

**Supplement**

to the

**Annual Report 2004**

**Berlin 2004**

Supplement, Annual Report 2004

HMI-B602  
Hahn-Meitner-Institut Berlin GmbH  
Glienicker Str. 100  
D-14109 Berlin (Wannsee)

Co-ordination:  
Dr. Klaus Möhring  
Phone: (030) 8062-2763  
Fax: (030) 8062-2047  
E-Mail: moehring@hmi.de  
Dr. Cornelia Rohland  
Phone: (030) 8062-2515  
Fax: (030) 8062-2047  
E-Mail: cornelia.rohland@hmi.de

## Supplement Index

<b>Preface</b>	<b>4</b>
<b>Publications</b>	<b>7</b>
SF - Structural Research . . . . .	8
SE - Solar Energy Research . . . . .	41
I - Central Scientific-Technical Infrastructure . . . . .	60
<b>Conference Contributions</b>	<b>61</b>
SF - Structural Research . . . . .	62
SE - Solar Energy Research . . . . .	96
<b>Invited Lectures</b>	<b>123</b>
SF - Structural Research . . . . .	124
SE - Solar Energy Research . . . . .	129
I - Central Scientific-Technical Infrastructure . . . . .	136
<b>Patents and Patent Applications</b>	<b>137</b>
Patents . . . . .	137
Patent applications . . . . .	138
<b>Academic Education</b>	<b>141</b>
Lectures, Courses, . . . . .	141
Exams . . . . .	144
Summer students etc. . . . .	147
<b>Faculty appointments and Awards</b>	<b>148</b>
Faculty appointments . . . . .	148
Awards . . . . .	148
<b>Participation in external scientific bodies and committees</b>	<b>149</b>
<b>Organization of Scientific Conferences and Meetings</b>	<b>153</b>

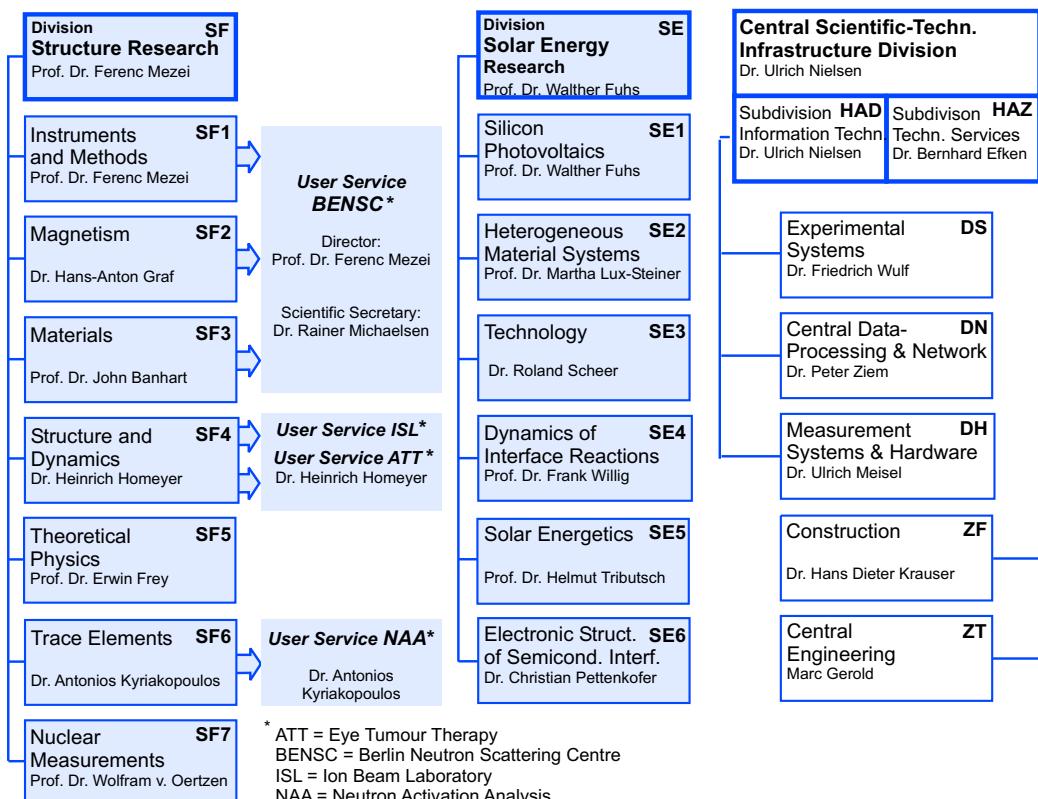
## Preface

This supplement to the Annual Report 2004 is supposed to provide in addition to the scientific highlights of the HMI a survey of the scientific activities in terms of publications, contributions to conferences etc.

Following the internal organisation of the institute, these lists are ordered along the divisions, departments and, wherever reasonable, along the R&D-projects within the latter. Publications and conference contributions are ascribed to a definite R&D-project. When authors from different departments have contributed, this contribution is listed under all involved departments and the respective R&D-project is indicated.

The supplement was generated mostly from an internal data base installed over the last year. We would like to thank Marion Schröder and Volker Denzer (Central Data-Processing & Network) for a lot of technical support.

### Organisational Chart



**R&D-projects in the matrix of departments versus Helmholtz programmes**

Dep.	Research fields and programmes				
	Structure of Matter: PNI		Health		Energy
	Research	Large scale facilities	Cancer	Environ. Health	Renewable Energies
		BENSC.External BENSC.User			
SF1	SF1.Methods SF1.Spallation SF1.Dynamics	SF1.BENSC			
SF2	SF2.Bulk Magnetism SF2.Thin films	SF2.BENSC SF2.BESSY			
SF3	SF3.Microstructure SF3.Light weight mat. SF3.Nanostructures	SF3.BENSC SF3.BESSY			
SF4	SF4.Dynamics SF4.Structures	ISL.User ISL.Development ISL.Accelerator SF4.BESSY	ISL.PPT		
SF5	SF5.Soft Matter SF5.Hard Matter SF5.Biosystems				
SF6		SF6.NAA		SF6.Analysis SF6.Proteins	
SF7	SF7.Q3D SF7.Detector				
SE1					SE1.Cells SE1.Hetero
SE2					SE2.Semico SE2.Contacts SE2.Integration SE2.Chemistry SE2.Concepts SE2.Analytics
SE3					SE3.Baseline SE3.Control
SE4					SE4.Cells SE4.Dynamics
SE5					SE5.Energetics SE5.Interfaces
SE6					SE6.Interfaces SE6.BESSY



# **Publications**

## SF - Structural Research

### SF - BENSC

#### BENSC.External

*Böhmert, J.; Viehrig, H.-W.; Ulbricht, A.*

**Correlation between irradiation-induced changes of microstructural parameters and mechanical properties of RPV steels**

Journal of Nuclear Materials

334 (2004) 71 - 78

*Czeslik, C.*

**Factors ruling protein adsorption**

Zeitschrift für Physikalische Chemie

218 (2004) 771 - 801

*Branca, C.; Faraone, A.; Magazu, S.; Maisano, G.; Mangione, A.*

**A quasi-elastic neutron scattering and neutron spin-echo study of hydrogen bonded system**

Physica B

350 (2004) e355 - e358

*Ulbricht, A.; Böhmert, J.*

**Small angle neutron scattering analysis of the radiation susceptibility of reactor pressure vessel steels**

Physica B

350 (2004) e483 - e486

*Giuliani, A.; Albertini, G.; Manescu, A.*

**Residual stress analysis on tensile MMC specimens after loading/unloading tests in several conditions**

Physica B

350 (2004) e499 - e501

*Auffermann, G.; Müller, P.; Bronger, W.:*

**Neutron Scattering as a Powerful Tool in Solid State Chemistry. Examples from the Investigations in Crystal Structures and Properties of Metal Hydrogen and Metal Chalcogen Compounds**

Z. Anorg. Allg. Chem.

630 (2004) 2113 - 2124

*Niewa, R.; Zherebtsov, D.A.:*

**New Phases in the Lithiumnitridovanadate System - The Solid Solution Li<sub>7-2x</sub>Mgx[VN<sub>4</sub>] (0 ≤ x ≤ 1)**

Z. Anorg. Allg. Chem.

630 (2004) 229 - 233

*Niewa, R.; Zherebtsov, D.A.; Schnelle, W.; WagnerF.R.:*

**Metal-Metal Bonding in ScTaN<sub>2</sub>. A New Compound in the System ScN - TaN**

Inorganische Chemie

43 (2004) 6188 - 6194

*Chaboussant, G.; Basler, R.; Sieber, A.; Ochsenbein, S.T.; Güdel, H.-U.*

**Neutron scattering studies of magnetic molecular spin clusters**

Physica B

350 (2004) e51 - e54

*Pintschovius, L.; Reznik, D.; Pfleiderer, C.; Löhneysen, H. v.*

**Partial order in the itinerant-electron magnet MnSi**

PRAMANA-journal of physics

63 (2004) 117 - 123

Rogante, M.; Battistella, P.; Rustichelli, F.

**Residual stress measurement by neutron diffraction in AA6082 extruded samples submitted to different quenching rates**

Journal of Alloys and Compounds

378 (2004) 335 - 338

Bruno, G.; Ceretti, M.; Girardin, E.; Giuliani, A.; Manescu, A.

**Relaxation of residual stress in MMC after combined plastic deformation and heat treatment**

Scripta Materialia

51 (2004) 999 - 1004

Wosnitza, J.; Hagel, J.; Stockert, O.; Pfleiderer, C.; Schlueter, J.A.; Mohtasham, J.; Gard, G.L.

**Fermi surface reconstruction close to a pressure-induced metal-insulator transition**

Journal de Physique IV

114 (2004) 277 - 281

---

**SF1.BENSC**

---

Ahrens H. ; Büscher K. ; Eck D. ; Förster S. ; Luap C. ; Papastavrou G. ; Schmitt J. ; Steitz R. ; Helm C.A.

**Poly(styrene sulfonate) self-organization: electrostatic and secondary interactions**

Macromolecular Symposia

211 (2004) 93 - 105

Bourdarot F. ; Fak B. ; Habicht K. ; Prokes K.

**Evidence for a hidden order parameter in  $URu_2Si_2$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e31 - e32

Calandrini V. ; Deriu A. ; Onori G. ; Lechner R.E. ; Pieper J.

**Diffusive dynamics of water in tert-butyl alcohol/water mixtures**

Journal of Chemical Physics

120 (2004) 4759 - 4767

Czeslik C. ; Jackler G. ; Hazlett T. ; Gratton E. ; Steitz R. ; Wittemann A. ; Ballauff M.

**Salt-induced protein resistance of polyelectrolyte brushes studied using fluorescence correlation spectroscopy and neutron reflectometry**

Physical Chemistry Chemical Physics

6 (2004) 5557 - 5563

Czeslik C. ; Jackler G. ; Steitz R. ; von Grünberg H.-H.

**Protein binding to like-charged polyelectrolyte brushes by counterion evaporation**

Journal of Physical Chemistry B

108 (2004) 13395 - 13402

Fick J. ; Steitz R. ; Leiner V. ; Tokumitsu S. ; Himmelhaus M. ; Grunze M.

**Swelling behavior of self-assembled monolayers of alkanethiol-terminated poly(ethylene glycol): a neutron reflectometry study**

Langmuir

20 (2004) 3848 - 3853

Fitzsimmons M.R. ; Fritzsche H. ; Gierlings M. ; Major J. ; Pynn R.

**Measuring scattering angles with neutron spin echo**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 10 - 15

Gutberlet T. ; Klösgen B. ; Krastev R. ; Steitz R.

**Neutron reflectivity as method to study in-situ adsorption of phospholipid layers to solid-liquid interfaces**

Advanced Engineering Materials

6 (10) (2004) 832 - 836

Gutberlet T. ; Steitz R. ; Fragneto G. ; Klösgen B.

**Phospholipid bilayer formation at a bare Si surface: a time-resolved neutron reflectivity study**

Journal of Physics: Condensed Matter

16 (2004) S2469 - S2476

Habicht K. ; Golub R. ; Mezei F. ; Keimer B. ; Keller T.

**Temperature-dependent phonon lifetimes in lead investigated with neutron-resonance spin-echo spectroscopy**

Physical Review B

69 (2004) 104301/1 - 8

Hahn-Meitner-Institut Berlin / Berlin Neutron Scattering Center. Kirschbaum Y. ; Tovar M. ; Bischoff D. ; Michaelsen R. [Eds.]

**BENSC experimental reports 2003**

(HMI-B 595)

Hahn-Meitner-Institut, Berlin, 2004

Iolin E. ; Rusevich L. ; Strobl M. ; Treimer W. ; Mikula P.

**Application of ultrasound for the simultaneous improvement intensity and resolution of the Bonse-Hart diffractometer**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 152 - 156

Jauch W.

**Electron densities in relation to magnetism: gamma-ray diffraction from transition-metal monoxides and difluorides**

Acta Crystallographica A

60 (2004) 397 - 401

Jauch W. ; Reehuis M.

**Electron density distribution in paramagnetic and antiferromagnetic NiO: a  $\gamma$ -ray diffraction study**

Physical Review B

70 (2004) 195121/1 - 8

Jauch W. ; Reehuis M. ; Schultz A.J.

**Gamma-ray and neutron diffraction studies of CoF<sub>2</sub>: magnetostriction, electron density and magnetic moments**

Acta Crystallographica A

60 (2004) 51 - 57

Keller T. ; Habicht K. ; Golub R. ; Mezei F.

**Roton and phonon linewidths in superfluid  $^4He$**

Europhysics Letters

67 (5) (2004) 773 - 778

Kumar M.S. ; Shah V.R. ; Schanzer C. ; Böni P. ; Krist Th. ; Horisberger M.

**Polarized neutron reflectivity of FeCoV/Ti multilayers**

Physica B

350 (2004) e241 - e244

Lake B. ; Aepli G. ; Christensen N.B. ; Lefmann K. ; McMorrow D.F. ; Clausen K.N. ; Ronnow H.M. ; Vorderwisch P. ; Smeibidl P. ; Mankortong M. ; Sasagawa T. ; Nohara M. ; Takagi H. ; Hussey N.E.

**Effects of magnetic field on the cuprate high- $T_C$  superconductor  $La_{2-x}Sr_xCuO_4$**

Notiziario Neutroni e Luce di Sincrotrone

9 (1) (2004) 4 - 9

McKinsey D.N. ; Brome C.R. ; Butterworth J.S. ; Dzhosyuk S.N. ; Golub R. ; Habicht K. ; Huffman P.R. ; Mattoni C.E.H. ; Yang L. ; Doyle J.M.

**Detecting ionizing radiation in liquid helium using wavelength shifting light collection**

Nuclear Instruments and Methods in Physics Research A

516 (2004) 475 - 485

Mukherjee C.J. ; Coldea R. ; Tennant D.A. ; Koza M. ; Enderle M. ; Habicht K. ; Smeibidl P. ; Tylczynski Z.

**Field-induced quantum phase transition in the quasi 1D XY-like antiferromagnet  $Cs_2CoCl_4$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 920 - 921

Novikov A.G. ; Robnikova M.N. ; Sobolev O.V.

**Reorientation and diffusion motions in liquid ethylene glycol**

Physica B

350 (2004) e363 - e366

Prager M. ; Pieper J. ; Buchsteiner A. ; Desmedt A.

**Probing adsorption sites in a cubic II water clathrate cage by methyl group rotation of  $CH_3I$  guest molecules**

Journal of Physics: Condensed Matter

16 (2004) 7045 - 7061

Prager M. ; Pieper J. ; Buchsteiner A. ; Desmedt A.

**Methyl rotational potentials as a probe of the cage potential surface in methyl iodide clathrate**

Physica B

350 (2004) e399 - e402

Russina O. ; Triolo A. ; Aihara Y. ; Telling M.T.F. ; Grimm H.

**Quasi-elastic neutron scattering investigation of dynamics in polymer electrolytes**

Macromolecules

37 (2004) 8653 - 8660

Rüegg Ch. ; Cavardini N. ; Furrer A. ; Krämer K. ; Güdel H.-U. ; Vorderwisch P. ; Habicht K. ; Mutka H. ; Wildes A.

**Spin dynamics in the BEC phase of the S=1/2 quantum spin system  $TlCuCl_3$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 195 - 196

Rüegg Ch. ; Oettli M. ; Schefer J. ; Zaharko O. ; Furrer A. ; Tanaka H. ; Krämer K.W. ; Güdel H.-U. ; Vorderwisch P. ; Habicht K. ; Polinski T. ; Meissner M.

**Neutron scattering study of the field-dependent ground state and the spin dynamics in spin-one-half  $NH_4CuCl_3$**

Physical Review Letters

93 (3) (2004) 037207/1 - 4

Schanzer C. ; Shah V.R. ; Böni P. ; Krist Th.

**Investigation of magnetization reversal in FeCoV/Ti multilayers**

Physica B

350 (2004) e221 - e224

Schedler R. ; Witte U. ; Rotter M. ; Doerr M. ; Loewenhaupt M. ; Kulda J.

**$CeCu_2$ -crystal field transition matrix elements determined by polarized neutron spectroscopy**

Physica B

350 (2004) e107 - e110

Shi H. ; Zhang S. ; Steitz R. ; Chen J. ; Uredat S. ; Findenegg G.H.

**Surface coatings of PEO-PPO-PEO block copolymers on native and polystyrene-coated silicon wafers**

Colloids and Surfaces A: Physicochemical and Engineering Aspects

246 (2004) 81 - 89

Stefanopoulos K.L. ; Steriotis Th.A. ; Mitropoulos A.Ch. ; Kanellopoulos N.K. ; Treimer W.

**Characterisation of porous materials by combining mercury porosimetry and scattering techniques**

Physica B

350 (2004) e525 - e527

- Steitz R. ; Müller-Buschbaum P. ; Schemmel S. ; Cubitt R. ; Findenegg G.H.*  
**Lateral structure of a surfactant layer adsorbed at a hydrophilic solid/liquid interface**  
 Europhysics Letters  
 67 (6) (2004) 962 - 968
- Strempfer J. ; Rütt U. ; Bayrakci S.P. ; Brückel Th. ; Jauch W.*  
**Magnetic properties of transition metal fluorides MF<sub>2</sub> (M = Mn, Fe, Co, Ni) via high-energy photon diffraction**  
 Physical Review B  
 69 (2004) 014417/1 - 9
- Strobl M. ; Treimer W. ; Hilger A.*  
**First realisation of a three-dimensional refraction contrast computerised neutron tomography**  
 Nuclear Instruments and Methods in Physics Research B  
 222 (2004) 653 - 658
- Strobl M. ; Treimer W. ; Hilger A.*  
**Small angle scattering signals for (neutron) computerized tomography**  
 Applied Physics Letters  
 85 (3) (2004) 488 - 490
- Strobl M. ; Treimer W. ; Hilger A. ; Feye-Treimer U.*  
**Neutron tomography in double crystal diffractometers**  
 Physica B  
 350 (2004) 155 - 158
- Wagner V. ; Hesse J. ; Klenke J. ; Pappas C.*  
**Dynamics of spin freezing in the re-entrant spin glass FeNiMn**  
 Physica B  
 350 (2004) e1051 - e1054
- Wilmer D. ; Feldmann H. ; Lechner R.E.*  
**Fast cation conduction and anion rotational disorder in the high-temperature phase of lithium sodium sulfate**  
 Zeitschrift für Physikalische Chemie  
 218 (2004) 1439 - 1454
- Wilmer D. ; Feldmann H. ; Lechner R.E. ; Combet J.*  
**Correlated motion of anions and cations in fast cation conducting rotor phases**  
 Solid State Ionics  
 175 (2004) 463 - 466
- Zheludev A. ; Shapiro S.M. ; Honda Z. ; Katsumata K. ; Grenier B. ; Ressouche E. ; Regnault L.-P. ; Chen Y. ; Vorderwisch P. ; Mikeska H.-J. ; Kolezhuk A.K.*  
**Dynamics of an anisotropic Haldane antiferromagnet in a strong magnetic field**  
 Physical Review B  
 69 (2004) 054414/1 - 10
- v. Klitzing R. ; Wong J.E. ; Jaeger W. ; Steitz R.*  
**Short range interactions in polyelectrolyte multilayers**  
 Current Opinion in Colloid and Interface Science  
 9 (2004) 158 - 162

---

**SF2.BENSC**

- Bazela W. ; Penc B. ; Stüsser N. ; Szytula A. ; Wawrzynska E. ; Zygmunt A.*  
**Neutron diffraction studies of R<sub>2</sub>RhSi<sub>3</sub> (R=Dy, Ho, Er) compounds**  
 Physica B  
 350 (2004) e167 - e170

Borisov S. ; Hansen T. ; Kumzerov Yu. ; Naberezhnov A. ; Simkin V. ; Smirnov O. ; Sotnikov A. ; Tovar M. ; Vakhrushev S.

**Neutron diffraction study of  $NaNO_2$  ferroelectric nanowires**

Physica B

350 (2004) e1119 - e1121

Charalambopoulou G.Ch. ; Steriotis Th.A. ; Hauss Th. ; Stubos A.K. ; Kanellopoulos N.K.

**Structural alterations of fully hydrated human stratum corneum**

Physica B

350 (2004) e603 - e606

Efimov V.V. ; Khasanov S.S. ; Mavrin B.N. ; Novikova N.N. ; Shilnikov A.V. ; Burkhanov A.I. ; Sikolenko V.V. ; Sternberg A. ; Tiutiunnikov S.I. ; Többens D.M. ; Yakovlev V.A.

**Structure and lattice dynamics in PLZT 8/65/35 ceramics irradiated by high-current pulsed electron beam**

Ferroelectrics

302 (2004) 327 - 333

Frontzek M. ; Kreyssig A. ; Doerr M. ; Hoffman J.-U. ; Hohlwein D. ; Bitterlich H. ; Behr G. ; Loewenhaupt M.

**Magnetic properties of  $Tb_2PdSi_3$**

Physica B

350 (2004) e187 - e189

Gamari-Seale H. ; Troyanchuk I.O. ; Bushinsky M.V. ; Stefanopoulos K.L. ; Hernandez-Velasco J.

**The effect on highly Cr-substituted manganite  $Nd_{0.6}Ca_{0.4}(Mn_{0.5}Cr_{0.5})O_3$**

Acta Physica Polonica A

105 (1-2) (2004) 81 - 86

Gamari-Seale H. ; Troyanchuk I.O. ; Khalyalin D. ; Szymczak H. ; Stefanopoulos K.L. ; Hernandez-Velasco J.

**Magnetic structure of  $Nd_{0.92}Ca_{0.08}MnO_3$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e483 - e484

Gamari-Seale H. ; Troyanchuk I.O. ; Khalyavin D. ; Stefanopoulos K.L. ; Hernandez-Velasco J.

**Neutron powder diffraction study of  $Nd_{0.92}Ca_{0.08}MnO_3$**

Physica B

350 (2004) e19 - e21

Gardiner C.H. ; Boothroyd A.T. ; McKelvy M.J. ; McIntyre G.J. ; Prokes K.

**Field-induced magnetic and structural domain alignment in  $PrO_2$**

Physical Review B

70 (2004) 024416/1 - 11

Genzel C.

**Problems related to X-ray stress analysis in thin films in the presence of gradients and texture**

In: Diffraction analysis of the microstructure of materials, eds. Mittemeijer E.J. ; Scardi P.

Springer, Berlin, 2004, 473 - 503

Gil A. ; Kaczorowski D. ; Hernandez-Velasco J. ; Penc B. ; Wawrzynska E. ; Szytula A.

**Magnetic structures of  $RCu_xGe_2$  (R=Ho, Er) compounds**

Journal of Alloys and Compounds

384 (2004) L4 - L6

Gil A. ; Penc B. ; Hernandez-Velasco J. ; Szytula A. ; Zygmunt A.

**Neutron-diffraction studies of  $RNi_xSn_2$  (R=Tb, Dy and Ho) compounds**

Physica B

350 (2004) e119 - e121

Gil A. ; Penc B. ; Stüsser N. ; Szytula A.

**Magnetic phase transitions in  $Tb_{0.4}Nd_{0.6}NiGe_2$  compound**

Physica B

350 (2004) e327 - e329

Gil A. ; Penc B. ; Wawrzynska E. ; Hernandez-Velasco J. ; Szytula A. ; Zygmunt A.

**Magnetic properties and magnetic structures of  $RCo_xSn_2$  ( $R$ =Gd-Er) compounds**

Journal of Alloys and Compounds

365 (2004) 31 - 34

Gondek L. ; Szytula A. ; Baran S. ; Rams M. ; Hernandez-Velasco J. ; Tyvanchuk Yu.

**Magnetic structures of non-stoichiometric hexagonal  $RNi_{1-x}In_{1+x}$  ( $R$ =Dy, Ho, Er) compounds**

Journal of Magnetism and Magnetic Materials

278 (3) (2004) 392 - 396

Gondek L. ; Szytula A. ; Baran S. ; Szajek A. ; Hernandez-Velasco J.

**Neutron-diffraction studies of  $R_3Co_8Sn_4$  ( $R$ =Y, Tb, Ho, Er) compounds**

Physica B

350 (2004) e123 - e125

Hoelzel M. ; Danilkin S.A. ; Ehrenberg H. ; Toebeens D.M. ; Udovic T.J. ; Fuess H. ; Wipf H.

**Effects of high-pressure hydrogen charging on the structure of austenitic stainless steels**

Materials Science and Engineering A

384 (2004) 255 - 261

Hofmann M. ; Campbell S.J. ; Ehrhardt H. ; Feyerherm R.

**The magnetic behaviour of nanostructured zinc ferrite**

Journal of Materials Science

39 (2004) 5057 - 5065

Hutana V. ; Habicht K. ; Rupp A.

**Neutron spin filters (NSF) obtained by metastability-exchange optical pumping (MEOP) and mechanical compressing of  $^3He$  gas**

In: ROMOPTO 2003: Seventh Conference on Optics, 8 - 11 September 2003, Constanta, Romania, eds. Vlad V.I.

SPIE, Bellingham, Wash., 2004, 418 - 427

Hutana V. ; Rupp A.

**Studies on optical pumping cells (OPC) to polarize  $^3He$**

Physica B

350 (2004) e703 - e706

Jaworska-Golab T. ; Szytula A. ; Baran S. ; Penc B. ; Zygmunt A. ; Stüsser N.

**Magnetic ordering of  $TbRu_{2-x}Pd_xSi_2$  solid solutions investigated by magnetometric and powder neutron-diffraction methods**

Physica B

350 (2004) e183 - e186

Jensen A. ; Norgaard Toft K. ; Abrahamsen A.B. ; Andersen N.H. ; Jensen J. ; Hedegard P. ; Klenke J. ; Prokes K. ; Smeibidl P. ; Danilkin S. ; Sikolenko V. ; Eskildsen M.R. ; Canfield P.C.

**Magnetic phase diagram of  $ErNi_2B_2C$**

Physica C

408-410 (2004) 97 - 99

Jensen A. ; Norgaard Toft K. ; Abrahamsen A.B. ; McMorrow D.F. ; Eskildsen M.R. ; Andersen N.H. ; Jensen J. ; Hedegard P. ; Klenke J. ; Danilkin S. ; Prokes K. ; Sikolenko V. ; Smeibidl P. ; Bud'ko S. L. ; Canfield P.C.

**Field-induced magnetic phases in the normal and superconducting states of  $ErNi_2B_2C$**

Physical Review B

69 (2004) 104527/1 - 11

Kolenda M. ; Hofmann M. ; Penc B. ; Szytula A.

**Magnetic structures of  $ErPd_2X$  (X=Si, Ge) compounds**

Physica B

350 (2004) e191 - e193

Korenev S. ; Sikolenko V.

**Non-destructive diagnostics of irradiated materials using neutron scattering from pulsed neutron sources**

Radiation Physics and Chemistry

71 (2004) 519 - 521

Lonkai Th. ; Tomuta D.G. ; Amann U. ; Ihringer J. ; Hendrikx R.W.A. ; Többens D.M. ; Mydosh J.A.

**Development of the high-temperature phase of hexagonal manganites**

Physical Review B

69 (2004) 134108/1 - 10

Lottermoser Th. ; Lonkai Th. ; Amann U. ; Hohlwein D. ; Ihringer J. ; Fiebig M.

**Magnetic phase control by an electric field**

Nature

430 (2004) 541 - 544

Mang P.K. ; Laroche S. ; Mehta A. ; Vajk O.P. ; Erickson A.S. ; Lu L. ; Buyers W.J.L. ; Marshall A.F. ; Prokes K. ; Greven M.

**Phase decomposition and chemical inhomogeneity in  $Nd_{2-\alpha}Ce_xCuO_{4-\delta}$**

Physical Review B

70 (2004) 094507/1 - 15

Matsuura M. ; Dai P. ; Kang H.J. ; Lynn J.W. ; Argyriou D.N. ; Onose Y. ; Tokura Y.

**Magnetic-field effect on static antiferromagnetic order above the upper critical field in**

$Nd_{1.85}Ce_{0.15}CuO_4$

Physical Review B

69 (2004) 104510/1 - 5

Panckow A.N. ; Sladkov D. ; Singh P.K. ; Genzel Ch.

**Low-temperature metal ion implantation assisted deposition of hard coatings.**

Surface and Coatings Technology

188-189 (2004) 214 - 219

Pebler J. ; Frommen C. ; Mangold M. ; Stief R. ; Krimmel A. ; van de Kamp R. ; Ohl M. ; Regnault L.-P.

**Comparison of the non-linear spin dynamics in antiferromagnetic chain compounds  $Na_2MnF_5$  and  $(ND_4)_2MnF_5$**

Zeitschrift für Anorganische und Allgemeine Chemie

630 (6) (2004) 829 - 840

Penc B. ; Szytula A. ; Wawrzynska E. ; Hernandez-Velasco J.

**Magnetic structures and magnetic phase transitions in  $TbCoSi_2$**

Journal of Alloys and Compounds

366 (2004) 120 - 123

Penc B. ; Wawrzynska E. ; Szytula A. ; Gil A. ; Hernandez-Velasco J. ; Zygmunt A.

**Magnetic structure of  $ErT_xSn_2$  (T=Co, Ni) compounds**

Journal of Alloys and Compounds

375 (2004) L1 - L3

Regulski M. ; Przenioslo R. ; Sosnowska I. ; Hohlwein D. ; Schneider R.

**Neutron diffraction study of the magnetic structure of  $\alpha - Mn_2O_3$**

Journal of Alloys and Compounds

362 (2004) 236 - 240

Schorr S. ; Tovar M. ; Stüber N. ; Bente K.

**Investigation of structural anomaly and metal ordering in the solid solution  $2\text{ZnS-CuInS}_2$  by neutron diffraction**

Physica B

350 (2004) e411 - e414

Sikolenko V.V. ; Pomjakushina E.V. ; Pomjakushin V.Yu. ; Gribanov A.V. ; Zimmermann U. ; Kurbakov A. ; Kozlenko D.P. ; Goncharenko I.N. ; Balagurov A.M.

**Modulated spin-density waves in uranium intermetallic compounds with  $\text{ThCr}_2\text{Si}_2$  structure**

Physica B

350 (2004) e163 - e166

Sikolenko V.V. ; Sazonov A.P. ; Troyanchuk I.O. ; Többens D. ; Zimmermann U. ; Pomjakushina E.V. ; Szymczak H.

**Magnetic properties of  $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$  ( $x = 0.15$  and  $0.3$ )**

Journal of Physics: Condensed Matter

16 (2004) 7313 - 7320

Stockert O. ; Faulhaber E. ; Zwicknagl G. ; Stüber N. ; Jeevan H.S. ; Deppe M. ; Borth R. ; Küchler R. ; Loewenhaupt M. ; Geibel C. ; Steglich F.

**Nature of the A phase in  $\text{CeCu}_2\text{Si}_2$**

Physical Review Letters

92 (13) (2004) 136401/1 - 4

Stockert O. ; Hossain Z. ; Deppe M. ; Hohlwein D. ; Geibel C.

**Magnetic order of  $\text{CePd}_5\text{Ge}_3$  and  $\text{CePt}_5\text{Ge}_3$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e479 - e480

Szytula A. ; Duraj R. ; Hernandez-Velasco J. ; Penc B. ; Venturini G. ; Wawrzynska E.

**Magnetic structure of  $\text{NdMn}_{2-x}\text{Fe}_x\text{Ge}_2$  ( $x=0.1$  and  $0.15$ ) compounds**

Journal of Alloys and Compounds

377 (2004) 21 - 24

Szytula A. ; Oles A. ; Penc B. ; Stsser N.

**Magnetic structure of the  $\text{HoPdSn}$  compound**

Journal of Alloys Compounds

370 (2004) L14 - L16

Szytula A. ; Penc B. ; Wawrzynska E. ; Hernandez-Velasco J. ; Zygmunt A.

**Magnetic structure of  $\text{HoPd}_2\text{Ge}_2$**

Journal of Alloys and Compounds

365 (2004) 39 - 42

Szytula A. ; Wawrzynska E. ; Penc B. ; Hernandez-Velasco J. ; Zygmunt A.

**Magnetic ordering and phase transitions in  $\text{R}_3\text{Cu}_4\text{X}_4$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 618 - 619

Szytula A. ; Wawrzynska E. ; Penc B. ; Stüsser N. ; Tomkowicz Z. ; Zygmunt A.

**Magnetic properties and electronic structure of  $\text{R}_3\text{T}_4\text{X}_4$  ( $\text{R: La-Nd, Gd-Er; T: Mn, Cu; X: Ge, Sn}$ ) compounds**

Journal of Alloys and Compounds

367 (2004) 224 - 229

Terada N. ; Mitsuda S. ; Prokes K. ; Suzuki O. ; Kitazawa H. ; Aruga Katori H.

**Impact of a small number of nonmagnetic impurities on H-T magnetic phase diagram of  $\text{CuFeO}_2$**

Physical Review B

70 (2004) 174412/1 - 7

- Troyanchuk I.O. ; Khomchenko V.A. ; Tovar M. ; Szymczak H. ; Bärner K.*  
**Orbital correlations and magnetic phase transitions in lightly doped  $La_{0.88}MnO_x$  and  $LaMn_{0.94}O_y$  manganites**  
Acta Physica Polonica A  
105 (1-2) (2004) 27 - 44
- Troyanchuk I.O. ; Khomchenko V.A. ; Tovar M. ; Szymczak H. ; Bärner K.*  
**Antiferromagnet-ferromagnet and structural phase transitions in  $La_{0.88}MnO_x$  manganites**  
Physical Review B  
69 (5) (2004) 054432/1 - 12
- Wawrzynska E. ; Hernandez-Velasco J. ; Penc B. ; Szytula A.*  
**Magnetic structures of  $R_3Cu_4Si_4$  (R=Dy, Ho and Er)**  
Journal of Magnetism and Magnetic Materials  
280 (2004) 234 - 242
- Wawrzynska E. ; Hernández-Velasco J. ; Penc B. ; Szytula A.*  
**Magnetic structures of  $R_3Cu_4Sn_4$  (R=Pr and Nd)**  
Journal of Physics: Condensed Matter  
16 (2004) 45 - 52
- Wawrzynska E. ; Hernández-Velasco J. ; Penc B. ; Szytula A.*  
**Magnetic structures of  $R_3Cu_4Sn_4$  (R=Tb-Er)**  
Physica B  
350 (2004) e127 - e130
- Wawrzynska E. ; Hernández-Velasco J. ; Penc B. ; Szytula A. ; Tomala K.*  
**Magnetic structures of  $R_3Ag_4Sn_4$  (R=Pr, Nd) and  $Nd_3Cu_4Ge_4$**   
Journal of Physics: Condensed Matter  
16 (2004) 7535 - 7544
- Wiechert H. ; Kortmann K.-D. ; Stüber N.*  
**Realization of a two-dimensional Ising system: Deuterium physisorbed on krypton-preplated graphite**  
Physical Review B  
70 (2004) 125410/1 - 14
- 
- SF3.BENSC**
- Baldelli Bombelli F. ; Berti D. ; Pini F. ; Keiderling U. ; Baglioni P.*  
**Flexibility of dilauroyl-phosphatidyl-nucleoside wormlike micelles in aqueous solutions**  
Journal of Physical Chemistry B  
108 (2004) 16427 - 16434
- Bonini M. ; Wiedenmann A. ; Baglioni P.*  
**Synthesis and characterization of surfactant and silica-coated cobalt ferrite nanoparticles**  
Physica A  
339 (2004) 86 - 91
- Bonini M. ; Wiedenmann A. ; Baglioni P.*  
**Small angle polarized neutrons (SANS-POL) investigation of surfactant free magnetic fluid of uncoated and silica-coated cobalt-ferrite nanoparticles**  
Journal of Physical Chemistry B  
108 (2004) 14901 - 14906
- Butter K. ; Hoell A. ; Wiedenmann A. ; Petukhov A.V. ; Vroege G.-J.*  
**Small-angle neutron and X-ray scattering of dispersions of oleic-acid-coated magnetic iron particles**  
Journal of Applied Crystallography  
37 (2004) 847 - 856

De Stefanis A. ; Tomlinson A.A.G. ; Steriotis Th.A.. ; Stefanopoulos K.L. ; Keiderling U.

**Nanostructural characterisation of catalysts by SANS**

Physica B

350 (2004) e521 - e524

Pop L.M. ; Hilljegerdes J. ; Odenbach S. ; Wiedenmann A.

**The microstructure of ferrofluids and their rheological properties**

Applied Organometallic Chemistry

18 (2004) 523 - 528

Ryukhtin V. ; Saroun J. ; Harjo S. ; Motohashi Y. ; Wiedenmann A. ; Strunz P.

**SANS investigations of pore anisotropy in superplastically deformed ceramics**

Physica B

350 (2004) e1019 - e1022

Strunz P. ; Schumacher G. ; Vassen R. ; Wiedenmann A.

**In situ SANS study of pore microstructure in YSZ thermal barrier coatings**

Acta Materialia

52 (2004) 3305 - 3312

Weissmüller J. ; Michels A. ; Michels D. ; Wiedenmann A. ; Krill C.E. III ; Sauer H.M. ; Birringer R.

**Spin structure of nanocrystalline terbium**

Physical Review B

69 (2004) 054402/1 - 16

---

**SF - BENSC**

**Addenda to 2003**

---

**SF1.BENSC**

---

Pappas C. ; Mezei F. ; Ehlers G. ; Manuel P. ; Campbell I.A.

**Dynamic scaling in spin glasses**

Physical Review B

68 (2003) 054431/1 - 5

**SF3.BENSC**

---

Bellmann D. ; Clemens H. ; Matijasevic B. ; Heinemann A. ; Banhart J.

**Investigation of early stages of metal foam formation by small-angle neutron scattering techniques**

In: Cellular metals : manufacture, properties, applications. International Conference on Cellular Metals and Metal Foaming Technology, Berlin : 23th - 25th June. MetFoam, eds. Banhart J. [u.a.]

Verl. MIT Publ., Berlin, 2003, 113 - 118

---

**SF - ISL**

---

**ISL\_Accelerator**

---

Busse W. ; Rethfeldt C.

**The ISL-control-system upgrade: A move from an in-house implementation to a commercial control-system**

In: ICALEPS 2003 : the 9th International Conference on Accelerator and Large Experimental Physics Control Systems, Hotel Hilton, Gyeongju, Korea, October 13 - 17, 2003

Pohang Accelerator Laboratory, Pohang, Korea, 2004, 258 - 260

**ISL.Development**

Denker A. ; Opitz-Coutureau J. ; Campbell J.L. ; Maxwell J.A. ; Hopman T.

**High-energy PIXE: quantitative analysis**

Nuclear Instruments and Methods in Physics Research B

219-220 (2004) 130 - 135

**ISL.PPT**

Bechrakis N.E. ; Höcht S. ; Martus P. ; Kreusel K.M. ; Heese J. ; Foerster M.H.

**Endoresektion von großen uvealen Melanomen nach Protonenbestrahlung**

Der Ophthalmologe

101 (4) (2004) 370 - 376

Heufelder J. ; Cordini D. ; Fuchs H. ; Heese J. ; Homeyer H. ; Kluge H. ; Morgenstern H. ; Höcht S. ; Nausner M. ; Bechrakis N.E. ; Hinkelbein W. ; Foerster M.H.

**Fünf Jahre Protonentherapie von Augentumoren am Hahn-Meitner-Institut Berlin**

Zeitschrift für Medizinische Physik

14 (2004) 64 - 71

Heufelder J. ; Cordini D. ; Kluge H.

**Ein schnelles zweidimensionales Messverfahren zur arbeitstäglichen Überprüfung des Dosisprofils eines 68 MeV-Protonenstrahls für die Behandlung von Augentumoren**

In: Medizinische Physik 2004. 35., Wissenschaftliche Tagung der Deutschen Gesellschaft für Medizinische Physik : 22. - 25. September 2004, Leipzig, eds. Wolf U. [u.a.]

Dt. Ges. für Med. Physik, Köln, 2004, 138 - 139

Höcht S. ; Bechrakis N.E. ; Nausner M. ; Kreusel K.-M. ; Kluge H. ; Heese J. ; Heufelder J. ; Cordini D. ; Homeyer H. ; Fuchs H. ; Martus P. ; Foerster M.H. ; Wiegel T. ; Hinkelbein W.

**Proton therapy of uveal melanomas in Berlin: 5 years of experience at the Hahn-Meitner Institute Strahlentherapie und Onkologie**

180 (7) (2004) 419 - 424

Stark R. ; Seiler F. ; Cordini D. ; Heufelder J. ; Höcht S. ; Bechrakis N.E. ; Foerster M.H. ; Hinkelbein W.

**Protonen- oder stereotaktische Photonenbestrahlung beim posterioren Aderhautmelanom?**

In: Medizinische Physik 2004. 35., Wissenschaftliche Tagung der Deutschen Gesellschaft für

Medizinische Physik : 22. - 25. September 2004, Leipzig, eds. Wolf U. [u.a.]

Dt. Ges. für Med. Physik, Köln, 2004, 134 - 135

Stiefel S. ; Heufelder J. ; Pfaender M. ; Lüdemann L. ; Grebe G. ; Heese J.

**BANG®-Polymerdosimetrie in der Protonentherapie von Augentumoren**

Zeitschrift für Medizinische Physik

14 (2004) 48 - 54

**ISL.User**

Bohne W. ; Lindner S. ; Röhrich J. ; Strub E.

**Calibration of various analytical methods with heavy-ion ERDA**

Surface and Interface Analysis

36 (2004) 1089 - 1092

Bohne W. ; Röhrich J. ; Schöpke A. ; Selle B. ; Sieber I. ; Fuhs W. ; del Prado A. ; San Andres E. ; Martil I. ; Gonzales-Díaz G.

**Compositional analysis of thin SiO<sub>x</sub>Ny:H films by heavy-ion ERDA, standard RBS, EDX and AES: a comparison**

Nuclear Instruments and Methods in Physics Research B

217 (2004) 237 - 245

Denker A.

**Zerstörungsfreie Analyse mit PIXE : Klassifizierung von Metallen und Pigmenten**

Restauro

(H. 6) (2004) 390 - 393

Denker A. ; Opitz-Coutureau J.

**Paintings - high-energy protons detect pigments and paint-layers**

Nuclear Instruments and Methods in Physics Research B

213 (2004) 677 - 682

Denker A. ; Opitz-Coutureau J.

**Proton-induced x-ray emission using 68 MeV protons**

X-Ray Spectrometry

33 (2004) 61 - 66

Denker A. ; Opitz-Coutureau J.

**Zerstörungsfrei : Metalcharakterisierung mit hochenergetischen Protonen an Beilen von Lebus, Lkr. Märkisch-Oderland**

In: Archäologie in Berlin und Brandenburg - 2003

Theiss, Stuttgart, 2004, 80 - 81

Denker A. ; Opitz-Coutureau J. ; Griesser M. ; Denk R. ; Winter H.

**Zerstörungsfreie Elementanalyse an mittelalterlichen "Wiener Pfennigen"**

In: Archäometrie und Denkmalpflege : Kurzberichte 2004. Zusammenfassung der Vorträge und Poster der Jahrestagung 2004 in den Reiss-Engelhorn Museen Mannheim 6. bis 9. Oktober 2004, eds.

Schüssler U. ; Pernicka E.

2004, 87 - 90

Denker A. ; Opitz-Coutureau J. ; Griesser M. ; Denk R. ; Winter H.

**Non-destructive analysis of coins using high-energy PIXE**

Nuclear Instruments and Methods in Physics Research B

226 (2004) 163 - 171

Denker A. ; Piwnicki P.

**Wasserstoff als Spürhund in der Kunstanalyse**

Museumskunde

69 (2) (2004) 100 - 104

Klaumünzer S.

**Ion hammering of silica colloids**

Nuclear Instruments and Methods in Physics Research B

215 (2004) 345 - 352

Manke I. ; Kardjilov N. ; Schneider R. ; Haibel A. ; Denker A. ; Rack A. ; Hilger A. ; Banhart J.

**Zerstörungsfreie Messmethoden am Hahn-Meitner-Institut**

ZfP-Zeitung

88 (2004) 31 - 40

Manke I. ; Kardjilov N. ; Schneider R. ; Haibel A. ; Denker A. ; Rack A. ; Hilger A. ; Garcia-Moreno F. ; Banhart J.

**Zerstörungsfreie Messmethoden am Hahn-Meitner-Institut: Neutronen, Ionen und**

**Röntgenstrahlen für die Industrie**

Materialprüfung : MP

46 (7-8) (2004) 404 - 413

Stempniewicz M. ; Hinkel P. ; Weiss S. ; Denker A. ; Sander M. ; Pyzalla A.

**Anwendung präparativer Methoden aus der Werkstoffkunde zur Untersuchung von**

**Sauropodenknochen**

In: Fortschritte in der Metallographie : Vortragstexte der 38. Metallographie-Tagung, 29. September - 1. Oktober 2004 in Berlin, eds. Pohl M.

DGM, Frankfurt, 2004, 217 - 221

Thamm T. ; Körner K.-U. ; Stöckel S. ; Marx G. ; Strub E. ; Bohne W. ; Röhrich J.

**PECVD-Abscheidung von harten Schichten im System B-C-N**

In: Neue Materialien und Verfahren in der Beschichtungstechnik : Tagungsband zum 7.

Werkstofftechnischen Kolloquium in Chemnitz, 30. September bis 1. Oktober 2004, eds. Wielage B.

TU, Lehrstuhl für Verbundstoffe, Chemnitz, 2004, 275 - 280

del Prado A. ; San Andres E. ; Martil I. ; Gonzalez-Diaz G. ; Bohne W. ; Röhrich J. ; Selle B.

**Influence of H on the composition and atomic concentrations of "N-rich" plasma deposited**

$SiO_x N_y H_z$  films

Journal of Applied Physics

95 (10) (2004) 5373 - 5382

**SF - ISL**

**Addenda to 2003**

**ISL.PPT**

Cordini D. ; Fuchs H. ; Heufelder J. ; Kluge H.

**Vergleichende CT-gestützte Bestrahlungsplanung in der Augentumorthерапie**

In: Medizinische Physik 2003 : 34. wissenschaftliche Tagung der Deutschen Gesellschaft für Medizinische Physik ; 1.-4. Oktober 2003, Heidelberg, eds. Semmler W. [u.a.]

2003, 238 - 239

Kott P. ; Morgenstern H. ; Heese J. ; Heufelder J. ; Zink K.

**Einfluss des Reichweitenschiebermaterials auf die ausgedehnten Bragg-Peaks des 68 MeV**

**Protonenstrahls am Hahn-Meitner-Institut Berlin**

In: Medizinische Physik 2003 : 34. wissenschaftliche Tagung der Deutschen Gesellschaft für Medizinische Physik ; 1. - 4. Oktober 2003, Heidelberg, eds. Semmler W. [u.a.]

2003, 12 - 13

Weber A. ; Cordini D. ; Heese J. ; Heufelder J. ; Homeyer H. ; Kluge H. ; Meseck A. ; Pelzer W.

**Designstudie für ein medizinisches 250 MeV-Protonentherapiezentrum im Raum Berlin**

In: Medizinische Physik 2003 : 34. wissenschaftliche Tagung der Deutschen Gesellschaft für Medizinische Physik ; 1.-4. Oktober 2003, Heidelberg, eds. Semmler W. [u.a.]

2003, 248 - 249

**ISL.User**

Heufelder J. ; Bechrakis N.E. ; Cordini D. ; Fuchs H. ; Heese J. ; Höchtl S. ; Homeyer H. ; Kluge H.

**Erfahrungen nach fünf Jahren Protonentherapie von Augentumoren am Hahn-Meitner-Institut**

**Berlin**

In: Medizinische Physik 2003 : 34. wissenschaftliche Tagung der Deutschen Gesellschaft für Medizinische Physik ; 1.-4. Oktober 2003, Heidelberg, eds. Semmler W. [u.a.]

2003, 246 - 247

**SF - BESSY**

**SE6.BESSY**

Pettenkofer C. ; Otto A.

**Strong subthreshold photoemission from Ag(111) islands**

Europhysics Letters

65 (5) (2004) 692 - 698

Yu S.-W. ; Müller N. ; Heinzmann U. ; Pettenkofer C. ; Klein A. ; Blaha P.

**Band symmetries of GaSe(0001) studied by spin-resolved electron spectroscopy using circularly polarized radiation**

Physical Review B

69 (2004) 045320/1 - 7

**SF2.BESSY**

---

Birkholz M. ; Genzel C. ; Jung T.

**X-ray diffraction study on residual stress and preferred orientation in thin titanium films subjected to a high ion flux during deposition**

Journal of Applied Physics  
96 (12) (2004) 7202 - 7211

Krappe H.J. ; Rossner H.H.

**Bayesian approach to background subtraction for data from the extended x-ray absorption fine-structure**

Physical Review B  
70 (2004) 104102/1 - 7

**SF3.BESSY**

---

Rack A. ; Haibel A. ; Bülow A. ; Matijasevic B. ; Banhart J.

**Characterization of metal foams with synchrotron-tomography and 3D image analysis**

In: 16th World Conference on Nondestructive Testing : Palais des Congrès, Montreal, Canada, August 30 - September 3, 2004 / CD of proceedings. WCNDT ; 16  
Montreal, 2004

**SF4.BESSY**

---

Erdelyi Z. ; Sladecik M. ; Stadler L.-M. ; Zizak I. ; Langer G.A. ; Kis-Varga M. ; Beke D.L. ; Sepiol B.

**Transient interface sharpening in miscible alloys**

Science  
306 (2004) 1913 - 1915

Stolterfoht N. ; Hellhammer R. ; Pesic Z.D. ; Hoffmann V. ; Bundesmann J. ; Petrov A. ; Fink D. ; Sulik B. ; Shah M. ; Dunn K. ; Pedregosa J. ; McCullough R.W.

**Time evolution of ion guiding through nanocapillaries in a PET polymer**

Nuclear Instruments and Methods in Physics Research B  
225 (2004) 169 - 177

---

**SF - BESSY**  
**Addenda to 2003**

---

**SF3.BESSY**

---

Rack A. ; Haibel A. ; Matijasevic B. ; Banhart J.

**Synchrotron tomography on zinc and aluminium foams**

In: Cellular metals : manufacture, properties, applications. International Conference on Cellular Metals and Metal Foaming Technology, Berlin : 23th - 25th June 2003. MetFoam, eds. Banhart J. [u.a.]  
Verl. MIT Publ., Berlin, 2003, 295 - 300

**SF4.BESSY**

---

Huke A. ; Czerski K. ; Heide P.

**Experimental techniques for the investigation of the electron screening effect for d+d fusion reactions in metallic environments**

Nuclear Physics A  
719 (2003) 279c - 282c

## SF1 - Methods and Instruments

### SF1.Dynamics

Aldridge L.P. ; Bordallo H.N. ; Desmedt A.

#### Water dynamics in cement pastes

Physica B

350 (2004) e565 - e568

Balog E. ; Becker T. ; Oettl M. ; Lechner R. ; Daniel R. ; Finney J. ; Smith J.C.

#### Direct determination of vibrational density of states change on ligand binding to a protein

Physical Review Letters

93 (2) (2004) 028103/1 - 4

Barthes M. ; Bordallo H.N. ; Denoyer F. ; Lorenzo J.-E. ; Zaccaro J. ; Robert A. ; Zontone F.

#### Micro-transitions or breathers in L-alanine?

European Physical Journal B

37 (2004) 375 - 382

Bordallo H.N. ; Herwig K.W. ; Luther B.M. ; Levinger N.E.

#### Quasi-elastic neutron scattering study of dimethyl-sulfoxide-water mixtures: probing molecular mobility in a nonideal solution

Journal of Chemical Physics

121 (24) (2004) 12457 - 12464

Desmedt A. ; Stallmach F. ; Lechner R.E. ; Cavagnat D. ; Lassègues J.-C. ; Guillaume F. ; Grondin J. ; Gonzalez M.A.

#### Proton dynamics in the perchloric acid clathrate hydrate $HClO_4 \Delta 5.5 H_2O$

Journal of Chemical Physics

121 (2004) 11916 - 11926

Pieper J. ; Irrgang K.-D. ; Renger G. ; Lechner R.E.

#### Density of vibrational states of the light-harvesting complex II of green plants studied by inelastic neutron scattering

Journal of Physical Chemistry B

108 (2004) 10556 - 10565

Rols S. ; Bordallo H.N. ; Herwig K.W. ; Barthes M.

#### Dynamical disorder and reorientation of the $CH_3$ groups in N-methylacetamide

Physica B

350 (2004) e587 - e589

Vorderwisch P. ; Sobolev O. ; Desmedt A.

#### $NH_3$ quantum rotators in Hofmann clathrates: intensity and width of rotational transition lines

Physica B

350 (2004) e391 - e393

### SF1.Methods

Bordallo H.N. ; Zsigmond G. ; Champion J.D.M.

#### Benchmark simulation of a Fermi-chopper instrument

Physica B

350 (2004) e717 - e719

Cho S.J. ; Kang H.Y. ; Lee C.H. ; Kim Y.J. ; Krist Th.

#### Crystallization and magnetic properties of FeCo/Si multilayer

Nuclear Instruments and Methods in Physics Research A

529 (2004) 94 - 97

*Habicht K. ; Keller T. ; Golub R.*

**The resolution matrix for neutron spin-echo three-axis spectroscopy**

Physica B

350 (2004) e803 - e806

*Krist Th.*

**Solid state and conventional neutron optical elements**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 50 - 53

*Lieutenant K. ; Zsigmond G.*

**Optimisation of guide exits by combining MC simulations and optimising routines**

Physica B

350 (2004) e687 - e689

---

### **SF1.Others**

*Hoinkis E.*

**Small-angle scattering studies of adsorption and of capillary condensation in porous solids**

Particle & Particle Systems Characterization

21 (2004) 80 - 100

*Hoinkis E. ; Lima E.B.F. ; Schubert-Bischoff P.*

**A study of carbon black Corax N330 with small-angle scattering of neutrons and x-rays**

Langmuir

20 (2004) 8823 - 8830

---

### **SF1.Spallation**

*Hilscher D. ; Herbach C.-M. ; Jahnke U. ; Tishchenko V.G. ; Galin J. ; Lott B. ; Letourneau A. ; Peghaire A. ; Filges D. ; Goldenbaum F. ; Nünighoff K. ; Schaaf H. ; Sterzenbach G. ; Wohlmuther M. ; Pienkowski L. ; Schröder W.U. ; Toke J.*

**Investigation of GeV proton-induced spallation reactions**

In: New Application of Nuclear Fission : proceedings of the International Workshop, Bucharest,

Romania, 7 -12 September 2003, eds. Mueller A.C. [u.a.]

World Scientific, Singapore, 2004, 75 - 81

*Lieutenant K. ; Zsigmond G. ; Fromme M. ; Manoshin S.*

**General features of the neutron instrument simulation package VITESS**

In: NOBUGS 2004 Conference. New Opportunities for Better User Group Software: October, 18-20, 2004 at PSI, Switzerland

2004

*Lieutenant K. ; Zsigmond G. ; Manoshin S. ; Fromme M. ; Bordallo H.N. ; Champion J.D.M. ; Peters J. ; Mezei F.*

**Neutron instrument simulation and optimization using the software package VITESS**

In: Avances in Computational Methods for X-ray and Neutron Optics : 3, 5 August 2004, Denver, Colorado, USA, eds. Sanchez del Rio M.

SPIE, Bellingham, Wash., 2004, 134 - 145

*Ohl M. ; Monkenbusch M. ; Richter D. ; Pappas C. ; Lieutenant K. ; Krist Th. ; Zsigmond G. ; Mezei F.*

**The high-resolution neutron spin-echo spectrometer for the SNS with  $\tau \xi = 1 \mu\text{s}$**

Physica B

350 (2004) 147 - 150

*Schnürer M. ; Hilscher D. ; Jahnke U. ; Ter-Avetisyan S. ; Busch S. ; Kalachnikov M. ; Stiel H. ; Nickles P.V. ; Sandner W.*

**Explosion characteristics of intense femtosecond-laser-driven water droplets**

Physical Review E

70 (2004) 056401/1 - 10

Zsigmond G. ; Lieutenant K. ; Manoshin S. ; Bordallo H.N. ; Champion J.D.M. ; Peters J. ; Carpenter J.M. ; Mezei F.

### **A survey of simulations of complex neutronic systems by VITESS**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 218 - 222

### **SF2.Bulk magnetism**

Bordallo H.N. ; Chapon L. ; Manson J.L. ; Hernandez-Velasco J. ; Ravot D. ; Reiff W.M. ; Argyriou D.N.

### **S=1/2 Ising behavior in the two-dimensional molecular magnet $Fe(NCS)_2(pyrazine)_2$**

Physical Review B

69 (2004) 224405/1 - 9

## **SF2 - Magnetism**

### **SF2.Bulk magnetism**

Andreev A.V. ; Mushnikov N.V. ; Goto T. ; Honda F. ; Sechovsky V. ; Prokes K.

### **High-field magnetization of a UCuGe single crystal**

Physica B

346-347 (2004) 132 - 136

Feyerherm R. ; Loose A. ; Ishida T. ; Nogami T. ; Kreitlow J. ; Baabe D. ; Litterst F.J. ; Süllow S. ; Klauss H.-H. ; Doll K.

### **Weak ferromagnetism with very large canting in a chiral lattice: $Fe(pyrimidine)_2Cl_2$**

Physical Review B

69 (2004) 134427/1 - 8

Feyerherm R. ; Loose A. ; Landsgesell S. ; Manson J.L.

### **Magnetic ordering in iron tricyanomethanide**

Inorganic Chemistry

43 (2004) 6633 - 6639

Feyerherm R. ; Loose A. ; Nojiri H.

### **Low-temperature magnetization of the distorted triangular magnet manganese tricyanomethanide**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 1054 - 1055

Gondek L. ; Szytula A. ; Baran S. ; Hernandez-Velasco J.

### **Neutron diffraction studies of the hexagonal RTIn (R=rare earth, T=Au or Ni) compounds**

Journal of Magnetism and Magnetic Materials

272-276 (Supplement) (2004) e443 - e444

Ling C.D. ; Granado E. ; Neumeier J.J. ; Lynn J.W. ; Argyriou D.N.

### **Magnetic inhomogeneities in electron-doped $Ca_{1-x}La_xMnO_3$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 246 - 248

Llobet A. ; Bao W. ; Moreno N.O. ; Pagliuso P.G. ; Sarrao J.L. ; Thompson J.D. ; Prokes K. ; Mignot J.-M.

### **Interplay between magnetism and superconductivity in $CeMIn_5$ heavy fermion**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 175 - 176

Mat'as S. ; Bat'ko I. ; Flachbart K. ; Paderno Y. ; Shitsevalova N. ; Siemensmeyer K.

### **Neutron diffraction on $HoB_{12}$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e435 - e437

Mitsuda S. ; Okano H. ; Kobayashi S. ; Prokes K.

**Non-magnetic impurity effect on domain growth kinetics in an isosceles triangular Ising antiferromagnet  $CoNb_2O_6$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e993 - e994

Prokes K. ; Gukasov A. ; Sechovský V. ; Andreev A.V.

**Magnetic properties of  $UNi_{2/3}Rh_{1/3}Al$  single crystal probed by polarized neutron diffraction**

Journal of Magnetism and Magnetic Materials

272-276 (2004) e67 - e69

Stüber N. ; Schotte U. ; Hoser A. ; Meißner M.

**Field-distorted magnetic spiral structure of  $CsCuCl_3$**

Physica B

350 (2004) e47 - e50

Toda M. ; Fujii Y. ; Chiba M. ; Kawano S. ; Goto T. ; Klenke J. ; Graf H.A. ; Steiner M.

**Neutron diffraction study of the field-induced order in singlet-ground state magnet  $CsFeCl_3$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 378 - 379

Wolter A.U.B. ; Wzietek P. ; Süllow S. ; Litterst F.J. ; Auban-Senzier P. ; Jérôme D. ; Feyerherm R. ; Klauss H.-H.

**$^{13}\text{C}$ -NMR under pressure on  $[\text{PMCu}(\text{NO}_3)_2(\text{H}_2\text{O})_2]_n$**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 1056 - 1057

Zvyagin S.A. ; Kolezhuk A.K. ; Krzystek J. ; Feyerherm R.

**Excitation hierarchy of the quantum sine-Gordon spin chain in a strong magnetic field**

Physical Review Letters

93 (2004) 027201/1 - 4

---

## SF2.Thin films

---

Fritzsche H. ; Liu Y.T. ; Hauschild J. ; Maletta H.

**Magnetization of uncovered and V-covered ultrathin Fe(100) films on V(100)**

Physical Review B

70 (2004) 214406/1 - 6

Liu Y.T. ; Fritzsche H. ; Hauschild J. ; Maletta H.

**Polarized neutron reflectometry study of thin Fe films prepared on V(100)**

Physica B

350 (2004) e225 - e227

Schmitz D. ; Hauschild J. ; Imperia P. ; Liu Y.T. ; Maletta H.

**Element-specific investigation of the magnetization of ultrathin Fe on a V(110) single crystal**

Journal of Magnetism and Magnetic Materials

269 (2004) 89 - 94

---

## SF4.Structures

---

Koteski V. ; Haas H. ; Holub-Krappe E. ; Ivanovic N. ; Mahnke H.-E.

**Bond lengths in  $Cd_{1-x}Zn_xTe$  beyond linear laws revisited**

Journal of Alloys and Compounds

371 (2004) 138 - 141

---

## SF6.NAA

---

Milne C.J. ; Argyriou D.N. ; Chemseddin A. ; Aliouane N. ; Veira J. ; Landsgesell S. ; Alber D.

**Revised superconducting phase diagram of hole-doped  $Na_x(H_3O)_2CoO_2 *_y H_2O$**

Physical Review Letters

93 (2004) 247007/1 - 4

## SF2 - Magnetism Addenda to 2003

### SF2.Bulk magnetism

Wolter A.U.B. ; Rakoto H. ; Costes M. ; Honecker A. ; Brenig W. ; Klümper A. ; Klauss H.-H. ; Litterst F.J. ; Feyerherm R. ; Jerome D. ; Süllow S.

**High-field magnetization study of the  $S = 1/2$  antiferromagnetic Heisenberg chain  $[\text{PMCu}(\text{NO}_3)_2(\text{H}_2\text{O})_2]_n$  with a field-induced gap**

Physical Review B

68 (2003) 220406/1 - 4

Wolter A.U.B. ; Wzietek P. ; Litterst F.J. ; Süllow S. ; Jerome D. ; Feyerherm R. ; Klauss H.-H.

**$^{13}\text{C}$  NMR on the  $S=1/2$  antiferromagnetically coupled spin chain compound  $[\text{PM Cu}(\text{NO}_3)_2(\text{H}_2\text{O})_2]_n$  (PM = pyrimidine)**

Polyhedron

22 (2003) 2273 - 2276

## SF3 - Materials

### SF3.Light weight mat.

Babcsan N. ; Leitlmeier D. ; Degischer H.P. ; Banhart J.

**The role of oxidation in blowing particle-stabilised aluminium foams**

Advanced Engineering Materials

6 (6) (2004) 421 - 428

Banhart J. ; Haibel A.

**Metallschäume Produktion - Charakterisierung - Anwendungen oder Von der Mikrostruktur zu Anwendungen**

In: Fortschritte in der Metallographie : Vortragstexte der 37. Metallographie-Tagung, 17.-19. September 2003 in Berlin, eds. Portella P.

Werkstoff-Informationsges., Frankfurt, 2004, 291 - 298

Garandet J.P. ; Mathiak G. ; Botton V. ; Lehmann P. ; Griesche A.

**Reference microgravity measurements of liquid phase solute diffusivities in tin- and aluminum-based alloys**

International Journal of Thermophysics

25 (1) (2004) 249 - 272

Garcia Moreno F. ; Fromme M. ; Banhart J.

**Real time X-ray radioscopy on metallic foams using a compact micro-focus source**

Advanced Engineering Materials

6 (6) (2004) 416 - 420

Kropf H. ; Haibel A.

**Vergleich von Synchrotron-Computertomographie- und metallographischen Untersuchungen**

In: Fortschritte in der Metallographie : Vortragstexte der 37. Metallographie-Tagung, 17.-19. September 2003 in Berlin, eds. Portella P.

Werkstoff-Informationsges., Frankfurt, 2004, 299 - 304

Kádár Cs. ; Chmelík F. ; Lendvai J. ; Babcsán N. ; Rajkovits Zs.

**Acoustic emission response of Metcomb foams during indentation**

Kovove Materialy

42 (2004) 265 - 274

**SF3.Microstructure**

*Abromeit C. ; Kuznetsov A.R.*

**Molecular dynamics simulation of a swift ion track in NiAl**

Nuclear Instruments and Methods in Physics Research B

225 (2004) 97 - 104

*Dieter S. ; Pyzalla A. ; Bauer A. ; Schell N. ; McCord J. ; Seemann K. ; Wanderka N. ; Reimers W.*  
**Correlation between magnetic properties of CoFe single and CoFe/SiO<sub>2</sub> multi-layer thin films and their microstructure, texture and internal stress state**

Zeitschrift für Metallkunde

95 (2004) 164 - 175

*Griesche A. ; Zumkley Th. ; Macht M.-P. ; Suzuki S. ; Frohberg G.*  
**Diffusion in PdCuNiP alloys from the amorphous to the liquid state**  
Materials Science and Engineering A  
375-377 (2004) 285 - 287

*Kindrachuk V. ; Wanderka N. ; Banhart J. ; Mukherji D. ; Del Genovesse D. ; Rösler J.*  
**Intragranular precipitation in Inconel 706: 3D atom-probe and HRTEM investigations**  
Steel Research International  
75 (1) (2004) 74 - 78

*Mechler S. ; Wanderka N. ; Macht M.-P.*  
**Crystallization behavior of low temperature pre-annealed Zr<sub>46.8</sub>Ti<sub>8.2</sub>Ni<sub>10</sub>Cu<sub>7.5</sub>Be<sub>27.5</sub>—bulk glass**  
Materials Science and Engineering A  
375-377 (2004) 355 - 358

*Wanderka N. ; Naundorf V. ; Banhart J. ; Mukherji D. ; Genovesse D.D. ; Rösler J.*  
**Microstructural characterization of Inconel 706 alloy**  
Surface and Interface Analysis  
36 (2004) 546 - 551

*Wollgarten M. ; Mechler S. ; Davidov E. ; Wanderka N. ; Macht M.-P.*  
**Decomposition and crystallization of Pd<sub>40</sub>Cu<sub>30</sub>Ni<sub>10</sub>P<sub>20</sub> and Zr<sub>46.8</sub>Ti<sub>8.2</sub>Cu<sub>7.5</sub>Ni<sub>10</sub>Be<sub>27.5</sub> metallic glasses**  
Intermetallics  
12 (2004) 1251 - 1255

**SF3.Nanostructures**

*García-Matres E. ; Wiedenmann A. ; Kumar G. ; Eckert J. ; Hermann H. ; Schultz L.*  
**Hard magnetic properties of bulk amorphous Nd<sub>60</sub>Fe<sub>20</sub>Co<sub>10</sub>Al<sub>10</sub> investigated by SANSPOL**  
Physica B  
350 (2004) e315 - e318

*Heinemann A. ; Wiedenmann A. ; Kammel M.*  
**The full potential of small-angle scattering with polarised neutrons for structure parameter evaluation in magnetic liquids**  
Physica B  
350 (2004) e207 - e210

*Heinemann A. ; Wiedenmann A. ; Kammel M. ; Bönnemann H. ; Matoussevitch N.*  
**High-quality structure parameter for magnetic liquids obtained by small-angle scattering of polarized neutrons**  
Applied Organometallic Chemistry  
18 (2004) 561 - 564

*Hoell A. ; Wiedenmann A. ; Heyen U. ; Schüler D.*

**Nanostructure and field-induced arrangement of magnetosomes studied by SANS-POL**

Physica B

350 (2004) e309 - e313

*Tatchev D. ; Heinemann A. ; Wiedenmann A. ; Hoell A.*

**Determination of particle size distributions by small-angle scattering with polarized neutrons using maximum-entropy method**

Journal of Applied Crystallography

37 (2004) 40 - 47

*Wiedenmann A. ; Kammel M. ; Hoell A.*

**Pseudo-crystalline ordering in ferrofluids induced by magnetic fields**

Journal of Magnetism and Magnetic Materials

272-276 (2004) 1487 - 1489

*Young Soo Han ; Baek Seok Seong ; Chang Hee Lee ; Geun Hee Lee ; Chang Kyu Rhee ; Whung Who Kim ; Wiedenmann A.*

**SANS study of microstructural inhomogeneities on Al nano-powder compacts**

Physica B

350 (2004) e1015 - e1018

### **SF3.Others**

*Griesche A. ; Macht M.-P. ; Garandet J.-P. ; Frohberg G.*

**Diffusion and viscosity in molten Pd40Ni40P20 and Pd40Cu30Ni10P20 alloys**

Journal of Non-Crystalline Solids

336 (2004) 173 - 178

### **SF3 - Materials Addenda to 2003**

#### **SF3.Light weight mat.**

*Babcsan N. ; Banhart J. ; Leitlmeier D.*

**Metal foams - manufacture and physics of foaming**

In: Proceedings of the International Conference Advanced Metallic Materials 2003, Smolenice Castle, Slovakia, November 5 - 7, 2003, eds. Jerz J. [u.a.]

Bratislava, 2003, 5 - 15

*Garcia Moreno F. ; Fromme M. ; Banhart J.*

**Real-time X-ray radioscopy on metallic foams using a compact micro-focus source**

In: Cellular metals : manufacture, properties, applications. International Conference on Cellular Metals and Metal Foaming Technology, Berlin : 23th - 25th June 2003. MetFoam, eds. Banhart J. [u.a.]

Verl. MIT Publ., Berlin, 2003, 89 - 94

### **SF4 - Structure and Dynamics**

#### **SE1.Cells**

*Reinig P. ; Fenske F. ; Selle B. ; Bohne W. ; Röhrich J. ; Sieber I. ; Fuhs W.*

**Low-temperature silicon homoepitaxial growth by pulsed magnetron sputtering**

Applied Surface Science

227 (2004) 114 - 121

**SE1.Others**

Weiss V. ; Bohne W. ; Röhrich J. ; Strub E. ; Bloeck U. ; Sieber I. ; Ellmer K. ; Mientus R. ; Porsch F.  
**Reactive magnetron sputtering of molybdenum sulfide thin films: In situ synchrotron x-ray diffraction and transmission electron microscopy study**  
Journal of Applied Physics  
95 (12) (2004) 7665 - 7673

**SE2.Semico**

Rusu M. ; Wiesner S. ; Fuertes Marrón D. ; Meeder A. ; Doka S. ; Bohne W. ; Lindner S. ; Schedel-Niedrig Th. ; Giesen Ch. ; Heuker M. ; Lux-Steiner M.Ch.  
**CuGaSe<sub>2</sub> thin films prepared by a novel CCSVT technique for photovoltaic application**  
Thin Solid Films  
451-452 (2004) 556 - 561

Strub E. ; Bär M. ; Bohne W. ; Fischer Ch.-H. ; Leupolt B. ; Lindner S. ; Röhrich J. ; Schöneich B.  
**Intensity calibration of an FT-IR spectrometer by heavy-ion ERDA**  
Nuclear Instruments and Methods in Physics Research B  
219-220 (2004) 499 - 502

**SF4.Dynamics**

Ban-d'Etat B. ; Haranger F. ; Boduch Ph. ; Bouffard S. ; Lebius H. ; Maunoury L. ; Pacquet J.Y. ; Rothard H. ; Clerc C. ; Garrido F. ; Thome L. ; Hellhammer R. ; Pesic Z. ; Stolterfoht N.  
**Potential and kinetic sputtering of UO<sub>2</sub> by slow highly charged ions**  
Physica Scripta  
T110 (2004) 389 - 393

Chen J. ; Klaumünzer S. ; Lux-Steiner M.C. ; Könenkamp R.  
**Vertical nanowire transistors with low leakage current**  
Applied Physics Letters  
85 (2004) 1401 - 1403

Czerski K. ; Huke A. ; Heide P. ; Ruprecht G.  
**The <sup>2</sup>H(d,p)<sup>3</sup>H reaction in metallic media at very low energies**  
Europhysics Letters  
68 (3) (2004) 363 - 369

Czerski K. ; Schiwietz G. ; Roth M. ; Staufenbiel F. ; Grande P. ; Bhattacharyya S.R.  
**Non-equilibrium emission of secondary ions from BeO films sputtered by swift gold ions**  
Nuclear Instruments and Methods in Physics Research B  
225 (2004) 72 - 77

Fadanelli R.C. ; Grande P.L. ; Behar M. ; Dias J.F. ; Schiwietz G. ; Denton C.D.  
**Coulomb heating of channelled H<sub>2</sub><sup>+</sup> and H<sub>3</sub><sup>+</sup> molecules in Si**  
Physical Review B  
69 (2004) 212104/1 - 4

Gentils A. ; Thomé L. ; Jagielski J. ; Nowicki L. ; Klaumünzer S. ; Garrido F. ; Beauvy M.  
**Damage production in cubic zirconia irradiated with swift heavy ions**  
Nuclear Instruments and Methods in Physics Research B  
218 (2004) 457 - 460

Grande P.L. ; Hentz A. ; Schiwietz G. ; Schulte W.H. ; Busch B.W. ; Starodub D. ; Gustafsson T.  
**Nonperturbative treatment of medium-energy proton scattering under shadowing-blocking conditions in Al(110)**  
Physical Review B  
69 (2004) 104112/1 - 8

Grande P.L. ; Schiwietz G.

**Ionization and energy loss beyond perturbation theory**

Advances in Quantum Chemistry

45 (2004) 7 - 46

Hedler A. ; Klaumünzer S.L. ; Wesch W.

**Amorphous silicon exhibits a glass transition**

Nature Materials

3 (2004) 804 - 809

Jagielski J. ; Gentils A. ; Thome L. ; Nowicki L. ; Garrido F. ; Klaumünzer S.

**Channeling study of the damage induced in zirconia irradiated with high-energy heavy ions**

Nuclear Instruments and Methods in Physics Research B

219-220 (2004) 626 - 630

Klaumünzer S.

**Ion tracks in quartz and vitreous silica**

Nuclear Instruments and Methods in Physics Research B

225 (2004) 136 - 153

Mahnke H.-E.

**EXAFS-analysis of phase formation and modification induced by swift heavy ions**

Nuclear Instruments and Methods in Physics Research B

225 (2004) 160 - 168

Pesic Z.D. ; Chesnel J.-Y. ; Hellhammer R. ; Sulik B. ; Stolterfoht N.

**Fragmentation of  $H_2O$  molecules following the interaction with slow, highly charged Ne ions**

Journal of Physics B

37 (2004) 1405 - 1417

Roth M. ; Maul C. ; Gericke K.-H.

**Photodissociation dynamics of  $Cl_2O$ : interpretation of electronic transitions**

Journal of Physical Chemistry A

108 (2004) 7954 - 7964

Roth M. ; Schiwietz G. ; Czerski K. ; Schattat B. ; Staufenbiel F. ; Walz B.

**Fast processes in ion tracks**

In: The physics of ionized gases : 22nd Summer School and International Symposium on the Physics of Ionized gases, eds. Hadzievski L. [u.a.]

American Institute of Physics, Melville, NY, 2004, 175 - 180

Ruprecht G. ; Czerski K. ; Bemmerer D. ; Hoeft, M. ; Heide P.

**Coherent resonance contributions in the reactions  $^6Li(d,\alpha)^4He$  and  $^{10}B(d,p_0)^{11}B$  at sub-Coulomb energies**

Physical Review C

70 (2004) 025803/1 - 9

Schiwietz G. ; Czerski K. ; Roth M. ; Staufenbiel F. ; Grande P.L.

**Femtosecond dynamics - snapshots of the early ion-track evolution**

Nuclear Instruments and Methods in Physics Research B

226 (2004) 683 - 704

Stadler L.-M. ; Sepiol B. ; Kantelhardt J.W. ; Zizak I. ; Grübel G. ; Vogl G.

**Revealing antiphase-domain dynamics in alloys by combining advanced statistical techniques with x-ray photon correlation spectroscopy**

Physical Review B

69 (2004) 224301/1 - 7

Stolterfoht N. ; Hellhammer R. ; Pesic Z.D. ; Hoffmann V. ; Bundesmann J. ; Petrov A. ; Fink D. ; Sulik B.  
**Guided transmission of  $Ne^{7+}$  ions through nanocapillaries in PET: dependence on the tilt angle**  
Vacuum  
73 (2004) 31 - 37

Stolterfoht N. ; Sulik B.  
**Interferences in electron emission from  $H_2$  induced by fast ion impact**  
Advances in Quantum Chemistry  
46 (2004) 307 - 327

Stolterfoht N. ; Sulik B. ; Skogvall B. ; Chesnel J.Y. ; Fremont F. ; Hennecart D. ; Cassimi A. ; Adoui L. ;  
Hossain S. ; Tanis J.A.  
**Frequency doubling of interference structures in electron emission interferences from  $H_2$  by**  
**68-MeV/u  $Kr^{33+}$  impact**  
Physical Review A  
69 (2004) 012701/1 - 4

Sulik B. ; Tanis J.A. ; Chesnel J.-Y. ; Stolterfoht N.  
**Young-type interferences in the ionization of the  $H_2$  molecule by fast ions**  
Physica Scripta  
T110 (2004) 345 - 349

#### **SF4.Others**

---

Hahn-Meitner-Institut Berlin / ISL, Ionenstrahllabor. Bertschat H.H. ; Röhrich J. ; Schiwietz G. [Eds.]  
**Annual report 2003**  
(HMI-B 596)  
Hahn-Meitner-Institut, Berlin, 2004

Mishra R. ; Tripathy S.P. ; Fink D. ; Dwivedi K.K.  
**A study of the activation energy of thermal decomposition of irradiated polymers**  
Radiation Effects and Defects in Solids  
159 (2004) 569 - 573

Sinha D. ; Petrov A. ; Fink D. ; Fahrner W.R. ; Hoppe K. ; Chandra A.  
**TEMPOS structures with gold nanoclusters**  
Radiation Effects and Defects in Solids  
159 (2004) 517 - 533

Soares M.R.F. ; Alegaonkar P. ; Behar M. ; Fink D. ; Müller M.  
 **$^6Li^+$  ion implantation into polystyrene**  
Nuclear Instruments and Methods in Physics Research B  
218 (2004) 300 - 307

#### **SF4.Structures**

---

Chen S.H. ; Schumacher G.  
**The application of transformation matrices on the determination of gamma/gamma interface**  
**types in a gamma-TiAl alloy**  
Scripta Materialia  
50 (2004) 31 - 34

Fink D. ; Petrov A.V. ; Hoppe K. ; Fahrner W.R. ; Papaleo R.M. ; Berdinsky A.S. ; Chandra A. ;  
Chemseddine A. ; Zrineh A. ; Biswas A. ; Faupel F. ; Chadderton L.T.  
**Etched ion tracks in silicon oxide and silicon oxynitride as charge injection or extraction**  
**channels for novel electronic structures**  
Nuclear Instruments and Methods in Physics Research B  
218 (2004) 355 - 361

Kamarou A. ; Wesch W. ; Wendler E. ; Klaumünzer S.

**Damage formation and annealing in InP due to swift heavy ions**

Nuclear Instruments and Methods in Physics Research B

225 (2004) 129 - 135

Koteski V. ; Haas H. ; Holub-Krappe E. ; Ivanovic N. ; Mahnke H.-E.

**Bond lengths in  $Cd_{1-x}Zn_xTe$  beyond linear laws revisited**

Journal of Alloys and Compounds

371 (2004) 138 - 141

**SF4 - Structure and Dynamics  
Addenda to 2003**

**SF4.Dynamics**

Pesic Z.D. ; Anton J. ; Bremer J.H. ; Hoffmann V. ; Stolterfoht N. ; Viktor Gy. ; Schuch R.

**Inelastic energy loss in large angle scattering of  $Ar^{9+}$  ions from Au(111) crystal**

Nuclear Instruments and Methods in Physics Research B

203 (2003) 96 - 103

Stolterfoht N. ; Hoffmann V. ; Hellhammer R. ; Pesic Z.D. ; Fink D. ; Petrov A. ; Sulik B.

**Guided transmission of 3 keV  $Ne^{7+}$  ions through nanocapillaries etched in a PET polymer**

Nuclear Instruments and Methods in Physics Research B

203 (2003) 246 - 253

Stolterfoht N. ; Sulik B. ; Gulyas L. ; Skogvall B. ; Chesnel J.Y. ; Fremont F. ; Hennecart D. ; Cassimi A. ; Adoui L. ; Hossain S. ; Tanis J.A.

**Interference effects in electron emission from  $H_2$  by 68-MeV/u  $Kr^{33+}$  impact: dependence on the emission angle**

Physical Review A

67 (2003) 030702/1 - 4

Sulik B. ; Stolterfoht N. ; Hellhammer R. ; Pesic Z. ; Koncz Cs. ; Tokesi K. ; Berenyi D.

**Fermi-shuttle acceleration of electrons in ion-matter interaction**

Nuclear Instruments and Methods in Physics Research B

212 (2003) 32 - 44

**SF4.Others**

Soares M.R.F. ; Behar M. ; Fink D. ; Müller M. ; Petrov A.

**$^{10}B^{+}$ -ion implantation into photoresist**

Applied Physics A

77 (2003) 891 - 898

**SF4.Structures**

Bertschat H.H. ; Manzhur Y. ; Potzger K. ; Prandolini M.J. ; Weber A. ; Zeitz W.-D.

**Investigations on surface and interface magnetism using local probes**

In: Proceedings of the XXXVIII Zakopane School of Physics, International Conference Condensed Matter Studies with Nuclear Methods : Zakopane, Poland, May 10 - 19, 2003, eds. Görlich E.A. [u.a.] Institute of Physics, Krakow, 2003, 37 - 51

**SF5 - Theory****SF5.Biosystems***Basu A.***Statistical properties of driven magnetohydrodynamic turbulence in three dimensions: novel universality**

Europhysics Letters

65 (4) (2004) 505 - 511

*Basu A. ; Frey E.***Novel universality classes of coupled driven diffusive systems**

Physical Review E

69 (2004) 015101/1 - 4

*Deutsch A. ; Howard J. ; Falcke M. [u.a.] [Eds.]***Function and regulation of cellular systems : experiments and models**

(Mathematics and biosciences in interaction)

Birkhäuser, Basel, 2004

*Falcke M.***Reading the patterns in living cells - the Physics of  $Ca^{2+}$  signaling**

Advances in Physics

53 (3) (2004) 255 - 440

*Frey E. ; Parmeggiani A. ; Franosch T.***Collective phenomena in intracellular processes**

Genome Informatics

15 (2004) 46 - 55

*Lattanzi G. ; Munk T. ; Frey E.***Transverse fluctuations of grafted polymers**

Physical Review E

69 (2004) 021801/1 - 4

*Parmeggiani A. ; Franosch T. ; Frey E.***Totally asymmetric simple exclusion process with Langmuir kinetics**

Physical Review E

70 (2004) 046101/1 - 20

*Sneyd J. ; Falcke M. ; Dufour J.-F. ; Fox C.***A comparison of three models of the inositol trisphosphate receptor**

Progress in Biophysics and Molecular Biology

85 (2004) 121 - 140

*Thul R. ; Falcke M.***Release currents of  $IP_3$  receptor channel clusters and concentration profiles**

Biophysical Journal

86 (2004) 2660 - 2673

*Thul R. ; Falcke M.***Stability of membrane bound reactions**

Physical Review Letters

93 (18) (2004) 188103/1 - 4

*Uhde J. ; Keller M. ; Sackmann E. ; Parmeggiani A. ; Frey E.***Internal motility in stiffening actin-myosin networks**

Physical Review Letters

93 (2004) 268101/1 - 4

**SF5.Hard Matter**

---

*Fröbrich P.*

**Present status of the theory of fission of hot nuclei**

Progress of Theoretical Physics Supplement

154 (2004) 279 - 284

*Fröbrich P. ; Kuntz P.J.*

**Anisotropic susceptibilities of thin ferromagnetic films within many-body Green's function theory**

Physica Status Solidi B

241 (4) (2004) 925 - 934

*Fröbrich P. ; Kuntz P.J.*

**Anisotropic susceptibilities of thin ferromagnetic films within many-body Green function theory: single-ion anisotropy versus exchange anisotropy**

Journal of Physics: Condensed Matter

16 (2004) 3453 - 3463

*Ritschel T. ; Zülicke L. ; Kuntz P.J.*

**Cationic van-der-Waals complexes: Theoretical study of  $Ar_2H^+$  structure and stability**

Zeitschrift für Physikalische Chemie

218 (2004) 377 - 389

*Wang H.-Y. ; Dai Z.-H. ; Fröbrich P. ; Jensen P.J. ; Kuntz P.J.*

**Many-body Green's function theory of ferromagnetic Heisenberg systems with single-ion anisotropies in more than one direction**

Physical Review B

70 (2004) 134424/1 - 11

---

**SF5.Others**

---

*Gross D.*

**Exploring temperature at the nano-scale**

Physics World

(October) (2004) 23

*Gross D.H.E.*

**Classical equilibrium thermostatistics, "Sancta sanctorum of Statistical Mechanics" from nuclei to stars**

Physica A

340 (2004) 76 - 84

*Gross, D.H.E.*

**A new thermodynamics from nuclei to stars**

Entropy

6 (2004) 158 - 179

*Krappe H.J.*

**Analytic results on level densities**

International Journal of Modern Physics E

13 (1) (2004) 277 - 284

---

**SF5.Soft Matter**

---

*Basu A. ; Bhattacharjee J.K.*

**Scaling in a temperature quench in systems with a Lifshitz point: nonconserved and conserved order parameters**

Journal of Physics A

37 (2004) 1111 - 1123

Hallatschek O. ; Frey E. ; Kroy K.

**Overdamped stress relaxation in buckled rods**

Physical Review E

70 (2004) 031802/1 - 19

Kroy K. ; Cates M.E. ; Poon W.C.K.

**Cluster mode-coupling approach to weak gelation in attractive colloids**

Physical Review Letters

92 (14) (2004) 148302/1 - 4

Kroy K. ; Guo X.

**Comment on "Relevant length scale of barchan dunes"**

Physical Review Letters

93 (3) (2004) 039401/1

Sarlah A. ; Zumer S.

**Introduction to micro- and macroscopic descriptions of nematic liquid crystalline films:**

**Structural and fluctuation forces**

In: Surfaces and interfaces of liquid crystals, eds. Rasing T. [u.a.]

Springer, Berlin, 2004, 211 - 247

---

## SF6 - Trace Elements

---

### SF6.Analysis

---

Behne D. ; Alber D. ; Kyriakopoulos A.

**Selenium research in mammals using nuclear analytical methods and related techniques in conjunction with biochemical procedures**

Journal of Radioanalytical and Nuclear Chemistry

259 (2004) 435 - 439

Knispel T. ; Kühbacher M. ; Ruhnau C. ; Denkhaus E. ; Prange A. ; Kyriakopoulos A. ; Behne D.

**Analyse von Nickel-Spezies im Cytosol von Normal- und Tumorgewebe des menschlichen Gastrointestinaltrakts**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 76 - 79

### SF6.Clinical app.

---

Plotnikov A. ; Kyriakopoulos A. ; Behne D.

**Möglichkeiten der Laserablation-ICP-Massenspektrometrie zur Identifizierung von Metallo- und Metalloidproteinen durch Scannen von geelektrophoretisch getrennten Proteinen**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 148 - 157

### SF6.NAA

---

Clauss M. ; Schwarm A. ; Ortmann S. ; Alber D. ; Flach E.J. ; Kühne R. ; Hummel J. ; Streich W.J. ; Hofer H.

**Intake, ingesta retention, particle size distribution and digestibility in the hippopotamidae**

Comparative Biochemistry and Physiology A

139 (2004) 449 - 459

*Lin X. ; Alber D. ; Henkelmann R.*

**Elemental contents in Napoleon's hair cut before and after his death: did Napoleon die of arsenic poisoning?**

Analytical and Bioanalytical Chemistry

379 (2004) 218 - 220

*Milne C.J. ; Argyriou D.N. ; Chemseddine A. ; Aliouane N. ; Veira J. ; Landsgesell S. ; Alber D.*

**Revised superconducting phase diagram of hole-doped  $Na_x(H_3O)_2CoO_2 \cdot y H_2O$**

Physical Review Letters

93 (2004) 247007/1 - 4

---

**SF6. Proteins**

---

*Behne D. ; Alber D. ; Kyriakopoulos A.*

**Untersuchungen über Selen und Selenoproteine im Säugetierorganismus**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 3 - 9

*Bertelsmann H. ; Rösick U. ; Özaslan M. ; Alber D. ; Kyriakopoulos A. ; Hammadeh M. ; Behne, D.*

**Die Bestimmung von Selen und Zink in sehr geringen Mengen humaner Spermienkerne**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 116 - 120

*Bukalis K. ; Kyriakopoulos A. ; Özaslan M. ; Alber D. ; Behne D.*

**Determination of trace elements and trace-element-containing proteins in the lung of the rat**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 124 - 131

*Dalla Puppa L. ; Savaskan N.E. ; Kyriakopoulos A. ; Behne D.*

**Inhibitory effects of selenium on the activation and migration of microglia during oxidative stress**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 132 - 136

*Felix K. ; Gerstmeier S. ; Kyriakopoulos A. ; Howard O.M.Z. ; Dong H.F. ; Eckhaus M. ; Behne D. ; Bornkamm G.W. ; Janz S.*

**Selenium deficiency abrogates inflammation-dependent plasma cell tumors in mice**

Cancer Research

64 (2004) 2910 - 2917

*Hoppe B. ; Kyriakopoulos A. ; Behne D.*

**Selenhaltige Proteine in einem Zellkultur-Modell der Blut-Hirnschranke**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 137 - 142

*Kyriakopoulos A. ; Behne D. [Eds.]*

**Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie ; 19. Jahrestagung der Gesellschaft für Mineralstoffe und Spurenelemente e.V. Berlin, 06. bis 08. November 2003**

(Schriftenreihe der Gesellschaft für Mineralstoffe und Spurenelemente e.V.)

Wiss. Verl.-Ges., Stuttgart, 2004

Kyriakopoulos A. ; Graebert A. ; Kiesel C. ; Behne D.

**Lokalisierung eines 75 kDa-selenocysteinhaltigen Proteins in der lysosomalen Fraktion der Rattenleber**

In: Metalloproteine und Metalloidproteine : analytische Aspekte, Redoxprozesse, antioxidative Schutzsysteme, Interaktion Metalle - Proteine, Pathobiochemie, eds. Kyriakopoulos A. ; Behne D. Wiss. Verl.-Ges., Stuttgart, 2004, 143 - 147

Kyriakopoulos A. ; Hoppe B. ; Alber D. ; Graebert A. ; Kühbacher M. ; Weseloh G. ; Behne D.

**Identification of selenoproteins in the endoplasmatic reticulum of the rat kidney by combination of radioanalytical techniques and biochemical methods**

Journal of Radioanalytical and Nuclear Chemistry

259 (3) (2004) 453 - 458

Kyriakopoulos A. ; Hoppe B. ; Graebert A. ; Kühbacher M. ; Weseloh G. ; Behne D.

**Localization of selenoproteins in the perinuclear structure of the rat kidney**

Instrumentation Science and Technology

32 (2) (2004) 221 - 232

Schäfer K. ; Kyriakopoulos A. ; Gessner H. ; Grune T. ; Behne D.

**Effects of selenium deficiency on fatty acid metabolism in rats fed fish oil-enriched diets**

Journal of Trace Elements in Medicine and Biology

18 (2004) 89 - 97

Weseloh G. ; Kühbacher M. ; Bertelsmann H. ; Özaslan M. ; Kyriakopoulos A. ; Knöchel A. ; Behne D.

**Analysis of metal-containing proteins by gel electrophoresis and synchrotron radiation X-ray fluorescence**

Journal of Radioanalytical and Nuclear Chemistry

259 (3) (2004) 473 - 477

## SF7 - Measurement instrumentation

### **SF7.Detector**

Gebauer B.

**Towards detectors for next generation spallation neutron sources**

Nuclear Instruments and Methods in Physics Research A

535 (2004) 65 - 78

Gebauer B. ; Kirilov A. ; Levchanovski F. ; Litvinenko E. ; Nikiforov A. ; Prikhodko V.

**Development of data acquisition systems for the IBR-2 spectrometer complex**

In: Nuclear electronics & computing : 19th international symposium, Varna, Bulgaria, September 15 - 20, 2003 ; proceedings of the Symposium NEC '2003

JINR, Dubna, 2004, 135 - 140

Gebauer B. ; Alimov S.S. ; Klimov A.Yu. ; Levchanovski F.V. ; Litvinenko E.I. ; Nikiforov A.S. ; Prikhodko V.I. ; Richter G. ; Rogov V.V. ; Schulz Ch. ; Shashkin V.I. ; Wilhelm M. ; Wilpert Th.

**Development of hybrid low-pressure MSGC neutron detectors**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 358 - 364

Gebauer B. ; Schulz Ch. ; Levchanovsky F.V. ; Litvinenko E.I. ; Nikiforov A.S. ; Alimov S.S. ; Wilpert Th.

**Cross-fertilization between spallation neutron source and third generation synchrotron radiation detectors**

In: Synchrotron radiation instrumentation : Eighth International Conference on Synchrotron Radiation Instrumentation, San Francisco, California, 25 - 29 August 2003 ; SRI 03, eds. Warwick T. [u.a.]

American Inst. of Physics, Melville, NY, 2004, 1013 - 1018

*Levchanovski F.V. ; Gebauer B. ; Litvinenko E.I. ; Nikiforov A.S. ; Prikhodko V.I. ; Schulz Ch. ; Wilpert Th.*

**A PCI DAQ board for MWPC detectors with high-rate 2D delay line position readout**

Nuclear Instruments and Methods in Physics Research A

529 (2004) 413 - 416

*Levchanovskii F.V. ; Gebauer B. ; Litvinenko E.I. ; Nikiforov A.S. ; Prikhodko V.I. ; Schulz Ch. ; Wilpert Th.*

**DAQ board with PCI interface for MWPC detectors with delay line readout**

In: Condensed matter physics with neutrons at the IBR-2 pulsed reactor : Germany-JINR user meeting, Dubna, Russia, June 12-16, 2004

JINR, Dubna, 2004, 113

---

**SF7.Q3D**

*Beck C. ; Sánchez i Zafra A. ; Haas F. ; Papka P. ; Rauch V. ; Rousseau M. ; Azaiez F. ; Bednarczyk P. ; Curien D. ; Dorvaux O. ; Nourreddine A. ; Robin J. ; von Oertzen W. ; Gebauer B. ; Kokalova Ts. ; Thummerer S. ; de Angelis G. ; Gadea A. ; Lenzi S. ; Napoli D.R. ; Szilner S. ; Catford W. N. ; Jenkins D.*

**Search for  $^{12}C + ^{12}C$  molecule in  $^{24}Mg$ \* populated by  $^{24}Mg + ^{12}C$**

Nuclear Physics A

734 (2004) 453 - 456

*Bohlen H.G. ; Kalpakchieva R. ; von Oertzen W. ; Massey T.N. ; Gebauer B. ; Grimes S.M. ; Kokalova T. ; Lenz A. ; Milin M. ; Schulz Ch. ; Thummerer S. ; Torilov S. ; Tumino A.*

**Particle-hole structures of neutron-rich Be- and C-isotopes**

Nuclear Physics A

734 (2004) 345 - 348

*Bohlen H.G. ; Kalpakchieva R. ; von Oertzen W. ; Massey T.N. ; Gebauer B. ; Kokalova T. ; Ogloblin A.A. ; Schulz Ch. ; Thummerer S.*

**Structure of neutron-rich Beryllium and Carbon isotopes**

Nuclear Physics A

738 (2004) 333 - 336

*Khoa D.T. ; von Oertzen W.*

**Di-neutron elastic transfer in the  $^4He(^6He, ^6He)^4He$  reaction**

Physics Letters B

595 (2004) 193 - 201

*Kokalova Tz. ; von Oertzen W. ; Thummerer S. ; Bohlen H.G. ; Milin M. ; Tumino A. ; de Angelis G. ; Farnea E. ; Axiotis M. ; Marginean N. ; Napoli D.R. ; Lenzi S.M. ; Ur C. ; Rousseau M. ; Papka P.*

**Nuclear clusters and structure in light nuclei**

In: The labyrinth in nuclear structure : International Conference on the Labyrinth in Nuclear Structure, an EPS Nuclear Physics Divisional conference, Crete, Greece, 13 - 19 July 2003, eds. Bracco A. [u.a.] American Inst. of Physics, Melville, NY, 2004, 316 - 323

*Lépine-Szily A. ; Oliveira J.M. ; Galante D. ; Amadio G. ; Lichtenthäler R. ; Bohlen H.G. ; Ostrowski A.N. ; Blazevic A. ; Borcea C. ; Guimarães V. ; Lapoux V. ; Lima G. F. ; de Oliveira Santos F. ; Orr N.A. ; Roussel-Chomaz P. ; Stolla Th. ; Winfield J.S.*

**Spectroscopy of light proton-rich nuclei:  $^9C$  and  $^{15}F$**

Nuclear Physics A

734 (2004) 331 - 336

*Torilov S. ; Thummerer S. ; von Oertzen W. ; Kokalova Tz. ; de Angelis G. ; Bohlen H.G. ; Tumino A. ; Axiotis M. ; Farnea E. ; Marginean N. ; Martinez T. ; Napoli D.R. ; De Poli M. ; Lenzi S.M. ; Ur C. ; Rousseau M. ; Papka P.*

**Spectroscopy of  $^{40}Ca$  and negative-parity bands**

European Physical Journal A

19 (2004) 307 - 317

*von Oertzen W.*

**Nuclear structure with clusters and covalent valence neutrons**

Nuclear Physics A

734 (2004) 385 - 394

*von Oertzen W.*

**Chain states in  $^{13}\text{C}$  and  $^{14}\text{C}$ , nuclear polymers**

Nuclear Physics A

738 (2004) 264 - 267

*von Oertzen W. ; Bohlen H.G. ; Milin M. ; Kokalova Tz. ; Thummerer S. ; Tumino A. ; Kalpakchieva R. ; Massey T. N. ; Eisermann Y. ; Graw G. ; Faestermann T. ; Hertenberger R. ; Wirth H.-F.*

**Search for cluster structure of excited states in  $^{14}\text{C}$**

European Physical Journal A

21 (2004) 193 - 215

*von Oertzen W. ; Peter I. ; Thummerer S. ; Bohlen H.G. ; Gebauer B. ; Gerl J. ; Kaspar M. ; Kozhoukharov I. ; Kröll T. ; Rejmund M. ; Wollersheim H.J.*

**Selection of cold transfer and enhanced neutron-pair transfer in the  $^{206}\text{Pb} + ^{118}\text{Sn}$  reaction**

European Physical Journal A

20 (2004) 153 - 156

## SE - Solar Energy Research

### SE1 - Silicon photovoltaics

#### ISL.User

Bohne W. ; Röhrich J. ; Schöpke A. ; Selle B. ; Sieber I. ; Fuhs W. ; del Prado A. ; San Andres E. ; Martil I. ; Gonzales-Diaz G.

#### **Compositional analysis of thin SiOxNy:H films by heavy-ion ERDA, standard RBS, EDX and AES: a comparison**

Nuclear Instruments and Methods in Physics Research B  
217 (2004) 237 - 245

del Prado A. ; San Andres E. ; Martil I. ; Gonzalez-Diaz G. ; Bohne W. ; Röhrich J. ; Selle B.  
**Influence of H on the composition and atomic concentrations of "N-rich" plasma deposited  $SiO_x N_y H_z$  films**  
Journal of Applied Physics  
95 (10) (2004) 5373 - 5382

#### SE1.Cells

Böhme C. ; Lips K

#### **Investigation of electronic transitions in semiconductors with pulsed electrically detected magnetic resonance**

Applied Magnetic Resonance  
27 (2004) 109 - 122

Böhme C. ; Lips K.

#### **The nature of dangling bond recombination in $\mu$ c-Si:H**

Journal of Non-Crystalline Solids  
338-340 (2004) 434 - 439

Böhme C. ; Lips K.

#### **A pulsed EDMR study of hydrogenated microcrystalline silicon at low temperatures**

Physica Status Solidi C  
1 (5) (2004) 1255 - 1274

Brammer T. ; Stiebig H. ; Lips K.

#### **Numerical analysis of the spin-dependent dark current in microcrystalline silicon solar cells**

Applied Physics Letters  
85 (2004) 1625 - 1626

Brammer T. ; Stiebig H. ; Lips K.

#### **Simulation of the spin-dependent dark current in microcrystalline silicon solar cells**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]  
WIP, ETA, Munich, Florence, 2004, 1609 - 1612

Brehme S. ; Knipper U. ; Petter K. ; Sieber I. ; Rau B. ; Lips K. ; Fuhs W.

#### **Electronic properties of low-temperature epitaxial Si grown by ECR-CVD**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]  
WIP, ETA, Munich, Florence, 2004, 1225 - 1228

Brendel K. ; Nickel N.H. ; Lips K. ; Fuhs W.

#### **An electron-spin-resonance study of laser crystallized polycrystalline silicon**

Journal of Non-Crystalline Solids  
338-340 (2004) 262 - 265

*Brüggemann R. ; Brehme S. ; Kleider J.P. ; Gueunier M.E. ; Bronner W.*

**Effects of proton irradiation on the photoelectronic properties of microcrystalline silicon**

Journal of Non-Crystalline Solids

338-340 (2004) 477 - 480

*Chukichev M.V. ; Forsh P.A. ; Fuhs W. ; Kazanskii A.G.*

**Creation of metastable defects in microcrystalline silicon films by keV electron irradiation**

Journal of Non-Crystalline Solids

338-340 (2004) 378 - 381

*Fuhs W.*

**Amorphous hydrogenated silicon, a-Si:H**

In: Silicon : evolution and future of a technology, eds. Siffert P. ; Krimmel E.

Springer, Berlin, 2004, 123 - 137

*Fuhs W. ; Gall S. ; Nickel N.H. ; Schmidt M.*

**Crystalline silicon thin-film solar cells**

In: Photovoltaik: Materialforschung in Deutschland : Workshop 11. - 12.12.2003 in Berlin, eds.

Stadermann G.

Forschungsverbund Sonnenenergie c/o Hahn-Meitner-Inst., Berlin, 2004, 165 - 169

*Fuhs W. ; Gall S. ; Rau B. ; Schmidt M. ; Schneider J.*

**A novel route to a polycrystalline silicon thin-film solar cell**

Solar Energy

77 (2004) 961 - 968

*Fuhs W. ; Stiebig H. ; Reber S.*

**Dünnschicht-Solarzellen aus Silicium**

In: Photovoltaik - neue Horizonte : Jahrestagung des Forschungsverbunds Sonnenenergie, 25. - 26.

September 2003 in Berlin, eds. Stadermann G.

Forschungsverbund Sonnenenergie c/o Hahn-Meitner-Inst., Berlin, 2004, 42 - 47

*Gall S. ; Schneider J. ; Klein J. ; Muske M. ; Rau B. ; Conrad E. ; Sieber I. ; Fuhs W. ; Ornaghi C. ; Van Gestel D. ; Gordon I. ; Van Nieuwenhuysen K. ; Beaucarne G. ; Poortmans J. ; Stöger-Pollach M. ; Bernardi, J. ; Schattschneider P. ; Wang Y. ; Van Der Biest O.*

**Crystalline silicon thin-film solar cells on foreign substrates: The European project METEOR**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 475 - 478

*Klein J. ; Schneider J. ; Muske M. ; Gall S. ; Fuhs W.*

**Aluminium-induced crystallisation of amorphous silicon: influence of the aluminium layer on the process**

Thin Solid Films

451-452 (2004) 481 - 484

*Klein J. ; Schneider J. ; Muske M. ; Gall S. ; Fuhs W.*

**Aluminium-induced crystallisation of amorphous silicon: the influence of the aluminium layer on the process**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1135 - 1138

*Kytina I.G. ; Kytin V.G. ; Lips K.*

**High power polymer dye laser with improved stability**

Applied Physics Letters

84 (24) (2004) 4902 - 4904

- Laades A. ; Kiefel K. ; Korte L. ; Brendel K. ; Stangl R. ; Schmidt M. ; Fuhs W.  
**Surface passivation of crystalline silicon wafers by hydrogenated amorphous silicon probed by time resolved surface photovoltage and photoluminescence spectroscopy**  
In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]  
WIP, ETA, Munich, Florence, 2004, 1170 - 1173
- Lips K. ; Böhme C. ; Fuhs W.  
**Recombination in  $\mu$ c-Si:H pin solar cells**  
Journal of Non-Crystalline Solids  
338-340 (2004) 702 - 705
- Nickel N.H. ; Brendel K.  
**Influence of laser crystallization on the hydrogen density-of-states distribution**  
Journal of Non-Crystalline Solids  
338-340 (2004) 295 - 298
- Nickel N.H. ; Brendel K.  
**Hydrogen bonding in ZnO**  
In: Hydrogen in semiconductors : symposium held April 13 - 14, 2004, San Francisco, California, U.S.A. ; Symposium H, held at the 2004 MRS spring meeting, eds. Nickel N.H. [u.a.]  
Materials Research Society, Warrendale, Pa., 2004, 137 - 142
- Nickel N.H. ; Brendel K. ; Saleh R.  
**Laser crystallization of hydrogenated amorphous silicon**  
Physica Status Solidi C  
1 (5) (2004) 1154 - 1168
- Nickel N.H. ; McCluskey M.D. ; Zhang S. [Eds.]  
**Hydrogen in semiconductors : symposium held April 13 - 14, 2004, San Francisco, California, U.S.A. ; Symposium H, held at the 2004 MRS spring meeting**  
(Materials Research Society symposium proceedings ; 813)  
Materials Research Society, Warrendale, Pa., 2004
- Nickel N.H. [Guest Ed.]  
**Amorphous and microcrystalline silicon - materials science and devices : in honour of Prof. Dr. Walther Fuhs ; [Festschrift]**  
(Physica status solidi : C, Conferences and critical reviews ; 1,5)  
WILEY-VCH, Weinheim, 2004, 1092 - 1323
- Poortmans J. ; Reber S. ; Gall S. ; Zahedi C. ; Alonso J.  
**European cluster on high- and intermediate temperature thin-film crystalline Si solar cells R&D: overview of running projects and underlying roadmap**  
In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]  
WIP, ETA, Munich, Florence, 2004, 397 - 402
- Rau B. ; Schneider J. ; Muske M. ; Sieber I. ; Gall S. ; Stöger-Pollach M. ; Schattschneider P. ; Fuhs W.  
**Epitaxial Si growth on polycrystalline Si seed layers at low temperature**  
In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]  
WIP, ETA, Munich, Florence, 2004, 1131 - 1134
- Rau B. ; Sieber I. ; Schneider J. ; Muske M. ; Stöger-Pollach M. ; Schattschneider P. ; Gall S. ; Fuhs W.  
**Low-temperature Si epitaxy on large-grained polycrystalline seed layers by electron-cyclotron resonance chemical vapor deposition**  
Journal of Crystal Growth  
270 (2004) 396 - 401

Rau B. ; Sieber I. ; Selle B. ; Brehme S. ; Knipper U. ; Gall S. ; Fuhs W.

**Homo-epitaxial Si absorber layers grown by low-temperature ECRCVD**

Thin Solid Films

451-452 (2004) 644 - 648

Rein S. ; Lips K. ; Schmidt J.

**Materialforschung mit neuen analytischen Methoden**

In: Photovoltaik - neue Horizonte : Jahrestagung des Forschungsverbunds Sonnenenergie, 25. - 26.

September 2003 in Berlin, eds. Stadermann G.

Forschungsverbund Sonnenenergie c/o Hahn-Meitner-Inst., Berlin, 2004, 60 - 65

Reinig P. ; Fenske F. ; Selle B. ; Bohne W. ; Röhrich J. ; Sieber I. ; Fuhs W.

**Low-temperature silicon homoepitaxial growth by pulsed magnetron sputtering**

Applied Surface Science

227 (2004) 114 - 121

Saleh R. ; Nickel N.H.

**Excimer laser crystallized phosphorous-doped polycrystalline silicon**

Journal of Non-Crystalline Solids

338-340 (2004) 143 - 146

Saleh R. ; Nickel N.H.

**Silicon-hydrogen bonds in boron and phosphorous doped polycrystalline silicon thin films**

In: Amorphous and nanocrystalline silicon science and technology - 2004 : symposium held April 13 -

16, 2004, San Francisco, California, U.S.A. ; Symposium A, held at the 2004 MRS spring meeting, eds.

Ganguly G. [u.a.]

Materials Research Society, Warrendale, Pa., 2004, A4.4.1 - A4.4.6

Schneider J. ; Klein J. ; Muske M. ; Gall S. ; Fuhs W.

**Aluminium-induced crystallization of amorphous silicon: preparation effect on growth kinetics**

Journal of Non-Crystalline Solids

338-340 (2004) 127 - 130

Schneider J. ; Klein J. ; Muske M. ; Hübener K. ; Gall S. ; Fuhs W.

**Aluminium-induced crystallisation of amorphous silicon: interface influence on grain growth**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international

conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1145 - 1148

---

**SE1.Hetero**

---

Angermann H. ; Henrion W. ; Rebien M. ; Röseler A.

**Wet-chemical preparation and spectroscopic characterization of Si interfaces**

Applied Surface Science

235 (2004) 322 - 339

Angermann H. ; Henrion W. ; Rebien M. ; Röseler A.

**Wet-chemical passivation and characterization of silicon interfaces for solar cell applications**

Solar Energy Materials and Solar Cells

83 (2004) 331 - 346

Bresler M.S. ; Gusev O.B. ; Terukov E.I. ; Fuhs W. ; Froitzheim A. ; Gudovskikh A.S. ; Kleider J.P. ;

Weiser G.

**Electroluminescence from amorphous-crystalline silicon heterostructures**

Journal of Non-Crystalline Solids

338-340 (2004) 440 - 443

*Gudovskikh A.S. ; Kleider J.-P. ; Stangl R. ; Schmidt M. ; Fuhs W.*

**Interface properties of a-Si:H/c-Si heterojunctions investigated by admittance spectroscopy**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 697 - 700

*Gudovskikh A.S. ; Kleider J.P. ; Froitzheim A. ; Fuhs W. ; Terukov E.I.*

**Investigation of a-Si:H/c-Si heterojunction solar cells interface properties**

Thin Solid Films

451-452 (2004) 345 - 349

*Rappich J.*

**Initial stages of porous silicon formation: An in-situ investigation of the electronic properties and surface morphology**

Physica Status Solidi C

1 (5) (2004) 1169 - 1178

*Schmidt M. ; Korte L. ; Kiefeloth K. ; Schoepke A. ; Stangl R. ; Laades A. ; Conrad E. ; Brendel K. ; Fuhs W. ; Scherff M. ; Fahrner W.*

**Basic electronic properties of a-Si:H/c-Si heterostructure solar cells**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 592 - 595

*Schmidt M. ; Schoepke A. ; Korte L. ; Milch O. ; Fuhs W.*

**Density distribution of gap states in extremely thin a-Si:H layers on crystalline silicon wafers**

Journal of Non-Crystalline Solids

338-340 (2004) 211 - 214

*Stangl R. ; Froitzheim A. ; Kriegel M. ; Brammer T. ; Kirste S. ; Elstner L. ; Stiebig H. ; Schmidt M. ; Fuhs W.*

**AFORS-HET, a numerical PC-program for simulation of heterojunction solar cells, Version 1.1 (open-source on demand), to be distributed for public use**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1497 - 1500

*Stangl R. ; Schaffarzik D. ; Laades A. ; Kiefeloth K. ; Schmidt M. ; Fuhs W.*

**Characterization of interfaces in amorphous/crystalline silicon heterojunction solar cells by surface photovoltage spectroscopy**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 686 - 689

---

**SE1.Others**

---

*Birdwell A.G. ; Shaffner T.J. ; Chandler-Horowitz D. ; Buh G.H. ; Rebien M. ; Henrion W. ; Stauß P. ; Behr G. ; Malikova L. ; Pollak F.H. ; Littler C.L. ; Glosser R. ; Collins S.*

**Excitonic transitions in  $\beta$ -FeSi<sub>2</sub> epitaxial films and single crystals**

Journal of Applied Physics

95 (5) (2004) 2441 - 2447

*Bulychev B.M. ; Lunin R.A. ; Krechetov A.V. ; Kulbachinskii V.A. ; Kytin V.G. ; Poholok K.V. ; Lips K. ; Rappich J.*

**Heterometallic fullerides of Fe and Cu groups with the composition  $K_2MC_{60}$**

( $M = Fe^{+2}, Fe^{+3}, Co^{+2}, Ni^{+2}, Cu^{+1}, Cu^{+2}, Ag^{+1}$ )

Journal of Physics and Chemistry of Solids

65 (2004) 337 - 342

Meyer C. ; Harneit W. ; Naydenov B. ; Lips K. ; Weidinger A.

**N@C<sub>60</sub> and P@C<sub>60</sub> as quantum bits**

Applied Magnetic Resonance

27 (2004) 123 - 132

Migas D.B. ; Miglio L. ; Rebien M. ; Henrion W. ; Stauss P. ; Birdwell A.G. ; Davydov A.V. ; Shaposhnikov V.L. ; Borisenko V.E.

**Structural, electronic, and optical Properties of  $\beta$ -(Fe<sub>1-x</sub>Co<sub>x</sub>)Si<sub>2</sub>**

Physical Review B

69 (2004) 115204/1 - 7

Peters S. ; Leihkauf R. ; Wagemann H.G. ; Boit C.

**I(V)-characteristic of Si thin-film solar cells within a monolithically series-interconnected SOI module: measurement and simulation**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 690 - 693

Shaposhnikov V.L. ; Krivosheeva A.V. ; Ivanenko L.I. ; Filonov A.B. ; Borisenko V.E. ; Rebien M. ; Henrion W. ; Migas D.B. ; Miglio L. ; Behr G. ; Schumann J.

**Structural, electronic and optical properties of semiconducting rhenium silicide**

Journal of Physics: Condensed Matter

16 (2004) 303 - 312

Weiss V. ; Bohne W. ; Röhrich J. ; Strub E. ; Bloeck U. ; Sieber I. ; Ellmer K. ; Mientus R. ; Porsch F.

**Reactive magnetron sputtering of molybdenum sulfide thin films: In situ synchrotron x-ray diffraction and transmission electron microscopy study**

Journal of Applied Physics

95 (12) (2004) 7665 - 7673

Würz R. ; Meeder A. ; Fuertes Marrón D. ; Schedel-Niedrig Th. ; Knop-Gericke A. ; Lips K.

**Native oxidation of CuGaSe<sub>2</sub> crystals and thin films studied by electron paramagnetic resonance and photoelectron spectroscopy**

Physical Review B

70 (2004) 205321/1 - 10

del Prado A. ; San Andrés E. ; Martíl I. ; González-Díaz G. ; Kliefoth K. ; Füssel W.

**Annealing effects on the interface and insulator properties of plasma-deposited Al/SiO<sub>x</sub>N<sub>y</sub>H<sub>z</sub>/Si devices**

Semiconductor Science and Technology

19 (2004) 133 - 141

---

## SE2.Analytics

---

Skryshevskyy V.A. ; Dittrich Th. ; Rappich J.

**Infrared - active defects in a TiO<sub>2</sub> mixture of coexisting anatase and rutile phases**

Physica Status Solidi A

201 (1) (2004) 157 - 161

---

## SE2.Concepts

---

Merson A. ; Dittrich Th. ; Zidon Y. ; Rappich J. ; Shapira Y.

**Charge transfer from TiO<sub>2</sub> into adsorbed benzene diazonium compounds**

Applied Physics Letters

85 (6) (2004) 1075 - 1076

## **SE1 - Silicon photovoltaics Addenda to 2003**

### **SE1.Cells**

**Rau B. ; Selle B. ; Knipper U. ; Brehme S. ; Sieber I. ; Stöger M. ; Schattschneider P. ; Gall S. ; Fuhs W.**  
**Low-temperature epitaxial Si absorber layers grown by electron-cyclotron resonance chemical vapor deposition**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. B, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 1237 - 1240

**Schneider J. ; Klein J. ; Muske M. ; Schöpke A. ; Gall S. ; Fuhs W.**

**Aluminium-induced crystallisation of amorphous silicon: influence of oxidation conditions**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. A, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 106 - 109

**Stöger-Pollach M. ; Hebert C. ; Karl-Rückert E.C. ; Schattschneider P. ; Rau B. ; Gall S. ; Zandbergen H.W.**

**Investigations of core level states in epitaxial grown Si layers by electron energy loss spectrometry**

In: Microscopy of semiconducting materials 2003 : proceedings of the Institute of Physics Conference, Cambridge University, 31 March - 3 April 2003 ; MSM XIII, eds. Cullis A.G. ; Midgley P.A.  
Institute of Physics Publ., Bristol, 2003, 37 - 40

**Stöger-Pollach M. ; Schattschneider P. ; Schneider J. ; Gall S. ; Zandbergen H.W.**

**Investigations of bonding at an aluminium (III) oxide membrane in Si using ELNES separation**

In: Microscopy of semiconducting materials 2003 : proceedings of the Institute of Physics Conference, Cambridge University, 31 March - 3 April 2003 ; MSM XIII, eds. Cullis A.G. ; Midgley P.A.  
Institute of Physics Publ., Bristol, 2003, 401 - 404

### **SE1.Hetero**

**Froitzheim A.M. ; Scherff M.L.D. ; Ulyashin A. ; Milch O. ; Schmidt M. ; Fahrner W.R. ; Fuhs W.**

**Amorphous / crystalline silicon heterojunction solar cells with intrinsic buffer layer**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. A, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 180 - 183

**Froitzheim, A.; Stangl, R.; Elstner, L.; Kriegel, M; Fuhs, W.**

**AFORS-HET: a computer-program for the simulation of heterojunction solar cells to be distributed for public use**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. 1, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 279 - 282

*Stangl R. ; Froitzheim A. ; Schmidt M. ; Fuhs W.*

**Design criteria for amorphous/crystalline silicon heterojunction solar cells, - a simulation study**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. 2, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 1005 - 1008

**SE2.Semico**

*Kötschau I. ; Bär M. ; Fischer Ch.-H. ; Grimm A. ; Lauermann I. ; Reichardt J. ; Sieber I. ; Sokoll S. ; Lux-Steiner M.Ch. ; Weinhardt L. ; Fuchs O. ; Heske C. ; Jung C. ; Gudat W. ; Niesen T.P. ; Karg F.*

**X-ray emission study of the  $ZnO/Cu(In, Ga)(S, Se)_2$  interface before and after damp heat treatment**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. A, eds. Kurokawa K. [u.a.]  
Osaka, 2003, 523 - 526

**SE2 - Heterogeneous material systems**

**SE1.Others**

*Meyer C. ; Harneit W. ; Naydenov B. ; Lips K. ; Weidinger A.*

**N@ $C_{60}$  and P@ $C_{60}$  as quantum bits**

Applied Magnetic Resonance

27 (2004) 123 - 132

*Würz R. ; Meeder A. ; Fuertes Marrón D. ; Schedel-Niedrig Th. ; Knop-Gericke A. ; Lips K.*

**Native oxidation of  $CuGaSe_2$  crystals and thin films studied by electron paramagnetic resonance and photoelectron spectroscopy**

Physical Review B

70 (2004) 205321/1 - 10

**SE2.Analytics**

*Douhéret O. ; Anand S. ; Glatzel Th. ; Maknys K. ; Sadewasser S.*

**Characterization of quantum wells by cross-sectional Kelvin probe force microscopy**

Applied Physics Letters

85 (22) (2004) 5245 - 5247

*Duhayon N. ; Eyben P. ; Fouchier M. ; Clarysse T. ; Vandervorst W. ; Alvarez D. ; Schoemann S. ; Ciappa M. ; Stangoni M. ; Fichtner W. ; Formanek P. ; Kittler M. ; Rainieri V. ; Giannazzo F. ; Goghero D. ; Rosenwaks Y. ; Shikler R. ; Saraf S. ; Sadewasser S. ; Barreau N. ; Glatzel T. ; Verheijen M. ; Mentink S.A.M. ; von Sprikelsen M. ; Maltezopoulos T. ; Wiesendanger R. ; Hellmann L.*

**Assessing the performance of two-dimensional dopant profiling techniques**

Journal of Vacuum Science and Technology B

22 (1) (2004) 385 - 393

*Glatzel Th. ; Steigert H. ; Klenk R. ; Lux-Steiner M.Ch. ; Niesen T.P. ; Visbeck S.*

**$Zn_{1-x}Mg_xO$  as a window layer in completely Cd-free  $Cu(In, Ga)(S, Se)_2$  based thin film solar cells**

In: Technical Digest. 14th International Photovoltaic Science and Engineering Conference 26-30

January 2004. Bangkok, Thailand. PVSEC-14

2004, 707 - 708

Papathanasiou O. ; Siebentritt S. ; Bohne W. ; Klaer J. ; Lauermann I. ; Rahne K. ; Röhrich J. ; Rusu M. ; Strub E. ; Lux-Steiner M.Ch.

**Cd-free buffer layers for  $CuInS_2$  solar cells prepared by a dry process**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.] WIP, ETA, Munich, Florence, 2004, 1951 - 1954

Rosenwaks Y. ; Shikler R. ; Glatzel Th. ; Sadewasser S.

**Kelvin probe force microscopy of semiconductor surface defects**

Physical Review B  
70 (2004) 085320/1 - 7

Sadewasser S. ; Carl P. ; Glatzel Th. ; Lux-Steiner M.Ch.

**Influence of uncompensated electrostatic force on height measurements in non-contact atomic force microscopy**

Nanotechnology  
15 (2004) S14 - S18

Skryshevskyy V.A. ; Dittrich Th. ; Rappich J.

**Infrared - active defects in a  $TiO_2$  mixture of coexisting anatase and rutile phases**

Physica Status Solidi A  
201 (1) (2004) 157 - 161

---

## SE2.Chemistry

---

Bär M. ; Bohne W. ; Röhrich J. ; Strub E. ; Lindner S. ; Lux-Steiner M.C. ; Fischer Ch.-H. ; Niesen T.P. ; Karg F.

**Determination of the band gap depth profile of the penternary  $Cu(In_{(1-X)}Ga_X)(S_YSe_{(1-Y)})_2$  chalcopyrite from its composition gradient**

Journal of Applied Physics  
96 (7) (2004) 3857 - 3860

Göbel R. ; Fischer Ch.-H.

**New findings on the original surface treatment of the Münnerstadt altarpiece**

In: Tilman Riemenschneider, c. 1460 - 1531 : proceedings of the Symposium "Tilman Riemenschneider: A Late Medieval Master Sculptor", held 3-4 December 1999 in Washington / National Gallery of Art, Washington, eds. Chapuis J. Yale Univ. Press, New Haven, 2004, 125 - 129

Sankapal B.R. ; Goncalves E. ; Ennaoui A. ; Lux-Steiner M.Ch.

**Wide band gap p-type windows by CBD and SILAR methods**

Thin Solid Films  
451-452 (2004) 128 - 132

Sankapal B.R. ; Sartale S.D. ; Lokhande C.D. ; Ennaoui A.

**Chemical synthesis of Cd-free wide band gap materials for solar cells**

Solar Energy Materials and Solar Cells  
83 (2004) 447 - 458

Sartale S.D. ; Ennaoui A. ; Lux-Steiner M.

**Fabrication of electroplated  $CuInS_2$  thin film based solar cells**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.] WIP, ETA, Munich, Florence, 2004, 1988 - 1991

**SE2.Concepts***Dittrich Th.***Retarded surface photovoltage response from dye molecules adsorbed on metal oxide surfaces**

Physica Status Solidi A

201 (11) (2004) R69 - R71

*Dittrich Th. ; Dloczik L. ; Gumin'skaya T. ; Lux-Steiner M.Ch. ; Grigorieva N. ; Urban I.***Photovoltaic characterization of CuAlO<sub>2</sub> crystallites**

Applied Physics Letters

85 (5) (2004) 742 - 744

*Dloczik L. ; Koenenkamp R.***Nanostructured metal sulfide surfaces by ion exchange processes**

Journal of Solid State Electrochemistry

8 (2004) 142 - 146

*Dloczik L. ; Tomm Y. ; Könenkamp R. ; Lux-Steiner M.C. ; Dittrich Th.***CuAlO<sub>2</sub> prepared by ion exchange from LiAlO<sub>2</sub>**

Thin Solid Films

451-452 (2004) 116 - 119

*Mahrov B. ; Boschloo G. ; Hagfeldt A. ; Dloczik L. ; Dittrich Th.***Photovoltaic study of charge injection from dye molecules into transparent hole and electron conductors**

Applied Physics Letters

84 (26) (2004) 5455 - 5457

*Mehring M. ; Scherer W. ; Weidinger A.***Pseudoentanglement of spin states in the multilevel <sup>15</sup>N@C<sub>60</sub> system**

Physical Review Letters

93 (20) (2004) 206603/1 - 4

*Merson A. ; Dittrich Th. ; Zidon Y. ; Rappich J. ; Shapira Y.***Charge transfer from TiO<sub>2</sub> into adsorbed benzene diazonium compounds**

Applied Physics Letters

85 (6) (2004) 1075 - 1076

*Toulemonde M. ; Trautmann C. ; Balanzat E. ; Hjort K. ; Weidinger A.***Track formation and fabrication of nanostructures with MeV-ion beams**

Nuclear Instruments and Methods in Physics Research B

216 (2004) 1 - 8

*Weidinger A.***Ion tracks - a new route to nanotechnology**

Europhysics News

35 (5) (2004)

*Zollondz J.-H. ; Weidinger A.***Towards new applications of ion tracks**

Nuclear Instruments and Methods in Physics Research B

225 (2004) 178 - 183

**SE2.Contacts***Klenk R. ; Glatzel T. ; Grimm A. ; Fischer C.-H. ; Kirsch M. ; Lauermann I. ; Reichardt J. ; Steigert H. ; Niesen T. P. ; Visbeck S.***Die Grenzfläche in Chalkopyrit-Solarzellen - Ein neuer Ansatz**

In: Photovoltaik - neue Horizonte : Jahrestagung des Forschungsverbunds Sonnenenergie, 25. - 26. September 2003 in Berlin, eds. Stadermann G.

Forschungsverbund Sonnenenergie c/o Hahn-Meitner-Inst., Berlin, 2004, 94 - 95

*Siebentritt S.*

**Alternative buffers for chalcopyrite solar cells**

Solar Energy

77 (2004) 767 - 775

*Siebentritt S. ; Walk P. ; Fiedeler U. ; Lauermann I. ; Rahne K. ; Lux-Steiner M.Ch. ; Niesen Th.P. ; Karg F.*

**MOCVD as a dry deposition method of ZnSe buffers for  $Cu(In, Ga)(S, Se)_2$  solar cells**

Progress in Photovoltaics: Research and Applications

12 (2004) 333 - 338

---

**SE2.Others**

---

*Kaufmann C.A. ; Neisser A. ; Scheer R. ; Klenk R. ; Kroon M.A.*

**$Cu(In, Ga)Se_2$  thin film solar cells on flexible substrates**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 3637 - 3639

---

**SE2.Semico**

---

*Bakehe S. ; Klenk R. ; Lux-Steiner M.Ch.*

**Widegap  $Cu(InGa)S_2$  thin film solar cells on transparent substrates**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1714 - 1717

*Fuertes Marrón D. ; Glatzel Th. ; Meeder A. ; Schedel-Niedrig Th. ; Sadewasser S. ; Lux-Steiner M.Ch.*

**Electronic structure of secondary phases in Cu-rich  $CuGaSe_2$  solar cell devices**

Applied Physics Letters

85 (17) (2004) 3755 - 3757

*Klenk R. ; Bakehe S. ; Kaigawa R. ; Neisser A. ; Reiβ J. ; Lux-Steiner M.Ch.*

**Optimising the open-circuit voltage of  $Cu(In,Ga)S_2$  solar cells-design and analysis**

Thin Solid Films

451-452 (2004) 424 - 429

*Rusu M. ; Wiesner S. ; Fuertes Marrón D. ; Meeder A. ; Doka S. ; Bohne W. ; Lindner S. ; Schedel-Niedrig Th. ; Giesen Ch. ; Heukens M. ; Lux-Steiner M.Ch.*

**$CuGaSe_2$  thin films prepared by a novel CCSVT technique for photovoltaic application**

Thin Solid Films

451-452 (2004) 556 - 561

*Schuler S. ; Siebentritt S. ; Nishiwaki S. ; Rega N. ; Beckmann J. ; Brehme S. ; Lux-Steiner M.Ch.*

**Self-compensation of intrinsic defects in the ternary semiconductor  $CuGaSe_2$**

Physical Review B

69 (2004) 045210/1 - 9

*Shan W. ; Walukiewicz W. ; Wu J. ; Yu K.M. ; Ager III J.W. ; Siebentritt S. ; Rega N.*

**Pressure-dependent photoluminescence study of  $CuGaSe_2$**

Physica Status Solidi B

241 (14) (2004) 3117 - 3122

*Siebentritt S. ; Rega N. ; Zajogin A. ; Lux-Steiner M.Ch.*

**Do we really need another PL study of  $CuInSe_2$ ?**

Physica Status Solidi C

1 (9) (2004) 2304 - 2310

*Strub E. ; Bär M. ; Bohne W. ; Fischer Ch.-H. ; Leupolt B. ; Lindner S. ; Röhrich J. ; Schöneich B.*

**Intensity calibration of an FT-IR spectrometer by heavy-ion ERDA**

Nuclear Instruments and Methods in Physics Research B

219-220 (2004) 499 - 502

**SE3.Baseline**

Klaer J. ; Scheer R. ; Klenk R. ; Boden A. ; Köble C.

**Stress behaviour of CuInS<sub>2</sub> thin film PV-modules studied by a specific test structure**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.] WIP, ETA, Munich, Florence, 2004, 1847 - 1850

Meyer N. ; Luck I. ; Rühle U. ; Klaer J. ; Klenk R. ; Lux-Steiner M.Ch. ; Scheer R.

**Towards thin film module production using a simplified CIS process**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.] WIP, ETA, Munich, Florence, 2004, 1698 - 1701

Scheer R. ; Klenk R. ; Klaer J. ; Luck I.

**CuInS<sub>2</sub> based thin film photovoltaics**

Solar Energy

77 (2004) 777 - 784

**SE2 - Heterogeneous material systems****Addenda to 2003****SE2.Analytics**

Barreau N. ; Douhéret O. ; Sadewasser S. ; Glatzel Th. ; Steigert H. ; Maknys K. ; Anand S. ; Lux-Steiner M.Ch.

**Scanning probe microscopies for the electrical characterization of GaAs pn junctions**

In: Scanning tunneling microscopy/spectroscopy and related techniques : 12th international conference, STM '03, Eindhoven, The Netherlands, 21 - 25 July 2003, eds. Koenraad P.M. [u.a.] American Inst. of Physics, Melville, NY, 2003, 669 - 676

**SE2.Chemistry**

Eisele W. ; Ennaoui A. ; Schubert-Bischoff P. ; Giersig M. ; Pettenkofer C. ; Krauser J. ; Lux-Steiner M. ; Zweigart S. ; Karg F.

**XPS, TEM and NRA investigations of Zn(Se,OH)/Zn(OH)<sub>2</sub> films on Cu(In,Ga)(S,Se)<sub>2</sub> substrates for highly efficient solar cells**

Solar Energy Materials and Solar Cells

75 (2003) 17 - 26

Ennaoui A. ; Eisele W. ; Lux-Steiner M. ; Niesen T.P. ; Karg F.

**Highly efficient Cu(Ga,In)(S,Se)<sub>2</sub> thin film solar cells with zinc-compound buffer layers**

Thin Solid Films

431-432 (2003) 335 - 339

Rusu M. ; Eisele W. ; Würz R. ; Ennaoui A. ; Lux-Steiner M.Ch. ; Niesen T.P. ; Karg F.

**Current transport in ZnO/ZnS/Cu(In,Ga)(S,Se)<sub>2</sub> solar cell**

Journal of Physics and Chemistry of Solids

64 (2003) 2037 - 2040

**SE2.Concepts**

Belaidi A. ; Bayon R. ; Dloczik L. ; Ernst K. ; Lux-Steiner M.Ch. ; Könenkamp R.

**Comparison of different thin film absorbers used in eta-solar cells**

Thin Solid Films

431-432 (2003) 488 - 491

*Chen J. ; Könenkamp R.*

**Vertical nanowire transistor in flexible polymer foil**

Applied Physics Letters

82 (26) (2003) 4782 - 4784

*Ernst K. ; Belaidi A. ; Könenkamp R.*

**Solar cell with extremely thin absorber on highly structured substrate**

Semiconductor Science and Technology

18 (2003) 475 - 479

*Jakes P. ; Dinse K.-P. ; Meyer C. ; Harneit W. ; Weidinger A.*

**Purification and optical spectroscopy of  $N@C_{60}$**

Physical Chemistry Chemical Physics

5 (2003) 4080 - 4083

*Kijatkina O. ; Krunks M. ; Mere A. ; Mahrov B. ; Dloczik L.*

**$CuInS_2$  sprayed films on different metal oxide underlayers**

Thin Solid Films

431-432 (2003) 105 - 109

*Koenigsfeld N. ; Hofäss H. ; Schwen D. ; Weidinger A. ; Trautmann C. ; Kalish R.*

**Field emission enhancement by graphitic nano-scale channels through ta-C layers**

Diamond and Related Materials

12 (2003) 469 - 473

*Zollondz J.-H. ; Krauser J. ; Weidinger A. ; Trautmann C. ; Schwen D. ; Ronning C. ; Hofsaess H. ; Schultrich B.*

**Conductivity of ion tracks in diamond-like carbon films**

Diamond and Related Materials

12 (2003) 938 - 941

## **SE2.Semico**

*Kötschau I. ; Bär M. ; Fischer Ch.-H. ; Grimm A. ; Lauermann I. ; Reichardt J. ; Sieber I. ; Sokoll S. ; Lux-Steiner M.Ch. ; Weinhardt L. ; Fuchs O. ; Heske C. ; Jung C. ; Gudat W. ; Niesen T.P. ; Karg F.*

**X-ray emission study of the  $ZnO/Cu(In, Ga)(S, Se)_2$  interface before and after damp heat treatment**

In: Proceedings of the 3rd World Conference on Photovoltaic Energy Conversion : joint conference of 13th PV Science & Engineering Conference, 30th IEEE PV Specialists Conference, 18th European PV Solar Energy Conference; Osaka International Congress Center "Grand Cube", Osaka, Japan, 11 - 18 May 2003 / WCPEC-3. Vol. A, eds. Kurokawa K. [u.a.]

Osaka, 2003, 523 - 526

*Rumberg A. ; Gerhard A. ; Jäger-Waldau A. ; Lux-Steiner M.Ch.*

**ZnSe buffer prepared by iodine-enhanced chemical vapour deposition for**

**$Cu(In, Ga)(Se, S)_2$ -based solar cells**

Solar Energy Materials and Solar Cells

75 (2003) 1 - 8

## **SE3 - Technology**

### **SE2.Others**

*Kaufmann C.A. ; Neisser A. ; Scheer R. ; Klenk R. ; Kroon M.A.*

**$Cu(In, Ga)Se_2$  thin film solar cells on flexible substrates**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 3637 - 3639

**SE2.Semico**

Klenk R. ; Bakehe S. ; Kaigawa R. ; Neisser A. ; Reiß J. ; Lux-Steiner M.Ch.

**Optimising the open-circuit voltage of Cu(In,Ga)S<sub>2</sub> solar cells-design and analysis**

Thin Solid Films

451-452 (2004) 424 - 429

**SE3.Baseline**

Asenjo B. ; Chaparro A.M. ; Gutiérrez M.T. ; Herrero J. ; Klaer J.

**Growth and properties of In<sub>2</sub>S<sub>3</sub> thin films for buffer layers of CuInS<sub>2</sub> based solar cells**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1784 - 1787

Klaer J. ; Scheer R. ; Klenk R. ; Boden A. ; Köble C.

**Stress behaviour of CuInS<sub>2</sub> thin film PV-modules studied by a specific test structure**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1847 - 1850

Meyer N. ; Luck I. ; Rühle U. ; Klaer J. ; Klenk R. ; Lux-Steiner M.Ch. ; Scheer R.

**Towards thin film module production using a simplified CIS process**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1698 - 1701

Müller K. ; Scheer R. ; Burkov Y. ; Schmeißer D.

**Preparation of stoichiometric CuInS<sub>2</sub> surfaces**

Thin Solid Films

451-452 (2004) 120 - 123

Scheer R. ; Klenk R. ; Klaer J. ; Luck I.

**CuInS<sub>2</sub> based thin film photovoltaics**

Solar Energy

77 (2004) 777 - 784

**SE3.Control**

Rudigier E. ; Barcones B. ; Luck I. ; Jawhari-Colin T. ; Pérez-Rodriguez A. ; Scheer R.

**Quasi real-time Raman studies on the growth of Cu-In-S thin films**

Journal of Applied Physics

95 (9) (2004) 5153 - 5158

Sakurai K. ; Hunger R. ; Scheer R. ; Kaufmann C.A. ; Yamada A. ; Baba T. ; Kimura Y. ; Matsubara K. ; Fons P. ; Nakanishi H. ; Niki S.

**In situ diagnostic methods for thin-film fabrication: utilization of heat radiation and light scattering**

Progress in Photovoltaics: Research and Applications

12 (2004) 219 - 234

**SE3 - Technology  
Addenda to 2003**
**SE3.Control**

Rudigier E. ; Alvarez-Garcia J. ; Luck I. ; Klaer J. ; Scheer R.

**Quality assessment of chalcopyrite thin films using Raman spectroscopy**

Journal of Physics and Chemistry of Solids

64 (2003) 1977 - 1981

## SE4 - Dynamics of interfacial reactions

### SE1.Others

Weiss V. ; Bohne W. ; Röhrich J. ; Strub E. ; Bloeck U. ; Sieber I. ; Ellmer K. ; Mientus R. ; Porsch F.  
**Reactive magnetron sputtering of molybdenum sulfide thin films: In situ synchrotron x-ray diffraction and transmission electron microscopy study**  
Journal of Applied Physics  
95 (12) (2004) 7665 - 7673

### SE4.Cells

Geisz J. ; Olson J.M. ; McMahon W.E. ; Hannappel T. ; Jones K. ; Moutinho H. ; Al-Jassim M.M.  
**Growth and characterization of GaPNAs on Si**  
In: Progress in compound semiconductor materials III - electronic and optoelectronic applications : symposium held December 1 - 4, 2003, Boston, Massachusetts, U.S.A., eds. Friedman D.J [u.a.] Materials Research Society, Warrendale, Pa., 2004, 27 - 31

Hannappel T. ; McMahon W.E. ; Olson J.M.  
**An RDS, LEED, and STM study of MOCVD-prepared Si(1 0 0) surfaces**  
Journal of Crystal Growth  
272 (2004) 24 - 29

Hannappel T. ; Visbeck S. ; Töben L. ; Willig F.  
**Apparatus for investigating metalorganic chemical vapor deposition-grown semiconductors with ultrahigh-vacuum based techniques**  
Review of Scientific Instruments  
75 (2004) 1297 - 1304

Kollonitsch Z. ; Möller K. ; Schimper H.-J. ; Giesen Ch. ; Heuker M. ; Willig F. ; Hannappel T.  
**In situ monitored MOVPE growth of undoped and p-doped GaSb(1 0 0)**  
Journal of Crystal Growth  
261 (2004) 289 - 293

### SE4.Dynamics

Ernstorfer R. ; Gundlach L. ; Felber S. ; Zimmermann C. ; Eichberger R. ; Wei Q. ; Galoppini E. ; Willig F.  
**Influence of molecular spacers on ultrafast heterogeneous electron transfer**  
In: Femtochemistry and Femtobiology : Ultrafast Events in Molecular Science, eds. Martin M.M. ; Hynes J.T. Elsevier, Amsterdam, 2004, 521 - 524

Gundlach L. ; Ernstorfer R. ; Zimmermann C. ; Eichberger R. ; Felber S. ; Töben L. ; Galoppini E. ; Wei Q. ; Willig F.  
**Heterogeneous electron transfer probed with femtosecond two-photon photoemission spectroscopy**  
In: Femtochemistry and Femtobiology : Ultrafast Events in Molecular Science, eds. Martin M.M. ; Hynes J.T. Elsevier, Amsterdam, 2004, 529 - 532

Neges M. ; Schwarzburg K. ; Gundlach L. ; Toeben L. ; Willig F.  
**Measuring and modeling hot electron dynamics for third generation solar cells**  
In: Technical Digest. 14th International Photovoltaic Science and Engineering Conference 26-30 January 2004. Bangkok, Thailand. PVSEC-14  
2004, 761 - 762

Ramakrishna S. ; Willig F. ; Knorr A.

**Photoinduced bulk-surface dynamics: time resolved two photon photoemission signals at semiconductor surfaces**

Surface Science

558 (2004) 159 - 173

Ramakrishna S. ; Willig F. ; Knorr A.

**Time-resolved two-photon photoemission spectroscopy of semiconductor bulk states**

Applied Physics A

78 (2004) 247 - 252

Schwarzburg K. ; Ernstorfer R. ; Felber S. ; Willig F.

**Primary and final charge separation in the nano-structured dye-sensitized electrochemical solar cell**

Coordination Chemistry Reviews

248 (2004) 1259 - 1270

Töben L. ; Gundlach L. ; Hannappel T. ; Ernstorfer R. ; Eichberger R. ; Willig F.

**Dynamics of electron scattering between bulk states and the  $C_1$  surface state of InP(100)**

Applied Physics A

78 (2004) 239 - 245

---

#### **SE4.Others**

---

Alam M.S. ; Janata E.

**The rate constant of the reaction of H with tert-butyl alcohol in aqueous solution revisited**

Chemical Physics Letters

398 (2004) 557 - 559

Alam M.S. ; Kelm M. ; Rao B.S.M. ; Janata E.

**Reaction of  $H^*$  with  $H_2O_2$  as observed by optical absorption of perhydroxyl radicals or aliphatic alcohol radicals and of  $*OH$  with  $H_2O_2$ . A pulse radiolysis study**

Radiation Physics and Chemistry

71 (2004) 1087 - 1093

Ershov B.G. ; Janata E.

**The one electron reduction of  $Hg^{2+}$  by 1-hydroxyalkyl radicals in aqueous solution: a pulse radiolysis study**

Radiation Physics and Chemistry

69 (2004) 55 - 57

Ershov B.G. ; Janata E. ; Gordeev A.V.

**Reactivity of 1-hydroxyalkyl radicals in the reduction of  $Hg^{2+}$  and  $I_2$  in aqueous solutions**

Mendeleev Communications

14 (2) (2004) 81 - 83

Janata E.

**Instrumentation of kinetic spectroscopy-20: Cherenkov emission in a 'foil' of optical fibers to measure the excitation in pulse radiolysis**

Radiation Physics and Chemistry

69 (2004) 199 - 203

Janata E. ; Köfer M. ; Schlarb H.

**Determination of location and intensity of radiation through detection of Cherenkov emission in optical fibers. Part 2. preliminary results obtained at TTF**

Nuclear Instruments and Methods in Physics Research A

523 (2004) 256 - 261

**SF6.NAA**

Milne C.J. ; Argyriou D.N. ; Chemseddine A. ; Aliouane N. ; Veira J. ; Landsgesell S. ; Alber D.

**Revised superconducting phase diagram of hole-doped  $Na_x(H_3O)_2CoO_2 *_y H_2O$** 

Physical Review Letters

93 (2004) 247007/1 - 4

**SE4 - Dynamics of interfacial reactions****Addenda to 2003****SE4.Cells**

Möller K. ; Kollonitsch Z. ; Giesen Ch. ; Heuken M. ; Willig F. ; Hannappel T.

**Optical in situ monitoring of MOVPE GaSb(1 0 0) film growth**

Journal of Crystal Growth

248 (2003) 244 - 248

**SE5 - Solar energy****SE5.Energetics**

Bogdanoff P. ; Herrmann I. ; Hilgendorff M. ; Dorbandt I. ; Fiechter S. ; Tributsch H.

**Probing structural effects of pyrolysed CoTMPP-based electrocatalysts for oxygen reduction via new preparation strategies**

Journal of New Materials for Electrochemical Systems

7 (2004) 85 - 92

Boujday S. ; Wünsch F. ; Portes P. ; Bocquet J.-F. ; Colbeau-Justin C.

**Photocatalytic and electronic properties of  $TiO_2$  powders elaborated by sol-gel route and supercritical drying**

Solar Energy Materials and Solar Cells

83 (2004) 421 - 433

Ellmer K. ; Mientus R. ; Seeger S. ; Weiß V.

**Highly (001)-textured  $WS_{2-\alpha}$  films prepared by reactive radio frequency magnetron sputtering**

Physica Status Solidi A

201 (2004) R97 - R100

Fiechter S.

**Defect formation energies and homogeneity ranges of rock salt-, pyrite-, chalcopyrite- and molybdenite-type compound semiconductors**

Solar Energy Materials and Solar Cells

83 (2004) 459 - 477

Hariskos R.D. ; Menner R. ; Spiering S. ; Eicke A. ; Powalla M. ; Ellmer K. ; Oertel M. ; Dimmler B.

 **$In_2S_3$  buffer layer deposited by magnetron sputtering for  $Cu(InGa)Se_2$  solar cells**

In: Nineteenth European Photovoltaic Solar Energy Conference : proceedings of the international conference held in Paris, France, 7 - 11 June 2004, eds. Hoffmann W. [u.a.]

WIP, ETA, Munich, Florence, 2004, 1894 - 1897

Jeranko T. ; Tributsch H. ; Sariciftci N.S. ; Hummelen J.C.

**Patterns of efficiency and degradation of composite polymer solar cells**

Solar Energy Materials and Solar Cells

83 (2004) 247 - 262

Kunst M. ; Grunow P.

**Characterization of multicrystalline silicon wafers by non-invasive measurements**

Solar Energy Materials and Solar Cells

83 (2004) 409 - 419

Kunst M. ; Neitzert H.-C. ; Sanders A.

**Characterization of InP and GaAs films by contactless transient photoconductivity measurements**

Thin Solid Films

450 (2004) 159 - 162

Kunst M. ; Wünsch F. ; Fuertes Marron D. ; Meeder A.

**Charge carrier kinetics of CuGaSe<sub>2</sub> films determined by TRMC**

Thin Solid Films

451-452 (2004) 152 - 155

Lewerenz H.J. ; Jakubowicz J. ; Jungblut H.

**Metastable stage in porous silicon formation: the role of H-terminated low index faces**

Electrochemistry Communications

6 (2004) 838 - 842

Niehus M. ; Sanguino P. ; Schwarz R. ; Fedorov A. ; Martinho J.M.G. ; Soares M.J. ; Monteiro T. ; Wünsch F. ; Kunst M.

**Non-radiative and radiative properties of PLD-deposited polycrystalline GaN studied by UV ps-to-ns laser pulses**

Journal of Non-Crystalline Solids

338-340 (2004) 460 - 464

Sirimanne P.M. ; Tributsch H.

**Parameters determining efficiency and degradation of TiO<sub>2</sub>/dye/CuI solar cells**

Journal of Solid State Chemistry

177 (2004) 1789 - 1795

Skorupska K. ; Jakubowicz J. ; Jungblut H. ; Lewerenz H.J.

**Observation of metastable self-organised structure during porous silicon formation**

Superlattices and Microstructures

36 (2004) 211 - 217

Tributsch H.

**Bionic models for new sustainable energy technology**

In: First International Industrial Conference Bionik2004 : April 22nd and 23rd, 2004 held attendant to the Hannover Messe, Hannover, Germany, eds. Boblan I. ; Bannasch R.

VDI-Verl., Düsseldorf, 2004, 331 - 337

Tributsch H.

**Fahrplan für ein gesundes oder "krankes" Land? Die Kernkraft-Befürwortung durch die Deutsche Akademie der Naturforscher**

Solarzeitalter

H.3 (2004) 10 - 13

Villarreal T.L. ; Bogdanoff P. ; Salvador P. ; Alonso-Vante N.

**Photocatalytic oxidation on nanostructured chalcogenide modified titanium dioxide**

Solar Energy Materials and Solar Cells

83 (2004) 347 - 362

---

**SE5.Interfaces**

---

Lewerenz H.J. ; Jakubowicz J. ; Jungblut H.

**Nascent phase of porous silicon**

Electrochemistry Communications

6 (2004) 1243 - 1248

## SE5 - Solar energy Addenda to 2003

### SE5.Energetics

*Ellmer K. ; Wendt R. ; Wiesemann K.*

**Interpretation of ion distribution functions measured by a combined energy and mass analyzer**

International Journal of Mass Spectrometry

223-224 (2003) 679 - 693

*Lokhande C.D. ; Barkschat A. ; Tributsch H.*

**Contact angle measurements: an empirical diagnostic method for evaluation of thin film solar cell absorbers ( $CuInS_2$ )**

Solar Energy Materials and Solar Cells

79 (2003) 293 - 304

*Schulenburg H. ; Stankow S. ; Schünemann V. ; Radnik J. ; Dorbandt I. ; Fiechter S. ; Bodganoff P. ; Tributsch H.*

**Catalysts for the oxygen reduction from heat-treated iron(III) tetramethoxyphenylporphyrin chloride: structure and stability of active sites**

Journal of Physical Chemistry B

107 (2003) 9034 - 9041

## SE6 - Elektronic structure of semiconductor interfaces

### SE6.BESSY

*Pettenkofer C. ; Otto A.*

**Strong subthreshold photoemission from Ag(111) islands**

Europhysics Letters

65 (5) (2004) 692 - 698

*Yu S.-W. ; Müller N. ; Heinzmann U. ; Pettenkofer C. ; Klein A. ; Blaha P.*

**Band symmetries of GaSe(0001) studied by spin-resolved electron spectroscopy using circularly polarized radiation**

Physical Review B

69 (2004) 045320/1 - 7

### SE6.Interfaces

*Tonti D. ; Pettenkofer C. Jaegermann W.*

**Origin of the electrochemical potential in intercalation electrodes: experimental estimation of the electronic and ionic contributions for Na intercalated into  $TiS_2$**

Journal of Physical Chemistry B

108 (2004) 16093 - 16099

## I - Central Scientific-Technical Infrastructure

### DN - Zentrale DV-Systeme und Netze

#### SF3.Light weight mat.

*Garcia Moreno F. ; Fromme M. ; Banhart J.*

**Real time X-ray radioscopy on metallic foams using a compact micro-focus source**

Advanced Engineering Materials

6 (6) (2004) 416 - 420

# **Conference Contributions**

## SF - Structural Research

### **SF - BENSC**

Invited Talk

*G. Zsigmond, K. Lieutenant, S. Manoshin, H. N. Bordallo, J. D. M. Champion, J. Peters, J. M. Carpenter, F. Mezei*

#### **A survey of simulations of complex neutronic systems by VITESS**

Joint Meeting on Neutron Optics and Detectors

Tokyo 12. Jan - 16. Jan 2004

Oral

*Habicht, K.*

#### **On dispersion curvature correction**

Semiannual meeting (PNT-II) of Polarized Neutron Techniques Joint Research Activity in NMI3

LLB Saclay France 18. Nov - 19. Nov 2004

Invited Talk

*Jauch, W.*

#### **Electron densities in prototypic antiferromagnets from gamma-ray diffraction**

22nd European Crystallographic Meeting

Budapest (Ungarn) 26. Aug - 31. Aug 2004

Invited Talk

*Jauch, W.*

#### **Charge density studies of prototypic antiferromagnets by gamma-ray diffraction**

XVI International School on Physics and Chemistry of Condensed Matter

Bialowieca (Polen) 01. Jul - 10. Jul 2004

Poster

*Manke, I., Kardjilov, N., Strobl, M., Hilger, A., Treimer, W., Haibel, A., Rack, A., Zabler, S., Rueda, A., Scholte, J., Hartnig, C., Jörissen, L., Lehnert, W.*

#### **Tomographie und Radiographie an Brennstoffzellen**

Forschungsverbund Sonnenenergie Jahrestagung

Umweltforum Berlin 25. Nov - 26. Nov 2004

Invited Talk

*Mezei, F.*

#### **Less Conventional Approaches to Optimize Time-of -Flight Spectrometers**

Workshop on Inelastic Neutron Spectroscopy 2004

Tokai,Japan 02. Dec - 05. Dec 2004

Invited Talk

*Mezei, F.*

#### **Neutron Scattering Instruments for the Study of Magnetism**

LANSCE Winter School on Neutron Scattering

Los Alamos,USA 10. Jan - 15. Jan 2004

Invited Talk

*Mezei, F.*

#### **Time-of-flight Diffraction at CW Neutron Sources**

EXED workshop

HMI,Berlin 10. May - 12. May 2004

Oral

*Novikov, A.G.; Rodnikova, M.N.; Sobolev, O.*

**Hydration Effects in Aqueous Solutions and Diffusion Mobility**

Germany - JINR User Meeting

Dubna, Russia 12. Jun - 16. Jun 2004

Oral

*Peters, J.*

**VITESS simulations of the new TOF powder diffractometer EXED at the HMI**

SCANS / MCNSI Meeting

Cosener's House, Abingdon UK 05. Feb - 06. Feb 2004

Oral

*Peters, J.; Clemens, D.; Lieutenant, K.; Mezei, F.*

**Novel time-of-flight diffractometer for very high resolution and extreme sample environment**

American Conference on Neutron Scattering 2004

College Park, Maryland, USA 06. Jun - 10. Jun 2004

Oral

*Pieper, J., Irrgang, K.-D., Renger, G., Lechner, R.E.,*

**Density of States of Low-Frequency Protein Vibrations in the Light-Harvesting Complex II of Green Plants**

International Workshop on Light-Harvesting Systems

St. Adele (Kanada) 26. Aug - 29. Aug 2004

Invited Talk

*Pieper, J., Irrgang, K.-D., Weß, M., Hauß, Th., Dencher, N. A., Renger, G., Lechner, R.E.,*

**Light-induced Protein Dynamics in Photosynthetic Chromophor-Protein Complexes**

7th International Conference on Quasielastic Neutron Scattering (QENS 2004)

Arcachon (Frankreich) 01. Sep - 04. Sep 2004

Invited Talk

*Pieper, J., Irrgang, K.-D., Weß, M., Hauß, Th., Renger, G., Lechner, R.E.*

**Protein Dynamics in Photosynthetic Pigment-Protein Complexes**

11th International Conference on Neutron Scattering Investigations in Condensed Matter

Poznan (Polen) 06. May - 08. May 2004

Poster

*Schemmel, S.; Shi, H.; Zhang, S.; Akcakayiran, D.; Steitz, R.; Findenegg, G.H.*

**Surfactant mediated and Interfacial Structures**

Annual Meeting of the DFG Priority Program 1052

Pforzheim 17. Feb - 20. Feb 2004

Oral

*Steitz, R.; Schemmel, S.; Krastev, R.; Müller-Buschbaum, P.; Cubitt, R.; Findenegg, G. H.;*

**Water depletion and nanobubbles at a solid/liquid interface**

14th Ostwald-Kolloquium

Berlin 22. Nov - 23. Nov 2004

Oral

*Steitz, R.; Schemmel, S.; Müller-Buschbaum, P.; Cubitt, R.; Findenegg, G. H.;*

**Water depletion and nanobubbles at a solid/liquid interface**

Deutsche Neutronenstreuungtagung 2004

Dresden 01. Sep - 04. Sep 2004

Invited Talk

*Strobl, M.*

**Tomography at HMI - Status and Projects in Progress**

BENSC Usermeeting

HMI 14. May - 14. May 2004

Poster

*Strobl, M., Treimer, W., Hilger, A.*

**Application of Double Crystal Diffractometers for the Tomographic Reconstruction of Macroscopic Structures**

American Conference on Neutron Scattering (ANCS)  
College Park, Maryland, USA 06. Jun - 10. Jun 2004

Oral

*Strobl, M., Treimer, W., Hilger, A.*

**Three dimensional refraction contrast tomography**

International Topical Meeting on Neutron Radiography (ITMNR)  
TU München, Garching 26. Jul - 30. Jul 2004

Oral

*Strobl, M., Treimer, W., Hilger, A.; Kardjilov, N.*

**Tomography with monochromatic neutrons**

Deutsche Neutronenstreuetagung  
TU Dresden 01. Sep - 04. Sep 2004

Oral

*Treimer, W., Hilger, A., Kardjilov, N., Strobl, M.*

**Neutron Tomography with CONRAD at HMI Berlin**

Neutron Tomography Meeting  
Abington, ISIS, England 28. Mar - 28. Mar 2004

Oral

*Treimer, W., Strobl, M., Hilger, A., Kardjilov, N.*

**Review about incoherent and coherent computerized neutron tomography**

World Conf. on Non-Destructive Testing  
Montreal, Canada 30. Aug - 30. Aug 2004

Poster

*Wilpert Th.; Gebauer, B.; Altmann W.; Namaschk B.; Levchanovski F.V.; Prikhodko V.I.; Schulz, Ch.*

**Adequate Electronics for efficient Experiments**

PSND2004  
Tokyo, Japan 13. Jan - 16. Jan 2004

---

**SF2.BENSC**

---

Invited Talk

*Rupp, A.*

**Polarised  $^3He$  at HMI - status quo and plans**

(PNT & NSF)-JRA Joint Meeting  
Grenoble 18. Mar - 19. Mar 2004

---

**SF3.BENSC**

---

Poster

*Babcsan, N.; Banhart, J.; Leitlmeier, D.; Garcia-Moreno, F.*

**The Mechanisms of Stabilization of Liquid Metal Foams**

International Workshop of Bubble and Drop Interfaces  
Genova - Italy 25. Apr - 28. Apr 2004

Oral

*Baumbach, T.; Helfen, L.; Schladitz, K.; Pernot, P.; Stanzick H.; Banhart, J.*

**High-resolution microtomography and fast radiography for real-time and in-situ characterisation of porous microstructures.**

16th World Conference on Non-destructive Testing  
Montreal (Canada) 30. Aug - 30. Aug 2004

Poster

*Garcia-Matres, E. Perroud, O. Kumar, G. Wiedenmann, A.*

**Small Angle Neutron Scattering studies of hard magnetic Nd<sub>60</sub>FexCo<sub>30-x</sub>Al<sub>10</sub> (x=20, 7.5 and 0) bulk amorphous alloys.**

7th International Conference on Nanostructured Materials

Wiesbaden 20. Jun - 24. Jun 2004

Poster

*Garcia-Matres, E.; Perroud, O.; Wiedenmann, A.; Kumar, G.; Eckert, J.*

**SANS-POL studies of hard magnetic Nd<sub>60</sub>FexCo<sub>30-x</sub>Al<sub>10</sub> bulk amorphous alloys**

Deutsche Neutronenstreuetagung

Dresden 01. Sep - 04. Sep 2004

Invited Talk

*Garcia-Matres, E.; Perroud, O.; Kumar, G.; Wiedenmann, A.;*

**Magnetic and crystalline nanostructure in Nd-Fe-Co-Al bulk amorphous alloys studied by SANS-POL**

Sociedad española de técnicas neutrónicas and XV Symposium del grupo especializado de cristalografía.

Tenerife 20. Sep - 25. Sep 2004

Invited Talk

*Kardjilov, N.*

**Simulation of neutron radiography experiments**

International Topical Meeting on Neutron Radiography - 5

München, Deutschland 26. Jul - 26. Jul 2004

Oral

*Kardjilov, N.; Banhart, J.; Dierick, M.; Hilger, A.; Masschaele, B.*

**Real-time imaging with a high flux cold neutron beam at HMI**

International Topical Meeting on Neutron Radiography-5

München, Deutschland 26. Jul - 30. Jul 2004

Poster

*Kardjilov, N.; Böni, P.; Hilger, A.; Strobl, M.; Treimer, W.*

**INVESTIGATION OF A FOCUSING PARABOLIC GUIDE BY A RADIOGRAPHIC METHOD**

International Topical Meeting on Neutron Radiography-5

München, Deutschland 26. Jul - 30. Jul 2004

Poster

*Kardjilov, N.; Hilger, A.; Manke, I.; Strobl, M.; Treimer, W.; Banhart, J.*

**Tomographie und Radiographie mit Neutronen für industrielle Anwendungen**

Werkstoffwoche 2004

München 21. Sep - 23. Sep 2004

Poster

*Kardjilov, N.; Hilger, A.; Rustichelli, F.; Strobl, M.; Triolo, R.; Banhart, J.*

**Neutron tomography for archaeological investigations**

1st International Meeting "Rileggere l'Antico"

Rom, Italien 13. Dec - 15. Dec 2004

Oral

*Kardjilov, N.; Lehmann, L.; Vontobel, P.; Sim, C. M.; Lee, S. W.; Lim, I. C.*

**Improving the image contrast and resolution in the phase contrast neutron radiography**

International Topical Meeting on Neutron Radiography-5

München, Deutschland 26. Jul - 30. Jul 2004

Oral

*Kardjilov, N.; de Beer, F.; Hassanein, R.; Lehmann, E.; Vontobel, P.*

**SCATTERING CORRECTIONS IN NEUTRON RADIOGRAPHY USING POINT SCATTERED FUNCTIONS**

International Topical Meeting on Neutron Radiography-5

München, Deutschland 26. Jul - 30. Jul 2004

Oral

*Manke, I.; Kardjilov, N.; Hilger, A.; Strobl, M.; Treimer, W.; Banhart, J.*

**The new cold neutron radiography and tomography facility at the Hahn-Meitner-Institut and industrial applications**

ITMNR-5 Fifth International Topical Meeting on Neutron Radiography

München 26. Jul - 30. Jul 2004

Poster

*Saroun, J.; Kocik, J.; García-Matres, E.; Muransky, O.; Strunz, P.*

**Characterisation of irradiation-induced precipitates in reactor pressure vessel steels**

European Powder Diffraction Conference

Prague 02. Sep - 05. Sep 2004

Oral

*Treimer, W.; Hilger, A.; Kardjilov, N.; Strob, M.; Manke, I.*

**REVIEW ABOUT OLD AND NEW IMAGING SIGNALS FOR NEUTRON TOMOGRAPHY**

International Topical Meeting on Neutron Radiography-5

München, Deutschland 26. Jul - 30. Jul 2004

Invited Talk

*Wiedenmann, A.*

**Nanostructures probed by SANS**

Workshop on X-ray and Neutron Scattering

Daejeon, Korea 09. Dec - 10. Dec 2004

---

**SF - ISL**

---

**ISL.Accelerator**

---

Invited Talk

*Bundesmann, J.*

**CODIAN, a portable control system**

Second LEIF Labview workshop

Wien 24. Aug - 26. Aug 2004

Oral

*Homeyer, H.*

**Status of ISL**

International Conference on Cyclotrons and Their Applications

Tokio 18. Oct - 22. Oct 2004

**ISL.Development**

---

Poster

*Opitz-Coutureau, J.; Bundesmann, J.; Denker, A.; Homeyer, H.*

**Installation of the Berlin Ion Beam Exposure and Research Facility (BIBER)**

Radiation Effects on Components and Systems RADECS 2004

Madrid, Spanien 22. Sep - 24. Sep 2004

**ISL\_PPT**

---

Invited Talk

*Heufelder, J.*

**Die Protonentherapie aus mediziphysikalischer Erfahrung**

Statusseminar Protonentherapie in Berlin

Berlin 02. Dec - 02. Dec 2004

Oral

*Heufelder, J.; Cordini, D.; Kluge H.*

**Ein schnelles zweidimensionales Messverfahren zur arbeitstäglichen Überprüfung des Dosisprofils eines 68 MeV-Protonenstrahls für die Behandlung von Augentumoren.**

35. Jahrestagung der Deutschen Gesellschaft für Medizinische Physik

Leipzig 22. Sep - 25. Sep 2004

Oral

*Stark, R.; Seiler, F.; Cordini, D.; Heufelder, J.; Höcht, S.; Bechrakis, N.E.; Foerster, M.H.; Hinkelbein, W.*

**Protonen- oder stereotaktische Photonenbestrahlung beim posterioren Aderhautmelanom? In:****Protonen- oder stereotaktische Photonenbestrahlung beim posterioren Aderhautmelanom?**

35. Jahrestagung der Deutschen Gesellschaft für Medizinische Physik

Leipzig 22. Sep - 25. Sep 2004

Oral

*Weber, A.; Cordini, D.; Heufelder, J.; Homeyer, H.; Kluge, H.; Simiantonakis, I.; Stark, R.*

**A Proton Therapy Facility with Simultaneous Treatment Capability**

Particle Therapy Co-Operative Group (PTCOG), 41st Meeting

Bloomington, Indiana, USA 10. Oct - 13. Oct 2004

**ISL\_User**

---

Oral

*Beuttlar, M.; Bolse, W.; Kreissig, U.; Bohne, W.*

**Ionenstrahlinduzierte Grenzflächendurchmischung in isotopenmarkierten Schichtsystemen**

AKF-Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

Invited Talk

*Bohne, W.; Röhrich, J.; Strub, E.*

**Quantitative Element Profiling of Thin Films by Means of Elastic Recoil Detection Analysis****(ERDA) with High Energetic Heavy Ions**

AVS 51st International Symposium

Anaheim, CA USA 14. Nov - 19. Nov 2004

Invited Talk

*Denker, A.*

**Schneller Wasserstoff als Spürhund**

Kolloquium Studiengang Restaurierung/Grabungstechnik an der FHTW

Berlin 20. Jan - 20. Jan 2004

Oral

*Denker, A.*

**Influence of corrosion layers on quantitative analysis**

ARCHAEOOMETRY WITH IBA AND RELATED METHODS

Ljubljana, Slovenia 09. Jun - 10. Jun 2004

Invited Talk

*Denker, A.; Bohne W.; Homeyer, H.; Opitz-Coutureau, J.; Röhrich, J.; Strub, E*

**APPLICATIONS OF HIGH-ENERGY IONS IN MATERIALS SCIENCE**

17th International Conference on Cyclotrons and their applications

Tokio, Japan 18. Oct - 22. Oct 2004

## Oral

*Denker, A.; Bohne, W. Campbell, J.L.; Heide, P.; Hopman, T.; Maxwell, J.A.; Opitz-Coutureau, J.; Rauschenberg, J.*

**Hochenergie PIXE - quantitative Analyse und Wirkungsquerschnitte**

Forschungsverbund Ionen und nukleare Sonden

Stuttgart 30. Sep - 01. Oct 2004

## Invited Talk

*Denker, A.; Homeyer, H.; Opitz-Coutureau, J.*

**APPLICATIONS OF HIGH-ENERGY IONS FOR INDUSTRIAL PURPOSES**

8th European Conference on Accelerators in Applied Research and Technology

Paris 20. Sep - 24. Sep 2004

## Oral

*Denker, A.; Opitz-Coutureau, J.; Griesser, M.; Denk, R.; Winter, H.*

**Zerstörungsfreie Elementanalyse an mittelalterlichen Wiener Pfennigen**

Archäometrie und Denkmalpflege Jahrestagung 2004

Mannheim 06. Oct - 08. Oct 2004

## Invited Talk

*Denker, A.; Opitz-Coutureau, J.; Rauschenberg, J.; Campbell, J.L.; Maxwell, J.A.; Hopman, T.*

**Quantitative Analysis using very energetic protons**

10th International Conference on particle Induced X-ray Emission and its analytical applications

Portoros, Slovenia 04. Jun - 08. Jun 2004

## Invited Talk

*Heufelder, J.*

**5 Jahre Protonentherapie von Augentumoren Erfahrungen und Ergebnisse**

Monatliches Colloquium der DGMP

Berlin 08. Jun - 08. Jun 2004

## Poster

*Höcht, S.; Bechrakis, N.E.; Foerster, M.H.; Hinkelbein, W.; Heufelder, J.; Cordini, D.; Homeyer, H.;*

*Kluge H.*

**Strahlentherapie von Augentumoren mit Protonen Das Berliner Protonentherapieprojekt - Erste Erfahrungen**

Hauptstadtkongress 2004

Berlin 02. Jun - 04. Jun 2004

## Poster

*Höcht, S.; Bechrakis, N.E.; Wiegel, T.; Krause, L.; Wachtlin, J.; Kluge, H.; Homeyer, H.; Martus, P.;*

*Foerster, M.H.; Hinkelbein, W.*

**5 years of experience in proton therapy for ocular tumors in Germany**

26. Deutscher Krebskongress

Berlin 27. Feb - 01. Mar 2004

## Oral

*Papathanasiou, O.; Siebentritt, S.; Bohne, W.; Strub, E.; Röhrich, J.; Calvet, W.; Pettenkofer, Ch.;*

*Kristukat, Ch., Lux-Steiner, M.*

**Cd-freie Pufferschichten für die Anwendung in CuInS<sub>2</sub> Dünnschichtsolarzellen**

AKF-Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

## Invited Talk

*Strub, E.*

**Elastic Recoil Detection Analysis (ERDA) am Ionenstrahlabor des Hahn-Meitner-Instituts**

Seminar im Institut für Kernchemie der Universität Mainz

Mainz 14. Jul - 14. Jul 2004

Oral

*Strub, E.*

**Chemical Information Obtained by ERDA measurements**

ECAART 2004

Paris 20. Sep - 24. Sep 2004

Poster

*Strub, E., Bohne, W., Röhrich, J.*

**Characterization of thin film solar cells by Heavy-Ion ERDA**

ECAART 2004

Paris 20. Sep - 24. Sep 2004

Poster

*Strub, E., Bohne, W., Röhrich, J.*

**Characterization of thin layers by Heavy-Ion ERDA**

PSE 2004

Garmisch-Partenkirchen 13. Sep - 17. Sep 2004

Invited Talk

*Strub, E., Bohne, W., Röhrich, J.*

**CHEMISCHE INFORMATION AUS ERDA-MESSUNGEN**

IGAS-Kolloquium

Berlin 17. Nov - 17. Nov 2004

Poster

*Thamm, T., Körner, K.-U., Bohne, W., Röhrich, J., Strub, E., Stöckel, S., Marx, G.*

**Characterization of PECVD Boron Carbonitride layers**

AOFA 2004

Dresden 14. Sep - 17. Sep 2004

Poster

*Thamm, T., Körner, K.-U., Stöckel, S., Strub, E., Bohne, W., Röhrich, Marx, G.*

**PECVD-Abscheidung von harten Schichten im System B-C-N**

7. Werkstofftechnisches Kolloquium 2004

Chemnitz 30. Sep - 01. Oct 2004

Oral

*Zeitz, W.-D.; Hattendorf, J.; Bohne, W.; Röhrich, J.; Strub, E.; Abrasimov, N. V.*

**Investigations on the diffusion of boron in SiGe mixed crystals**

HFI 2004

Bonn 23. Aug - 27. Aug 2004

---

**SF - BESSY**

---

**SE6.BESSY**

---

Oral

*Hunger, R.; Jaegermann, W.; Calvet, W.; Lehmann, C.; Pettenkofer, C.; Sakurai, K.; Niki, S.*

**Angle-resolved photoelectron spectroscopy of CuInSe<sub>2</sub>(001)**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

Poster

*Lehmann, C.; Calvet, W.; Pettenkofer, C.*

**Epitaxial CuInS<sub>2</sub> on Si(111) using di-tert-butyl disulfide as sulphur precursor**

EMRS spring meeting

Strasbourg 24. May - 28. May 2004

## Oral

*Lehmann, C.; Calvet, W.; Pettenkofer, C.*

**Metal organic molecular beam epitaxy (MOMBE) of CuInS<sub>2</sub> on Si(111)**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

## Invited Talk

*Pettenkofer, C.*

**Gennesys, Photovoltaics**

Gennesys WorkshopFZJ

Jülich 15. Apr - 15. Apr 2004

## Oral

*Schmidt, P.-M.; Winter, B.; Weber, R.; Freyer, W.; Hertel, I.V.; Pettenkofer, C.; Faubel, M.*

**The triiodide equilibrium in water investigated by photoemission**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

---

**SF2.BESSY**

---

## Poster

*Getzlaff, M.; Gebhardt, R.K.; Bulut, F.; Schmitz, D.; Holub-Krappe, E.; Maletta, H.; Kleibert, A.; Methling, J.; Bansmann, J.; Meiwes-Broer, K.-H.*

**Mass-filtered ferromagnetic alloy clusters on surfaces**

DPG Frühjahrstagung, Fachverband Magnetismus

Regensburg 08. Mar - 12. Mar 2004

## Poster

*Imperia, P.*

**Effect of Ar+ and H+ etching on the magnetic properties of Co/CoO core-shell nanoparticles**

IVth International School on Magnetism and Synchrotron Radiation

Mittelwihr, France 10. Oct - 16. Oct 2004

## Poster

*Imperia, P.; Schmitz, D.; Maletta, H.; Sobal, N.S.; Giersig, M.*

**Effect of Ar+ and H+ etching on the magnetic properties of Co/CoO core-shell nanoparticles**

Bessy Users' meeting,

Bessy, Berlin 02. Dec - 03. Dec 2004

## Invited Talk

*Krappe, H.-J.; Rossner, H. H.*

**Bayes' method in the valuation of EXAFS data**

Status Seminar: Soft X-ray XAFS at L-edges

HMI, Berlin 18. Nov - 19. Nov 2004

## Poster

*Rack, A.; Zabler, S.; Haibel, A.; Rueda, A.; Manke, I.; Weidemann, G.; Riesemeier, H.; Goebels, J.; Banhart, J.*

**High Resolution Synchrotron-Tomography**

Bessy Usermeeting 2004

Berlin, Germany 02. Dec - 03. Dec 2004

## Poster

*Rossner, H., Schmitz, D., Imperia, P., Maletta, H.*

**First MEXAFS experiments at UE46-PGM**

23rd BESSY user meeting

Berlin 02. Dec - 03. Dec 2004

Oral

*Rossner, H.H.; Schmitz, D.; Imperia, P.; Maletta, H.; Krappe, H.J.*

**Bayes-Turchin EXAFS Analysis at Fe L-Edges**

Status Seminar: Soft X-ray XAFS at L-edges

HMI, Berlin 18. Nov - 19. Nov 2004

---

**SF3.BESSY**

---

Poster

*Bülow, A., Haibel, A., Matijasevic, B., Helwig, H.-M., Rack, A., Banhart, J.*

**Strukturuntersuchungen an Metallschäumen in verschiedenen Schäumstadien**

DPG-Tagung

Regensburg 08. Mar - 08. Mar 2004

Invited Talk

*Haibel, A.*

**Synchrotron-Tomographie zur Charakterisierung komplexer Materialsysteme**

3.Seminar zur Nutzung des Wellenlängenschieber-Messplatzes bei BESSY

Berlin 29. Nov - 30. Nov 2004

Poster

*Haibel, A., Kardjilov, N., Manke, I.*

**Tomographie und Radiographie an Brennstoffzellen**

Tagung: Wasserstoff und Brennstoffzellen - Energieforschung im Verbund, Jahrestagung des

ForschungsVerbunds Sonnenenergie (FVS)

Berlin 25. Nov - 26. Nov 2004

Oral

*Haibel, A., Rack, A., Banhart, J.*

**Anordnungsmechanismen porenstabilisierender Partikel im Metallschaum**

DPG-Tagung

Regensburg 08. Mar - 08. Mar 2004

Poster

*Haibel, A.; Rack, A.; Manke, I.; Riesemeier, H.; Goebbels, J.; Banhart, J.*

**Synchrotron-Tomographie am BESSY**

Werkstoffwoche 2004

München 21. Sep - 23. Sep 2004

Poster

*Haibel, A.; Rack, A.; Riesemeier, H.; Goebbels, J.; Weidemann, G.; Banhart, J.*

**Synchrotron-Tomographie am BESSY**

25. Heidelberger Bildverarbeitungsforum - Neue mathematische Methoden für die Bildverarbeitung

Kaiserslautern, Deutschland 06. Jul - 06. Jul 2004

Poster

*Kühbacher, M.; Weseloh, G.; Kyriakopoulos, A.; Behne, D.*

**Molekulare Spurenelementforschung mit Synchrotronstrahlung an der BAMline**

3. BAMline-Seminar 29./30.11.2004

Berlin 29. Nov - 30. Nov 2004

Oral

*Rack A., Haibel A., Matijasevic B., Riesemeier R., Weidemann G., Goebbels J., Banhart J.*

**Charakterisierung von Metallschäumen mittels Synchrotron-Tomographie und 3D-Bildanalyse**

Deutsche Physikalische Gesellschaft e. V. (DPG)

Regensburg 10. Mar - 10. Mar 2004

## Poster

Rack, A., Zabler, S., Haibel, A., Manke, I., Riesemeier, H., Weidemann, G., Goebbel, J., Banhart, J.

**High Resolution Synchrotron Tomography**

BESSY-Usertreffen

Berlin 02. Dec - 03. Dec 2004

## Oral

Rack, A.; Haibel, A.; Bülow, A.; Matijasevic, B.; Banhart, J.

**CHARACTERIZATION OF METAL FOAMS WITH SYNCHROTRON-TOMOGRAPHY AND 3D IMAGE ANALYSIS**

16th World Conference on Nondestructive Testing 2004

Montreal, Kanada 30. Aug - 03. Sep 2004

---

**SF4.BESSY**

---

## Invited Talk

Chen, W.; Neumann, W.; Darowski, N.; Zizak, I.; Wanderka, N.; Schumacher, G.

**Measurement of Lattice Mismatch between gamma prime Precipitates and gamma Matrix in Single Crystal Superalloy SC16**

11. Jahrestagung der Deutschen Gesellschaft für Kristallographie

Humboldt Universität zu Berlin 10. Mar - 10. Mar 2004

## Poster

Darowski, N.; Zizak, I.; Schumacher, G.; Klingelhöffer, H.; Chen, W.; Neumann, W.

**Determination of FWHM of gamma prime Phase in Creep-deformed Superalloy SC16 using Synchrotron Radiation**

BESSY users' meeting 2004

Berlin 02. Dec - 03. Dec 2004

## Poster

Darowski, N.; Zizak, I.; Schumacher, G.

**Surface and bulk amorphization of InP induced by swift heavy ion irradiation**

BESSY users' meeting 2004

Berlin 02. Dec - 03. Dec 2004

## Poster

Darowski, N.; Zizak, I.; Schumacher, G.

**Surface and bulk structural changes in InP single crystals induced by 350 MeV Au ion irradiation**

8th international conference on surface x-ray and neutron scattering

Bad Honnef 28. Jun - 02. Jul 2004

## Poster

Darowski, N.; Zizak, I.; Schumacher, G.; Klingelhöffer, H.; Chen, W.; Neumann, W.

**Temperature Dependence of FWHM of gamma - Phase in Creep-deformed Single Crystal Superalloy SC16**

7th Biennial Conference on High Resolution X-Ray Diffraction and Imaging

Pruhonice 07. Sep - 10. Sep 2004

## Oral

Darowski, N.; Zizak, I.; Schumacher, G.; Klingelhöffer, H.; Chen, W.; Neumann, W.

**Effect of Tensile and Compressive Creep Deformation on Gamma/Gamma prime Lattice Mismatch in Single Crystal Superalloys**

BESSY users' meeting

Berlin 02. Dec - 03. Dec 2004

**Invited Talk**

*Griesser, M.; Denker, A.; Mendoza, A.; Oberthaler, E.; Zhuber-Okrog, K.; Diehl, J.; Denk, R.; Opitz-Coutureau, J.; Markowicz A.*

**Non-destructive investigation of artworks using portable XRF and high-energy PIXE/PIGE****Workshop**

Malta Centre for Restoration, Malta 08. Jan - 08. Jan 2004

**Oral**

*Mahnke, H.-E.; Haas, H.; Koteski, V.; Novakovic, N.; Fochuk, P.; Panchuk, O.*

**Lattice relaxation around dopants in CdTe**

Arbeitstreffen Forschung mit nuklearen Sonden und Ionenstrahlen FSI 2004

Stuttgart 29. Sep - 01. Oct 2004

**Oral**

*Rauschenberg, J.; Bohne, W.; Denker, A.; Heide, P.; Opitz-Coutureau, J.; Röhrich, J.; Strub, E.*

**Measurements of high-energy PIXE cross sections with 68 MeV protons for various thin target elements**

10th International Conference on Particle Induced X-ray Emission and its analytical applications

Portoroz, Slovenien 04. Jun - 08. Jun 2004

## SF1 - Methods and Instruments

### SF1.Dynamics

Poster

*Bordallo, H.N.; Desmedt, A. ; Aldridge L.*

#### **Quasi-elastic neutron scattering study of constrained water in hydrated cement pastes**

7th International Conference on Quasi-elastic neutron scattering

Arcachon, France 01. Sep - 04. Sep 2004

Poster

*Bordallo, H.N. ; Manson J.L.; Hernández-Velasco J.; Argyriou D.N.*

#### **Spin excitations in molecular based magnets probed by neutron scattering**

7th International Conference on Quasi-elastic neutron scattering

Arcachon, France 01. Sep - 04. Sep 2004

Poster

*N. Bordallo, H.; Eckert, J.*

#### **Dynamics of the Metallic State of Layered La<sub>1.2</sub>Sr<sub>1.8</sub>Mn<sub>2</sub>O<sub>7</sub> investigated by Inelastic Neutron Scattering**

Workshop on Neutrons & numerical methods 2

ILL, Grenoble, FRANCE 14. Sep - 18. Sep 2004

Invited Talk

*Vorderwisch, P.; Stuhr, U.; Shapiro, S.M.*

#### **Phononendispersion in der ferromagnetischen Formgedächtnislegierung Ni<sub>2</sub>MnGa**

Deutsche Neutronenstreuungtagung 2004

Dresden 01. Sep - 04. Sep 2004

Invited Talk

*Vorderwisch, P.; Stuhr, U.; Shapiro, S.M.*

#### **Phonon dispersion in the ferromagnetic shape memory alloy Ni<sub>2</sub>MnGa studied by neutron spectroscopy**

XIII International Materials Research Congress with Symposium on Magnetic Shape Memory Alloys

Cancun, Mexico 22. Aug - 26. Aug 2004

### SF1.Methods

Poster

*Krist, Th., Peters, J., Shimizu, H. M., Suzuki, J., Oku, T.*

#### **Transmission bender for polarizing neutrons**

Polarized Neutrons in condensed matter investigations

Washington 01. Jun - 06. Jun 2004

Oral

*Manochine, S.; Drabkin, G.; Mezei, F.*

#### **Simulations of double Drabkin 2-PI resonators (DR)**

Joint VITESS and McStas Training Course and Workshop, ISIS facility

UK, Abingdon 05. Feb - 06. Feb 2004

Oral

*Manoshin, S.; Lieutenant, K.; Zsigmond, G.; Clemens, D.; Mezei, F.*

#### **MC simulations of a new VSANS spectrometer at the Hahn-Meitner-Institute Berlin**

NOBUGS 2004 Conference, October 18-20 2004 , Paul Scherrer Institute Villigen, PSI, Switzerland

Villigen, PSI, Switzerland 18. Oct - 20. Oct 2004

Invited Talk

*Mezei, F.*

#### **Neutron Scattering Instruments for the Study of Magnetism**

LANSCE Winter School on Neutron Scattering

Los Alamos, NM, USA 10. Jan - 12. Jan 2004

Invited Talk

*Mezei, F.*

**Time-of-flight Diffraction at CW Neutron Sources**

EXED Workshop

HMI 09. May - 11. May 2004

Invited Talk

*Mezei, F.*

**Polarized Neutron Scattering Research, the Beginnings and a Glimpse of the Future**

Conference on Polarized Neutron in Condensed Matter Investigations 2004

Washington, USA 01. Jun - 04. Jun 2004

Invited Talk

*Mezei, F.*

**The European Spallation Source Project**

Common meeting of the Hungarian and Austrian Physical Societies

Szombathely, Hungary 14. Aug - 15. Aug 2004

---

**SF1.Others**

Oral

*Krist, T., Mezei, F.*

**Neutron optical elements from HMI Berlin**

American Conference on Neutron Scattering

College Park, Maryland 06. Jun - 10. Jun 2004

Invited Talk

*Steitz, R.; Schemmel, S.; Findenegg, G. H.;*

**New aspects of water depletion and nanobubbles at extended solid/liquid interfaces**

French-German Network - Complex Fluids: from 3 to 2 Dimensions

Toulouse 12. May - 15. May 2004

Oral

*Steitz, R.; Schemmel, S.; Howse, J.; Findenegg, G. H.;*

**The microscopic structure of interfaces**

Annual Meeting of the DFG Priority Program 1052

Pforzheim 17. Feb - 20. Feb 2004

Invited Talk

*Steitz, R.; Shi, H.; Findenegg, G. H.;*

**Microstructured PEO-PPO-PEO block copolymer layers on silicon wafers**

French-German Network - Complex Fluids: from 3 to 2 Dimensions

Münster 18. Nov - 20. Nov 2004

---

**SF1.Spallation**

Invited Talk

*Lieutenant, K.; Zsigmond, G.; Fromme, M.; Manoshin, S.*

**General features of the neutron instrument simulation package VITESS**

New Opportunities for Better User Group Software (NOBUGS) 2004

PSI, Schweiz 18. Oct - 20. Oct 2004

Invited Talk

*Lieutenant, K.; Zsigmond, G.; Fromme, M.; Manoshin, S.*

**New features in Vitess 2.5 and 2.5.1**

MCNSI-Meeting

Villigen, Schweiz (PSI) 21. Oct - 21. Oct 2004

**Invited Talk**

*Lieutenant, K.; Zsigmond, G.; Manoshin, S.; Fromme, M.; Bordallo, H.N.; Champion, J.D.M.; Peters, J.; Mezei, F.*

**Neutron instrument simulation and optimization using the software package VITESS**

SPIE International Symposium

Denver 02. Aug - 06. Aug 2004

**SF2 - Magnetism****SF1.Dynamics****Poster**

*Bordallo, H.N. ; Manson J.L.; Hernández-Velasco J.; Argyriou D.N.*

**Spin excitations in molecular based magnets probed by neutron scattering**

7th International Conference on Quasi-elastic neutron scattering

Arcachon, France 01. Sep - 04. Sep 2004

**SF2.Others****Invited Talk**

*Holub-Krappe, E.; Anderson, C.; Konishi, T.; Karis, O.; Maletta, H.; Arvanitis, D.*

**Spin Reorientation in Thin Au/Co/Au Films**

IV th International School on Magnetism and Synchrotron Radiation

Mittelwihr, Frankreich 10. Oct - 15. Oct 2004

**SF4.Structures****Poster**

*Mahnke, H.-E.; Haas, H.; Holub-Krappe, E.; Koteski, V.; Novakovic, N.; Fochuk, P.; Panchuk, O.*

**LATTICE DISTORTION AROUND IMPURITY ATOMS AS DOPANTS IN CdTe**

E-MRS Spring 2004, Symposium O

Strasbourg 25. May - 28. May 2004

**SF3 - Materials****SF3.Light weight mat.****Poster**

*Babcsan, N.*

**Cellular Materials**

Fraunhofer Workshop

Budapest 11. Mar - 12. Mar 2004

**Oral**

*Babcsan, N.; Garcia-Moreno, F.; Leitlmeier, D.; Banhart, J.*

**INFLUENCE OF GRAVITY ON METAL FOAM FORMATION**

Solidification and Gravity 04

Miskolc-Lillafured, 06. Sep - 10. Sep 2004

**Oral**

*Babcsan, N.; Garcia-Moreno, F.; Leitlmeier, D.; Banhart, J.*

**THE MECHANISMS OF STABILIZATION OF LIQUID METAL FOAMS**

EUFOAM

Paris, France 05. Jul - 08. Jul 2004

**Poster**

*Babcsan, N.; Kim, S.Y.; Hur, B.Y.; Banhart, J.*

**EX-SITU EXAMINATION OF ALPORAS TYPE METAL FOAMS**

EUFOAM

Paris, France 05. Jul - 08. Jul 2004

**Invited Talk**

*Babcsan, N.; N. Babcsán1, García-Moreno, F.; Leitlmeier, D.; Banhart, J.*

**METAL FOAMS - AIRY MATERIALS**

Junior Euromat 2004

Lausanne, Switzerland 06. Sep - 09. Sep 2004

**Poster**

*Babcsan, N.; Meier, M.; Garcia-Moreno, F.; Leitlmeier, D.; Banhart, J.*

**Measurements on cell walls and Plateau borders of particle stabilized foams**

EUFOAM

Paris, France 05. Jul - 08. Jul 2004

**Oral**

*Banhart, J.*

**Industrialisation of aluminium foam technology**

9th International Conference on Aluminium Alloys (2004), Brisbane (AUS)

Brisbane (AUS) 02. Aug - 05. Aug 2004

**Poster**

*Meier, M.; Tappe, S.; Babcsan, N.*

**Behaviour of low density solid particles during drainage of a foam**

EUFOAM

Paris, France 05. Jul - 08. Jul 2004

---

**SF3.Microstructure**

---

**Invited Talk**

*Abromeit, C.*

**Fe-Ni Invar alloy: an example of fractal decomposition?**

XVI International Conference on Physics of Radiation Phenomena and Radiation Material Science

Alushta (Ukraine) 06. Sep - 11. Sep 2004

**Invited Talk**

*Abromeit, C.*

**Compositional instabilities in binary alloys under irradiation**

Workshop on Irradiation Effects and Recovery on Materials

University of Tokyo, Japan 02. Dec - 02. Dec 2004

**Poster**

*Griesche, A.; Macht, M.-P.; Garandet, J.-P.; Frohberg, G.*

**Diffusion and Viscosity in Pd40Ni40P20 and Pd40Cu30Ni10P20 Melts**

Workshop on Dynamics in Viscous Liquids

Munich 14. Mar - 17. Mar 2004

**Oral**

*Lazarev, N.P.; Bakai, A.S.; Abromeit, C.*

**Molecular Dynamics Simulation of Viscosity in Supercooled Liquid and Glassy AgCu Alloy**

XIIth International Conference on Liquid and Amorphous Metals LAM 12

Metz (France) 11. Jul - 17. Jul 2004

Invited Talk

*Wanderka, N.*

**3 dimensional atom probe: new dimensions in material analysis (bulk metallic glasses and Ni-based superalloy IN 706)**

16. International Conference on Physics of radiation phenomena and radiation material science  
Alushta, Ukraine 06. Sep - 11. Sep 2004

Invited Talk

*Wanderka, N., Macht, M.-P.*

**Bulk metallic glasses, behaviour and possible application**

Workshop über Nanomaterials and Nanotechnology  
Tehran, Iran 02. May - 04. May 2004

---

**SF3.Nanostructures**

---

Oral

*Perroud, O.; Garcia-Matres, E.; Eckert, J.; Wiedenmann, A.*

**Magnetische und kristalline Nanostrukturen in  $Nd_{60} Fe_{20-x} Co_{10+x} Al_{10}$**

DPG Frühjahrstagung  
Regensburg 09. Mar - 09. Mar 2004

Invited Talk

*Perroud, O.; Garcia-Matres, E.; Eckert, J.; Wiedenmann, A.*

**Magnetische und kristalline Nanostrukturen in  $Nd_{Fe} Co Al$  alloys**

DFG SPP1120  
Bad Honnef 25. Mar - 25. Mar 2004

Invited Talk

*Wiedenmann, A.*

**Magnetic Nanostructures as probed by SANSPOL**

International Conference on Polarised Neutrons in Condensed Matter investigations (PNCMI 2004)  
Washington 02. Jun - 05. Jun 2004

Invited Talk

*Wiedenmann, A.*

**Nanostructures in Liquids and amorphous materials**

Int. Conference on Liquid and Amorphous materials LAM 12  
Metz, France 09. Jul - 14. Jul 2004

Invited Talk

*Wiedenmann, A.*

**Nanostructures in liquids and amorphous materials as probed by SANS**

Center for nanostructured Materials Technology  
Seoul, Korea 08. Dec - 09. Dec 2004

Invited Talk

*Wiedenmann, A.*

**Magnetic Nanostructures as probed by Polarized Small Angle Neutron Scattering**

Conference on Neutron Scattering  
Mumbai 02. Jan - 05. Jan 2004

Invited Talk

*Wiedenmann, A.; Heinemann, A.; Hoell, A.; Kammel, M.*

**Ordering phenomena in ferrofluids observed by Small Angle Neutron Scattering**

10th International Conference on Magnetic Fluids ICMF10  
Guarujá, Brasil 02. Aug - 07. Aug 2004

Oral

*Wiedenmann, A.; Heinemann, A.; Kammel, M.*

**Ordering phenomena in ferrofluids observed by Small Angle Neutron Scattering**

DFG-Annual Meeting SPP1104

Benediktbeuren 28. Sep - 28. Sep 2004

---

**SF3.Others**

---

Poster

*Babcsán, J. K.; Maros, M. B.; Wanderka, N.; Klaffke, D.; Schubert, H.*

**Effect of Ion-implantation on the Microstructure of Si<sub>3</sub>N<sub>4</sub> Based Ceramics**

Fractography of Advanced Ceramics, FAC2004

Stará Lesná, Poprad, Slovak Republic 03. Oct - 05. Oct 2004

Invited Talk

*Griesche, A.; Macht, M.-P.; Frohberg, G.*

**Diffusion in Liquid Multicomponent Al-Based Alloys**

Liquid and Amorphous Metals - LAM 12

Metz 11. Jul - 16. Jul 2004

Poster

*Manke, I.; Kardjilov, N.; Haibel, A.; Strobl, M.; Hilger, A.; Treimer, W.; Rack, A.; Banhart, J.*

**Neutronen- und Synchrotron томография für Anwendungen in der Industrie**

Werkstoffwoche 2004

München 21. Sep - 23. Sep 2004

Oral

*Manke, I.; Kardjilov, N.; Haibel, A.; Strobl, M.; Hilger, A.; Treimer, W.; Rack, A.; Wanderka, N.; Banhart, J.*

**Neutronen- und Synchrotron томография für Anwendungen in der Industrie**

Werkstoffwoche 2004

München 21. Sep - 21. Sep 2004

Invited Talk

*Vierke, J.*

**Empfindlichkeitseinstellung und Echohöhenbewertung von Ultraschallprüfköpfen mit schmalen rechteckigen Schwingern**

Internes Seminar der Firma intelligeNDT Systems & Services, Framatome ANP, Areva

Erlangen 16. Nov - 16. Nov 2004

---

**SF4 - Structure and Dynamics**

---

**SE4.Dynamics**

---

Oral

*Homeyer,H.;Röhrich,J.;Winkelmann, T.*

**Status of the Ion Source development at the ISL**

38th Symposium of Northeastern Accelerator Personnel in

Hamilton 17. Oct - 21. Oct 2004

---

**SF4.Dynamics**

---

Invited Talk

*Ban-d'Etat, B.; Haranger, F.; Boduch, P.; Bouffard, S.; Lebius, H.; Maunoury, L.; Pacquet, J.Y.; Rothard, H.; Clerc, C.; Garrido, F.; Thome, L.; Hellhammer, R.; Pesic, Z.D.; Stolterfoht, N.; Bohne, W.; Röhrich, J.*

**Evolution of sputtering with projectile kinetic energy in the nuclear stopping power regime**

15th International Workshop on Inelastic Ion-Surface Collisions

Ise-Shima, Japan 17. Oct - 22. Oct 2004

**Invited Talk**

Czerski, K.; Schiwietz, G.; Roth, M.; and F. Staufenbiel, F.

**Ultrafast breakdown of insulator band-structure induced by swift heavy ions (invited talk).**

21th Int. Conf. on Atomic Collisions in Solids (ICACS)

Genua, Italy 04. Jul - 09. Jul 2004

**Oral**

Elsanousi, A.; Bolse, W.; Schattat, B.; Klaumünzer, S.

**Swift heavy ion beam induced solid-state reaction at metal-oxide/silicon interfaces**

Arbeitskreis Festkörperphysik Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

**Oral**

Etissa-Debissa, D.; Kalafat, M.; Paulus, H.; Bolse, W.; Klaumünzer, S.

**Self-organisation of thin ceramic films under swift heavy ion bombardment**

Arbeitskreis Festkörperphysik Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

**Oral**

Facsко, S.; Pesic, Z.D.; Sobociński, P.; Stolterfoht, N.; Kost, D.; Möller, W.

**Electron emission from  $Ne^9+$  interacting with thin  $SiO_2$  films**

24th Werner-Brandt Workshop

Berlin-Adlershof, Germany 11. Jul - 14. Jul 2004

**Invited Talk**

Grande, P.L.; Schiwietz, G.

**Nonperturbative treatment of medium-energy proton scattering under shadowing-blocking conditions in Al(110) (invited talk)**

21th Int. Conf. on Atomic Collisions in Solids (ICACS)

Genua, Italy 04. Jul - 09. Jul 2004

**Poster**

Haranger, F.; Ban-d'Etat, B.; Boduch, P.; Bouffard, S.; Lebijus, H.; Maunoury, L.; Rothard, H.; Garrido, F.; Thome, L.; Bohne, W.; Hellhammer, R.; Pesic, Z.D.; Röhrich, J.; Stolterfoht, N.

**Angular distributions of  $UO_2$  sputtering induced by slow highly charged ions**

8th European Conference on Atomic and Molecular Physics

Rennes, France 06. Jul - 10. Jul 2004

**Oral**

Hedler, A.; Klaumünzer, S.; Wesch, W.

**Swift heavy ion irradiation of amorphous silicon**

Int. Conf. Ion beam Modification on Materials

Monterey, California, USA 05. Sep - 05. Sep 2004

**Oral**

Hedler, A.; Klaumünzer, S.; Wesch, W.

**Experimental evidence for a glass transition in amorphous silicon**

Forschung mit nuklearen Sonden und Ionen

Stuttgart 29. Sep - 29. Sep 2004

**Oral**

Hedler, A.; Klaumünzer, S.; wesch, W.

**Plastic deformation of amorphous silicon under swift heavy ion irradiation**

Arbeitskreis Festkörperphysik Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

Oral

*Hellhammer, R.; Bundesmann, J.; Fink, D.; Hoffmann, V.; Petrov, A.; Pesic, Z.D.; Skuratov, V.A.; Sulik, B.; Stolterfoht, N.*

**Guiding of Ne<sup>7+</sup> ions through Capillaries in PET: projectile energy dependence**

Arbeitstagung für energiereiche Stöße

Riezlern, Austria 09. Feb - 12. Feb 2004

Oral

*Hellhammer, R.; Pesic, Z.D.; Sobocinski P.; Bundesmann, J.; Fink, D.; Petrov, A.; Sulik, B.; Stolterfoht, N.*

**Guided transmission of highly charged ions through nanocapillaries in PET: study of the enrgy dependence**

8th Workshop on fast-ion Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

Oral

*Hellhammer, R.; Pesic, Z.D.; Sobocinski, P.; Bundesmann, J.; Fink, D.; Petrov, A.; Sulik, B.; Stolterfoht, N.*

**Guided transmission of highly charged ions through nanocapillaries in PET: study of the energy dependence**

8th Workshop on Fast Ion-Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

Poster

*Hossain, S.; Landers, A.L.; Stolterfoht, N.; Tanis, J.A.*

**High Frequency Oscillations in Electron Emission Interferences from H<sub>2</sub>**

8th Workshop on Fast Ion-Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

Oral

*Hossain, S.; Landers, A.L.; Stolterfoht, N.; Tanis, J.A.*

**High Frequency Oscillations in Electron Emission Interferences from H<sub>2</sub>**

8th Workshop on Fast Ion-Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

Oral

*Kalafat, M.; Feyh, A.; Bolse, W.; Etissa-Debissa, D.; Klaumünzer, S.; Schumacher, G.; Bilger, G.*

**Selbstorganisation dünner NiO-Schichten beim Beschuss mit schnellen, schweren Ionen**

Forschung mit nuklearen Sonden und Ionenstrahlen

Stuttgart 29. Sep - 29. Sep 2004

Oral

*Klaumünzer, S.*

**Texturänderung durch Bestrahlung mit hochenergetischen Ionen**

Forschung mit nuklearen Sonden und Ionenstrahlen

Stuttgart 29. Sep - 29. Sep 2004

Oral

*Roth, M.*

**Ion-Induced Sputtering**

Arbeitstreffen Forschung mit nuklearen Sonden und Ionenstrahlen

Universität Stuttgart, Institut für Strahlenphysik 29. Sep - 01. Oct 2004

Oral

*Roth, M.; Czerski, K.; Schiwietz, G.; Staufenbiel, F.*

**Ion induced sputtering**

24th Werner Brandt Workshop

Berlin-Adlershof, Germany 12. Jul - 14. Jul 2004

**Invited Talk**

*Roth, M.; Schiwietz, G.; Czerski, K.; Schattat, B.; Staufenbiel, F.; Walz, B.*

**Fast Processes in Ion Tracks**

SPIG2004 22nd Summer School and International Symposium on the Physics of Ionized Gases

National Park Tara, Serbia and Montenegro 23. Aug - 27. Aug 2004

**Oral**

*Roth, M.; Schiwietz, G.; Czerski, K.; Staufenbiel, F.; Grande, P.L.*

**Silicon Auger-Spectroscopy**

EAS 2004 Arbeitstagung Energieiche Atomare Stöße

Riezlern, Austria 08. Feb - 13. Feb 2004

**Oral**

*Schattat, B.; Bolse, W.; Paulus, H.; Klaumünzer, S.; Scholz, R.; Zizak, I.*

**Spuren hochenergetischer Ionen in NiO**

Forschung mit nuklearen Sonden und Ionenstrahlen

Stuttgart 29. Sep - 29. Sep 2004

**Invited Talk**

*Schiwietz, G.*

**Hoch ionisiert und was nun? - Von elektronischen Kurzzeitprozessen bis zu Strahlenschäden durch schnelle Schwerionen (invited main lecture)**

68. Physikertagung der Deutschen Physikalischen Gesellschaft (AMOP)

München, Germany 22. Mar - 26. Mar 2004

**Invited Talk**

*Schiwietz, G.*

**Electron spectroscopy of solids irradiated with relativistic heavy ions (invited talk)**

FAIR workshop on the future materials-science activities

GSI, Darmstadt, Germany 08. Nov - 09. Nov 2004

**Invited Talk**

*Schiwietz, G.*

**Interaction of fast highly charged ions with solids and surfaces (6 hours invited lectures)**

Summer school on Frontiers in Atomic and Molecular Physics with Charged Particles

Lanzhou, China 09. Aug - 17. Aug 2004

**Invited Talk**

*Schiwietz, G.; Czerski, K.; Roth, M.; Staufenbiel, F.; and Grande, P.L.*

**Dynamics of the early ion-track evolution (invited talk)**

Conference on the Physics of Highly Charged Ions (HCI 2004)

Vilnius, Lithuania 06. Sep - 11. Sep 2004

**Oral**

*Schiwietz, G.; Staufenbiel, F.; Czerski, K.; Roth, M.; Grande, P. L.*

**Electronic energy-density effects in ion-tracks of metals (selected oral contribution)**

21th Int. Conf. on Atomic Collisions in Solids (ICACS)

Genua, Italy 04. Jul - 09. Jul 2004

**Poster**

*Sobociński, P.; Pesic, Z.D.; Hellhammer, R.; Chesnel, J.Y.; Legendre, S.; Sulik, B.; Stolterfoht, N.*

**Fragmentation of  $H_2O$  molecules following interaction with slow  $He_2^+$  ions**

8th Workshop on Fast Ion-Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

**Oral**

*Sobociński, P.; Pesic, Z.D.; Hellhammer, R.; Stolterfoht, N.; Chesnel, J.Y.; Legendre, S.; Sulik, B.*

**Fragmentation of  $H_2O$  molecules following intrecaction with  $He^2+$  ions**

8th Workshop on Fast Ion-Atom Collisions

Debrecen, Hungary 01. Sep - 03. Sep 2004

Oral

*Stolterfoht, N.*

**Interferences in electrom emission from two centres of  $H_2$  by fast ion impact: First and second-order effects**

18th International Conference on the Application of Accelerators in Research and Industry  
Fort Worth, USA 10. Oct - 15. Oct 2004

Invited Talk

*Stolterfoht, N.*

**Quantum interference in electron emission from  $H_2$  molecules by fast ions: First- and second-order effects**

8th Workshop on Fast Ion-Atom Collisions  
Debrecen 01. Sep - 03. Sep 2004

Invited Talk

*Stolterfoht, N.; Hellhammer, R.; Hoffmann, V.; Pesic, Z.D.; Sulik, B.; Petrov, A.; Fink, D.*

**Transmission of 3-keV  $Ne^7+$  ions through 100 nm capillaries in a PET polymer: evidence for capillary guiding**

International Workshop on Atomic Collisions of Slow Highly-Charged Ions  
Tokyo 19. Feb - 21. Feb 2004

Invited Talk

*Stolterfoht, N.; Hellhammer, R.; Pesic, Z.D.; Bundesmann, J.; Fink, D.; Sulik, B.*

**Guiding of slow highly charged ions through nanocapillaries in insulating PET polymers**

International Workshop on Structures and Dynamics of free and deposited clusters  
Lanzhou, China 06. Sep - 10. Sep 2004

Invited Talk

*Stolterfoht, N.; Hellhammer, R.; Pesic, Z.D.; Bundesmann, J.; Fink, D.; Sulik, B.*

**Guiding of neon and molecular hydrogen through nanocapillaries in PET**

12th International Conference on the physics of highly Charged Ions  
Vilnius, Lithuania 06. Sep - 10. Sep 2004

Poster

*Stolterfoht, N.; Hellhammer, R.; Pesic, Z.D.; Hoffmann, V.; Fink, D.; Petrov, A.; Sulik, B.*

**Scattering of 3-keV  $Ne^7+$  ions through nanocapillaries etched in thin PET polymers: evidence for capillary guiding**

21st International Conference on Atomic Collisions in Solids  
Genoa, Italy 04. Jul - 09. Jul 2004

Invited Talk

*Stolterfoht, N.; Hellhammer, R.; Sobociński, P.; Pesic, Z.D.; Skuratov, V.; Apel, P.; Sulik, B.*

**Interaction of slow highly charged ions with inner surface of nanocapillaries**

15th International Workshop on Inelastic Ion-Surface (IISC-15)  
Ise-Shima, Japan 17. Oct - 22. Oct 2004

Oral

*Stolterfoht, N.; Hoffmann, V.; Skogvall, B.; Sulik, B.; Chesnel, J.Y.; Rangama, J.; Fremont, F.; Hennechart, D.; Cassimi, A.; Husson, X.; Hossain, S.; Landers, A.L.; Tanis, J.A.; Galassi, M.E.; Rivarola, R.D.*

**First- and second- Order interferences in electron emission from  $H_2$  by fast Ion Impact**

Arbeitstagung für energiereiche Stöße  
Groningen, The Netherlands 09. Feb - 12. Feb 2004

Oral

*Stolterfoht, N.; Pesic, Z.D.; Hellhammer, R.; Chesnel, J.Y.; Sulik, B.*

**Fragmentation of  $H_2O$  molecules following the interaction with slow highly charged ions**

Metting of the Work Group  
Groningen, The Netherlands 04. Mar - 06. Mar 2004

**Invited Talk**

*Stolterfoht, N.; Sobocinski, P.; Petic, Z.D.; Hellhammer, R.; Sulik, B.; Seredyuk, B.; McCullough R.W.; Bodewits, D.; Hoekstra, R.; Morgenstern, R.*

**State selective electron capture into  $He^2+$  ions colliding with  $H_2O$  molecules**

Radiation Damage in Biomolecules

Lyon 24. Jun - 27. Jun 2004

**Invited Talk**

*Stolterfoht, N.; Sobocinski, P.; Petic, Z.D.; Hellhammer, R.; Sulik, B.; Seredyuk, B.; McCullough R.W.; Bodewits, D.; Hoekstra, R.; Morgenstern, R.*

**State selective electron capture into  $He^2+$  ions colliding with  $H_2O$  molecules**

Annual Meeting of the COST P9 Action

Lyon, France 24. Jun - 27. Jun 2004

**Invited Talk**

*Stolterfoht, N.; Sulik, B.; Gulyas, L.; Skogvall, B.; Chesnel, J.Y.; Fremont, F.; Hennecart, D.; Cassimi, A.; Adoui, L.; Hossain, H.; Tanis J.A.*

**Young-type interferences in the electron spectra from  $H_2$  induced by fast ions**

Satellite Symposium of the IISC-15 Conference

Okayama, Japan 14. Oct - 15. Oct 2004

**Oral**

*Wesch, W.; Kamarou, A.; Wendler, E.; Klaumünzer, S.*

**593 MeV Au irradiation of InP, GaP, GaAs and AlAs**

Int. Conf. Ion Beam Modification on Materials IBMM 2004

Monterey, California, USA 05. Sep - 05. Sep 2004

**Oral**

*Zizak, I.; Darowski, N.; Schumacher, G.; Klaumünzer, S.; Assmann, W. Gerlach, J.*

**Texturänderung durch Bestrahlung mit hochenergetischen Ionen**

Forschung mit nuklearen Sonden und Ionenstrahlen

Stuttgart 29. Sep - 29. Sep 2004

**Oral**

*Zumkley, Th.; Schumacher, G.; Klaumünzer, S.*

**Thermal-spike-induced crystal growth in nano-crystalline nickel**

Arbeitkreis Festkörperphysik Frühjahrstagung 2004

Regensburg 08. Mar - 08. Mar 2004

---

**SF4.Others**

---

**Oral**

*Roth, M.; Schiwietz, G.; Czerski, K.; Staufenbiel, F.; Grande, P.L.*

**Silicon Auger-Spectroscopy**

EAS 2004 Arbeitstagung Energieriche Atomare Stöße

Riezlern, Austria 08. Feb - 13. Feb 2004

**Oral**

*Staufenbiel, F.; Czerski, K.; Roth, M.; Schiwietz, G.*

**Elektronische Ionenspureffekte in Be und Al**

25. Arbeitstagung Energieriche Atomare Stöße

Riezlern, Austria 08. Feb - 13. Feb 2004

---

**SF4.Structures**

---

**Poster**

*Agne, Th.; Koteski, V.; Mahnke, H.-E.; Wolf, H.; Wichert, Th.*

**Structural Properties of the Donor Indium in Nanocrystalline ZnO**

13th Intern. Conf. on Hyperfine Interactions

Bonn 23. Aug - 27. Aug 2004

## Poster

Koteski, V.; Haas, H.; Holub-Krappe, E.; Ivanovic, N.; Mahnke, H.-E.

**Lattice distortion around impurities in CdTe**

HASYLAB Users' Meeting at DESY

Hamburg 30. Jan - 30. Jan 2004

## Poster

Koteski, V.; Haas, H.; Holub-Krappe, E.; Mahnke, H.-E.; Novakovic, N.; Fochuk, P.; Panchuk, O.

**Lattice distortion around dopants in CdTe**

42. Workshop Pointdefect

Dresden 01. Apr - 02. Apr 2004

## Invited Talk

Mahnke, H.-E.

**Lattice relaxation around impurity atoms in semiconductors**

Gordon Research Conference Defects in Semiconductors

New London, NH, USA 18. Jul - 23. Jul 2004

## Poster

Mahnke, H.-E.; Haas, H.; Holub-Krappe, E.; Koteski, V.; Novakovic, N.; Fochuk, P.; Panchuk, O.

**LATTICE DISTORTION AROUND IMPURITY ATOMS AS DOPANTS IN CdTe**

E-MRS Spring 2004, Symposium O

Strasbourg 25. May - 28. May 2004

## Poster

Mahnke, H.-E.; Haas, H.; Koteski, V.; Novakovic, N.; Fochuk, P.; Panchuk, O.

**Experimental verification of calculated lattice relaxations around impurities in CdTe**

13th Intern. Conf. on Hyperfine Interactions

Bonn 23. Aug - 27. Aug 2004

## Oral

Mahnke, H.-E.; Haas, H.; Koteski, V.; Novakovic, N.; Fochuk, P.; Panchuk, O.

**Lattice distortion around impurity atoms as dopants in CdTe**

E-MRS 2004, Spring Meeting

Strasbourg 25. May - 28. May 2004

## Oral

Schattat, B.; Bolse, W.; Paulus, H.; Klaumünzer, S.; Scholz, R.

**Spuren hochenergetischer Ionen in NiO**

Arbeitskreis Festkörperphysik Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

---

**SF5 - Theory**

---

---

**SF5.Biosystems**

---

## Invited Talk

Falcke, M.

**Fluctuations, spatial structure and stability in intracellular Ca<sup>2+</sup> dynamics**

Workshop "Signal Transduction: Calcium Dynamics, Phototransduction and Olfaction",  
Columbus, Ohio 26. Jan - 31. Jan 2004

## Invited Talk

Falcke, M.

**Intracellular Ca<sup>2+</sup> dynamics**

DPG Frühjahrstagung des Arbeitskreises Festkörperphysik  
Regensburg 08. Mar - 12. Mar 2004

Oral

*Falcke, M.*

**Fokker-Planck-Equation for intracellular Ca<sup>2+</sup> dynamics**

Dresdener Herbstseminar des Arbeitskreises Nichtlineare Physik

Dresden 07. Nov - 10. Nov 2004

Oral

*Falcke, M.*

**Fluctuations create structures in intracellular Ca<sup>2+</sup> dynamics**

Workshop Complex stochastic systems in Biology and Medicin

München 07. Oct - 08. Oct 2004

Invited Talk

*Frey, E.*

**Statistical mechanics of the cytoskeleton - fiber networks and intracellular transport**

Gentner Symposium on

Dead Sea (Israel) 13. Mar - 17. Mar 2004

Oral

*Frey, E.*

**Phase Coexistence in Driven One-Dimensional Transport**

APS March Meeting

Montreal (Kanada) 21. Mar - 26. Mar 2004

Oral

*Frey, E.*

**Elasticity of Stiff Biopolymer Networks**

APS March Meeting

Montreal (Kanada) 21. Mar - 27. Mar 2004

Invited Talk

*Frey, E.*

**The Cytoskeleton: A Model System for Stiff Polymer Networks**

Statistical Physics of Molecular and Cell Biological Systems and Networks

Heidelberg 01. Apr - 03. Apr 2004

Invited Talk

*Frey, E.*

**The Cytoskeleton: A Model System for Stiff Polymer Networks**

StatPhys V

Bangalore (Indien) 03. Jul - 09. Jul 2004

Poster

*Hallatschek, O.; Frey, E.; Kroy, K.*

**Euler Buckling Dynamics**

Jülich Soft Matter Days

Kerkrade, Netherlands 18. Nov - 18. Nov 2004

Poster

*Heussinger, C.; Frey E.*

**Thermal and Mechanical Response of Stiff Polymer Networks**

Soft Matter Days

Kerkrade, Holland 17. Nov - 19. Nov 2004

Poster

*Toeffelen van, S.; Frey, E.; Kroy, K.*

**Effective pair potential approach to entangled stiff polymers**

DPG Fruehjahrstagung 2004

Regensburg 08. Mar - 12. Mar 2004

Poster

*Thul, R., Falcke, M.*

**Stability of strongly localized reactions**

Oscillations and waves in cells and Cell networks

Cargèse, Korsika 10. May - 15. May 2004

---

**SF5.Others**

---

Invited Talk

*Gross, D.H..E.*

**Equilibrium statistics applied to "Small" systems, phase transitions in nuclei in particular.**

Workshop Consensus Initiative I (WCI)

Catania, Italien 19. Jan - 24. Jan 2004

---

**SF5.Soft Matter**

---

Invited Talk

*Frey, E.*

**The Cytoskeleton: A Model System for Stiff Polymers**

DPG Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

Poster

*Kroy, K.*

**A cluster mode-coupling approach to weak gelation in attractive colloids**

Structural Arrest Transitions in Colloidal Systems

With Short-Range Attractions

Messina 17. Dec - 20. Dec 2004

Invited Talk

*Kroy, K.; Hallatschek, O.; Frey, E.*

**Nonequilibrium dynamics of stiff polymers**

DPG AKF-Frühjahrstagung 2004

Regensburg 08. Mar - 12. Mar 2004

---

**SF6 - Trace Elements**

---

**SF6.Analysis**

---

Poster

*Alber, D.; Bukalis, G.; Kyriakopoulos, A.; Stanik, B.; Zimmer, A.*

**Methoden der Spurenelementanalytik biologischer Materialien Neutronenaktivierungsanalyse (NAA)**

Gemeinsame Herbsttagung HMI - GSF

Berlin 25. Nov - 26. Nov 2004

Invited Talk

*Behne, D.; Alber, D.; Kühbacher, M.; Wolf, C.; Plotnikov, A.; Kyriakopoulos, A.*

**Elementanalytische Methoden in Metalloproteomics**

Gemeinsame Herbsttagung HMI - GSF

Berlin 25. Nov - 26. Nov 2004

Invited Talk

*Behne, D.; Alber, D.; Kyriakopoulos, A.*

**Applications of Nuclear Analytical Methods in Metalloproteomics**

11th International Conference

Guildford, UK 20. Jun - 25. Jun 2004

**Invited Talk**

*Knispel, T.; Kühbacher, M.; Denkhaus, E.; Prange, A.; Kyriakopoulos, A.; Behne, D.*

**Nickel Spezies Analyse von humanem Darmtumorgewebe und HT29/B6 Tumorzellen mittels Größenaufschlußchromatographie, SDS-PAGE und Massenspektrometrie**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

**Poster**

*Kühbacher, M.; Bertelsmann, H.; Wolf, C.; Weseloh, G.; Haibel, A.; Rack, A.; Kyriakopoulos, A.; Behne, D.*

**Untersuchungen an metall- und metalloidhaltigen Proteinen im männlichen Reproduktionssystem**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

**Poster**

*Kühbacher, M.; Weseloh, G.; Falkenberg, G.; Kyriakopoulos, A.; Behne, D.*

**Untersuchungen an metall- und metalloidhaltigen Proteinen im zentralen Nervensystem durch Kombination von biochemischen und elementanalytischen Methoden**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

**Oral**

*Kühbacher, M.; Weseloh, G.; Falkenberg, G.; Kyriakopoulos, A.; Behne, D.*

**Untersuchungen an metall- und metalloidhaltigen Proteinen im zentralen Nervensystem**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

**Poster**

*Kühbacher, M.; Weseloh, G.; Bertelsmann, H.; Radtke, M.; Riesemeier, H.; Haibel, A.; Rack, A.; Kyriakopoulos, A.; Behne, D.*

**Molekulare Spurenelementforschung mit Synchrotronstrahlung an der BAMline.**

3. BAMline-Seminar

Berlin 29. Nov - 30. Nov 2004

**Oral**

*Kyriakopoulos, A., Alber, Özaslan, M., Behne, D.*

**Identifizierung von Metalloproteinen (Cu-Proteine)**

Kooperationsprojekt mit Fa. WITA/Teltow

Teltow 08. Oct - 08. Oct 2004

**Oral**

*Plotnikov, A.*

**Anwendung der scannenden Laserablation-ICP-Massenspektrometrie für die Identifizierung von Se-haltigen Proteinen nach 1D/2D-gel-elektrophoretischer Trennung**

14. Jahressymposium der Interessengemeinschaft Atomspektroskopie (IGAS)

Berlin 17. Nov - 17. Nov 2004

**Oral**

*Plotnikov, A.*

**Novel Applications of Inductively Coupled Plasma Mass Spectrometry - a Powerful Technique for Elemental Analysis**

Workshop Moscow Chemist (Seminar der Moskauer Universität)

Berlin 26. Apr - 26. Apr 2004

**Poster**

*Weseloh, G.; Kühbacher, M.; Falkenberg, G.; Kyriakopoulos, A.; Behne, D.*

**INVESTIGATIONS OF TSE- INFECTED SYRIAN HAMSTER BRAINS BY MEANS OF THE SRXRF-MICROPROBE**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

## Poster

*Weseloh, G.; Kühbacher, M.; Falkenberg, G.; Kyriakopoulos, A.; Behne, D.*

**Investigation of TSE-infected syrian hamster brains by means of SRXRF-Microprobe**

EXRS 2004

Alghero 06. Jun - 11. Jun 2004

---

**SF6.Clinical app.**

---

## Poster

*Plotnikov, A.; Wolf, C.; Kyriakopoulos, A.; Behne, D.*

**Proteomics mittels SEC-ICP-MS: Verbesserung chromatographischer Auflösung durch die mathematische Signalverarbeitung**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

## Poster

*Wolf, C.; Plotnikov, A.; Kyriakopoulos, A.*

**Methoden der Spurenelementanalytik biologischer Materialien Massenspektrometrie mit induktiv gekoppeltem Plasma (ICP-MS)**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

---

**SF6.NAA**

---

## Poster

*Alber, D.; Schwarm, A.; Ortmann, S.; Clauss, M.; Behne, D.*

**Differential Particle Retention in the Forestomach of Hippopotamidae Investigated by Instrumental Neutron Activation Analysis of Elemental Particle Markers**

11th International Conference

Guildford, UK 20. Jun - 25. Jun 2004

## Oral

*Berger, A.; Alber, D.; Bukalis, G.*

**Determination of Cobalt in Nickel in the Sub-PPM Level with cold Neutrons**

11th International Conference

Guildford, UK 20. Jun - 25. Jun 2004

## Oral

*Lin, X.; Henkelmann, R.; Alber, D.*

**Is there something wrong in Barium determination by K0-INAA**

11th International Conference

Guildford, UK 20. Jun - 25. Jun 2004

---

**SF6.Proteins**

---

## Invited Talk

*Bertelsmann, H.; Kühbacher, M.; Weseloh, G.; Alber, D.; Bollwein, H.; Radtke, M.; Kyriakopoulos, A.; Behne, D.*

**Characterisation of a new form of snGPx in mammalian sperm nuclei**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

## Poster

*Bukalis, K.; Kyriakopoulos, A.; Alber, D.; Behne, D.*

**Subcellular distribution of selenium and selenium-containing proteins in the rat lung**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

Poster

*Bukalis, K.; Kyriakopoulos, A.; Alber, D.; Behne, D.*

**Studies on Trace Elements and Trace-Element-Containing Proteins in the Lung of the Rat**

29th FEBS

Warschau 26. Jun - 01. Jul 2004

Poster

*Bukalis, K.; Kyriakopoulos, A.; Alber, D.; Behne, D.*

**Trace elements and trace-element-containing proteins in the respiratory tract of the rat**

Macro and Trace Elements

Jena 24. Sep - 25. Sep 2004

Poster

*Dalla Puppa, L.; Kyriakopoulos, A.; Bräuer, A.; Savaskan, NE.; Behne, D.*

**WHICH SELENOPROTEINS PROTECT MICROGLIAL CELLS FROM OXIDATIVE STRESS?**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

Poster

*Dalla Puppa, L.; Savaskan, NE.; Nitsch, R.; Kyriakopoulos, A.; Behne, D.*

**Protective effect of selenium and selenoproteins on microglial and neuronal cells**

FENS Forum 2004

Lissabon 10. Jul - 14. Jul 2004

Poster

*Hoppe, B.; Kyriakopoulos, A.; Behne, D.*

**Involvement of selenium-containig proteins in the blood-brainbarrier**

Endo-Neuro-Psycho

Doorwerth 01. Jun - 04. Jun 2004

Poster

*Hoppe, B.; Kyriakopoulos, A.; Behne, D.*

**Selenium-containing proteins in the blood-brain barrier**

7th symposium

Potsdam 17. Sep - 17. Sep 2004

Oral

*Kyriakopoulos, A.*

**Biochemische Methoden zur Trennung von spezifischen Metalloproteinen**

FU-Berlin

Berlin 28. May - 28. May 2004

Oral

*Kyriakopoulos, A., Alber, D., Behne, D.*

**Plasma-Seleoprotein P**

Kooperationsprojekt mit Fa. Biogenes/Berlin

Berlin 27. Sep - 27. Sep 2004

Poster

*Kyriakopoulos, A.; Graebert, A.; Alber, D.; Behne, D.*

**Localization of membrane-bound selenoproteins in the cell compartments of rat tissues**

Gemeinsame Herbsttagung HMI-GSF

Berlin 25. Nov - 26. Nov 2004

Poster

*Kyriakopoulos, A.; Graebert, A.; Behne, D.*

**Selenoprotein in the signal transduction: Role of Se-Enzymes in the redox regulation of metabolic processes**

Symposium on Visualising Cytoskeletal Architecture and Dynamics by Light and Electron Microscopy

Dresden 25. Oct - 25. Oct 2004

## Poster

Kyriakopoulos, A.; Graebert, A.; Bertelsmann, H.; Alber, D.; Behne, D.

**Antioxidative defence system and selenoproteins**

Macro and Trace Elements

Jena 24. Sep - 26. Sep 2004

## Oral

Kyriakopoulos, A.; Graebert, A.; Kiesel, C.; Behne, D.

**Detection of small selenocystein-containing peptides in rat tissues by electrophoretic methods**

14th International Symposium on Capillary Electroseparation Techniques

Rom 12. Sep - 16. Sep 2004

## Poster

Kyriakopoulos, A.; Hoppe, B.; Bukalis, K.; Graebert, A.; Behne, D.

**Prevention and protection against oxidative stress of eukaryotic cell membranes by selenium compounds**

Signal Transduction 2004

Luxemburg 25. Jan - 25. Jan 2004

## Poster

Kyriakopoulos, A.; Müller, N.; Behne, D.

**Expression of a 40kDa selenoprotein in the diaphragm and skeletal muscle of the rat**

2nd International Symposium on Trace Elements and Minerals in Medicine and Biology

Neuherberg 13. May - 15. May 2004

## Oral

Savaskan, NE.; Dalla Puppa, L.; Eyüpoglu, I.; Schweizer, U.; Kyriakopoulos, A.; Behne, D.; Nitsch, R.; Bräuer, A.

**SELENIUM TARGETS SPECIFIC SELENOPROTEIN EXPRESSION IN MICROGLIAL CELLS:****Selenoproteins as novel Players in microglial activation and proliferation**

Gemeinsame Herbsttagung HMI - GSF

Berlin 25. Nov - 26. Nov 2004

---

**SF7 - Measurement instrumentation**

---

**SF7.Detector**

---

## Oral

Alimov, S.S.; Buzzetti, S.; Dabrowski, W.; Fiutowski, T.; Gebauer, B.; Grybos, P.; Klein, M.; Petrillo, C.; Sacchetti, F.; Schmidt, Ch.J.; Schulz, Ch.; Soltveit, K.H.; Trunk, U.; Wilpert, Th.

**Development of very-high rate and resolution thermal neutron and X-ray detectors in DETNI**

IEEE Conf., Synchrotron Radiation Workshop

Rome, Italy 22. Oct - 22. Oct 2004

## Poster

Buzzetti, S.; Dabrowski, W.; Fiutowski, T.; Gebauer, B.; Grybos, P.; Klein, M.; Petrillo, C.; Sacchetti, F.; Schmidt, Ch.J.; Soltveit, K.H.; Trunk, U.

**Development of a novel front-end ASIC for very high rate neutron area detectors in DETNI**

IEEE Conf., Synchrotron Radiation Workshop

Rome, Italy 22. Oct - 22. Oct 2004

## Invited Talk

Gebauer, B.

**Development of hybrid low-pressure MSGC detectors**

Joint Meeting of the Int. Conf. on Neutron Optics (NOP 2004) and the Third Int. Workshop on Position-Sensitive Neutron Detectors (PSND 2004)

Tokyo, Japan 12. Jan - 16. Jan 2004

Invited Talk

*Gebauer, B.*

**Towards detectors for next generation spallation neutron sources**

10<sup>th</sup> Vienna Conf. on Instrumentation (VCI 2004)

Vienna, Austria 16. Feb - 21. Feb 2004

Oral

*Gebauer, B.*

**DETNI: Planning, tasks, risks,?**

1<sup>st</sup> Joint DETNI-MILAND Workshop

Abingdon, UK 27. Feb - 27. Feb 2004

Oral

*Gebauer, B.*

**DETNI: Gd/CsI MSGC**

1<sup>st</sup> Joint DETNI-MILAND Workshop

Abingdon, UK 27. Feb - 27. Feb 2004

Invited Talk

*Gebauer, B.*

**High-resolution and fast hybrid 2D-MSGC detector development**

9<sup>th</sup> TECHNI Meeting

Abingdon, UK 26. Feb - 26. Feb 2004

Oral

*Gebauer, B.*

**Introduction and detector readout conditions**

2<sup>nd</sup> DETNI ASIC Meeting

Krakow, Poland 03. Apr - 03. Apr 2004

Oral

*Gebauer, B.*

**Front-end architecture II (Some remarks on BNL front-end)**

2<sup>nd</sup> DETNI ASIC Meeting

Krakow, Poland 03. Apr - 03. Apr 2004

Oral

*Gebauer, B.*

**Towards high-rate high-resolution time-of-flight area detectors for pulsed neutron sources**

Condensed Matter Physics with Neutrons at the IBR-2 Pulsed Reactor, Germany- JINR User Meeting

Dubna, Russia 12. Jun - 16. Jun 2004

Oral

*Gebauer, B.*

**DETNI project updates and issues**

1<sup>st</sup> DETNI ASIC Submission Readiness Review Meeting

Heidelberg, Germany 04. Sep - 04. Sep 2004

Oral

*Gebauer, B.*

**Comparison of specifications for the Si-MSD and MSGC cases**

5<sup>th</sup> DETNI ASIC meeting

Berlin, Germany 27. Nov - 27. Nov 2004

Oral

*Gebauer, B.*

**Hybrid micro-strip gas chamber detector R&D in DETNI**

2<sup>nd</sup> DETNI-MILAND Workshop

Rome, Italy 23. Oct - 23. Oct 2004

Oral

*Gebauer, B.*

**Overview on DETNI objectives and applications**

2<sup>nd</sup> DETNI-MILAND Workshop

Rome, Italy 23. Oct - 23. Oct 2004

Invited Talk

*Gebauer, B.*

**The DETNI detector development program**

Workshop on Electron, Neutron and Photon Detection Techniques for the Next Generation of Infrastructures

Rome, Italy 21. Oct - 21. Oct 2004

Invited Talk

*Gebauer, B.*

**Towards high-rate and high-resolution time-of-flight area detectors for spallation neutron sources like ESS**

European Materials Research Society Fall Meeting

Warsaw, Poland 06. Sep - 10. Sep 2004

Oral

*Gebauer, B.*

**On insulating layers for the converters between two silicon micro-strip detectors**

3<sup>rd</sup> DETNI ASIC Meeting

Krakow, Poland 19. Jun - 19. Jun 2004

Oral

*Gebauer, B.*

**Readout architecture II (Further remarks on BNL readout solutions)**

2<sup>nd</sup> DETNI ASIC Meeting

Krakow, Poland 03. Apr - 03. Apr 2004

Poster

*Levchanovsky, F.V.; Gebauer, B.; Litvinenko, E.I.; Nikiforov, A.S.; Prikhodko, V.I.; Schulz, Ch.; Wilpert, Th.*

**A PCI DAQ board for MWPC detectors with high-rate 2D delay line position readout**

Joint Meeting of the Int. Conf. on Neutron Optics (NOP 2004) and the Third Int. Workshop on Position-Sensitive Neutron Detectors (PSND 2004)

Tokyo, Japan 12. Jan - 16. Jan 2004

Poster

*Levchanovsky, F.V.; Gebauer, B.; Litvinenko, E.I.; Nikiforov, A.S.; Prikhodko, V.I.; Schulz, Ch.; Wilpert, Th.*

**A DAQ board with PCI interface for MWPC detectors with delay line readout**

Condensed Matter Physics with Neutrons at the IBR-2 Pulsed Reactor, Germany- JINR User Meeting Dubna, Russia 12. Jun - 16. Jun 2004

Poster

*Levchanovsky, F.V.; Gebauer, B.; Litvinenko, E.I.; Nikiforov, A.S.; Prikhodko, V.I.; Schulz, Ch.; Wilpert, Th.*

**DAQ boards for high-rate delay line detectors with 2D position and time resolution**

IEEE Conf., Synchrotron Radiation Workshop

Rome, Italy 22. Oct - 22. Oct 2004

**SF7.ERDA**

---

Invited Talk

*Von Oertzen, W***Ternary fission and Cluster structure of 56Ni**

Workshop on Bose Einstein Condensates in Nuclei

Rostock 20. Aug - 22. Aug 2004

Oral

*Von Oertzen, W.; Gebauer, B.; Schulz, Chr.; Thummerer, S.; Bohlen, H.G.; Kokalova, Tz.; Beck, C.; Rousseau, M.; Papka, P.; Efimov, g.; Kamanin, D.; de Angelis, G.***Coplanar Ternary decay of hyper-deformed nuclei of mass A=56**

EXON-2004 International Symposium on Exotic Nuclei

Peterhof, Russia 05. Jul - 12. Jul 2004

**SF7.Others**

---

Poster

*Kokalova, Tz.; von Oertzen, W.; Torilov, S.; Thummerer, S.; Bohlen, H. G.; Milin, M.; Tumino, A.; de Angelis, G.; Axiotis, M.; Farnea, E.; Marginean, N.; Martinez, T.; Napoli, D. R.; Lenzi, S. M.; Ur, C.; Rousseau, M.; Papka, P.***CLUSTER EMISSION (8Be, 12C\*(0+2)) IN COMPOUND NUCLEUS REACTIONS**

DPG Frühjahrstagung

Köln 08. Mar - 12. Mar 2004

Poster

*Kokalova, Tz.; von Oertzen, W.; Torilov, S.; Thummerer, S.; Bohlen, H. G.; Milin, M.; de Angelis G.; Tumino, A.; Farnea, E.; Axiotis, M.; Marginean, N.; Martinez, T.; Napoli, D. R.; Lenzi, S. M.; Ur, C.; Papka, P.; Rousseau, M.***Observation of cluster emission in compound nucleus reactions**

INPC 2004

Göteborg 28. Jun - 02. Jul 2004

Poster

*Wheldon, C.***Properties of pseudo-Nilsson bands in 185-Os**

DPG Spring Meeting

Köln 08. Mar - 12. Mar 2004

**SF7.Q3D**

---

Oral

*Avrigeanu, M.; von Oertzen, W.; Fischer, U.; Avrigeanu, V.***Optical model potentials for** *$\alpha$  – particle scattering around the coulomb barrier on medium – mass nuclei*

Nuclear Data Conference ND2004

New Mexico 26. Sep - 01. Oct 2004

Oral

*Avrigeanu, M.; von Oertzen, W.; Fischer, U.; Avrigeanu, V.***Analysis of Deuterium scattering on  ${}^6, {}^7Li$  up to 50MeV based on realistic effective NN Interaction**

Nuclear Data Conference ND 2004

New Mexico 26. Sep - 01. Oct 2004

Poster

*Bohlen, H.G.; Kalpakchieva, R.; Massey, T.N.; von Oertzen, W.; Ogloblin, A.A.; de Angelis, G.; Schulz, Ch.; Thummerer, S.; Kokalova, Tz.; Wheldon, C.*

**Structure studies of the carbon isotopes  $^{17,16,15}\text{C}$**

International Nuclear Physics Conference INPC 2004

Göteborg, Schweden 27. Jun - 02. Jul 2004

Invited Talk

*Kokalova, Tz*

**Alpha-cluster and  $\frac{8}{2}Be$  emission from compound nuclei**

Workshop on Bose Einstein Condensates in Nuclei

Rostock 20. Aug - 22. Aug 2004

Oral

*Oertzen von, W.*

**Coplanar ternary decay of hyper-deformed nuclei of mass A=56**

International Symposium on Exotic Nuclei, EXON 2004

Peterhof, Russia 05. Jul - 12. Jul 2004

Oral

*Von Oertzen, W.*

**Ternary fission and Cluster structure of  $^{56}\text{Ni}$**

Workshop on Bose Einstein Condensates in Nuclei

Rostock 20. Aug - 22. Aug 2004

Oral

*Von Oertzen, W.*

**Nuclear Clusters and Covalently bound Nuclear Molecules**

Institut Physique Nucléaire

Paris 15. Mar - 15. Mar 2004

Oral

*Von Oertzen, W.*

**Ternary fission and cluster structure of  $^{56}\text{Ni}$**

INPC04

Göteborg 28. Jun - 02. Jul 2004

Poster

*von Oertzen, W*

**HK 10.19: Binary and non-binary decay channels of compound nuclei formed in  $^{24}\text{Mg} * ^{32}\text{S}$  and**

**$^{24}\text{Mg} + ^{36}\text{Ar}$  reactions HK 10.21: Two neutron transfer reactions with  $^{10}\text{Be}$  targets**

DPG Frühjahrstagung

Köln 08. Feb - 12. Feb 2004

## SE - Solar Energy Research

### SE1 - Silicon photovoltaics

#### SE1.Cells

Poster

*Böhme, C.; Friedrich, F.; Ehara, T.; Lips, K.*

#### **Recombination Mechanisms at Silicon Dangling Bonds**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

Oral

*Böhme, C.; Lips, K.*

#### **The Electrical Observation of Spin Rabi Oscillation - a Step towards an Electrical Readout of Silicon Based Quantum Computers**

Workshop of the EU Roses Project

Berlin, Germany 02. Sep - 02. Sep 2004

Oral

*Böhme, C.; Lips, K.*

#### **The Electrical Observation of Spin Rabi Oscillation - a Step towards an Electrical Readout of Silicon Based Quantum Computers**

15th Meeting of the Intern. Society of Magnetic Resonance - ISMAR 2004 Conference

Jacksonville, USA 24. Oct - 28. Oct 2004

Poster

*Brammer, T.; Stiebig, H.; Lips, K.*

#### **Simulation of the Spin-Dependent Dark Current in Microcrystalline Silicon Solar Cells**

19th Europ. Photovoltaic Solar Energy Conf. and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Poster

*Brehme, S.; Knipper, U.; Petter, K.; Sieber, I.; Rau, B.; Lips, K.; Fuhs, W.*

#### **Electronic Properties of Low-Temperature Epitaxial Si Grown by ECR-CVD**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Oral

*Brehme, S.; Knipper, U.; Rau, B.; Fuhs, W.*

#### **Majority-Carrier Properties of Low-Temperature Epitaxial Si**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

*Clemens, P.; Rau, B.; Sieber, I.; Gall, S.; Fuhs, W.*

#### **Influence of the Substrate Preparation on the Low-Temperature Epitaxy of Si by Electron-Cyclotron Resonance Chemical Vapor Deposition**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

*Ehara, T.; Boehme, C.; Lips, K.*

#### **Proof of Excitonic Recombination in Hydrogenated Amorphous Silicon by Pulsed ODMR**

ESR Symposium der Rocky Mountain Conference on Analytical Chemistry

Denver, Colorado, USA 02. Aug - 06. Aug 2004

Invited Talk

*Fuhs, W.*

**Crystalline Silicon Thin-Film Solar Cells**

NATO ASI Nanostructured and Advanced materials for Application in Sensors, Optoelectronic and Photovoltaic Technology

Sozopol, Bulgaria 06. Sep - 17. Sep 2004

Invited Talk

*Fuhs, W.:*

**Transparent Conductive Zinc Oxide (ZnO) Layers in Photovoltaic Applications**

NATO Advanced Research Workshop Zinc Oxide as a Material for Micro- and Optoelectronic Applications

St. Petersburg, Russia 23. Jun - 25. Jun 2004

Oral

*Gall, S.; Schneider, J.; Klein, J.; Muske, M.; Rau, B.; Conrad, E.; Sieber, I.; Fuhs, W.; Ornaghi, C.; Van Gestel, D.; Gordon, I.; Van Nieuwenhuysen, K.; Beaucarne, G.; Poortmans, J.; Stöger-Pollach, M.; Bernardi, J.; Schattschneider, P.; Wang, Y.; Van Der Biest, O.*

**Crystalline silicon thin-film solar cells on foreign substrates: The European project METEOR**

19th European Photovoltaic Solar Energy Conference

Paris, France 07. Jun - 11. Jun 2004

Oral

*Gall, S.; Schneider, J.; Klein, J.; Muske, M.; Rau, B.; Sieber, I.; Fuhs, W.*

**Large-grained polycrystalline silicon films on glass**

3rd aSi-Net Workshop & 10th Euroregional Workshop on "Thin Silicon Devices"

Bratislava, Slovak Republic 25. Feb - 27. Feb 2004

Oral

*Hübener, K.; Gall, S.; Muske, M.; Schneider, J.; Fuhs, W.*

**Polykristalline Siliziumschichten auf metallbeschichteten Glassubstraten**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Oral

*Hübner, S.; Conrad, E.; Muske, M.; Gall, S.; Fuhs, W.*

**Beschleunigte Festphasenkristallisation von amorphem Silizium auf polykristallinen Saatschichten**

DPG-Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

*Klein, J.; Schneider, J.; Muske, M.; Gall, S.; Fuhs, W.*

**Aluminium-Induced Crystallisation of Amorphous Silicon: The Influence of the Aluminium Layer on the Process**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Invited Talk

*Lips, K.; Boehme, C.*

**Defect Characterisation With Coherent Spin Motion Experiments**

16th Workshop on Quantum Solar Energy Conversion QUANTSOL 2004

Bad Gastein, Austria 15. Mar - 19. Mar 2004

Invited Talk

*Lips, K.; Boehme, C.; Ehara, T.*

**The Impact of the Electron Spin on Charge Carrier Recombination - The Example of Amorphous Silicon**

13th International School on Condensed Matter Physics (ISCMP)

Varna, Bulgaria 30. Aug - 03. Sep 2004

## Poster

*Maydell, K. v., Brehme, S.; Nickel, N. H.; Fuhs, W.*

**Electronic Transport in P-doped Laser Crystallized Polycrystalline Silicon**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

## Invited Talk

*Nickel, N. H.*

**Influence of the Hydrogen Concentration on H-Bonding in Zinc Oxide**

NATO Advanced Research Workshop Zinc Oxide as a Material for Micro- and Optoelectronic Applications

St. Petersburg, Russia 23. Jun - 25. Jun 2004

## Oral

*Nickel, N. H.; Brendel, K.*

**Hydrogen Bonding in ZnO**

MRS Spring Meeting

San Francisco, USA 12. Apr - 16. Apr 2004

## Poster

*Nickel, N. H.; Brendel, K.*

**Passivation of Grain-Boundary Defects in Polycrystalline Silicon**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Poster

*Peters, S.; Leihkauf, R.; Wagemann, H. G.; Boit, C.*

**I(V)-Charactieristic of Si Thin-Film Solar Cells within a Monolithically Serie-Interconnected SOI Module: Measurement and Simulation**

19th Europ. Photovoltaic Solar Energy Conf. and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Oral

*Petter, K.; Rau, B.; Lips, K.; Fuhs, W.*

**Photolumineszenz von epitaktischem Dünnschichtsilizium in unterschiedlichen Wachstumstemperatur-Regimen**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

## Poster

*Petter, K.; Sieber, I.; Rau, B.; Brehme, S.; Lips, K.; Fuhs, W.*

**Structural Defects and Photoluminescence of Epitaxial Si Films Grown by Low Temperature ECRCVD**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

## Oral

*Poortmans, J.; Reber, S.; Gall, S.; Zahedi, C.; Alonso, J.*

**European cluster on high- and intermediate temperature thin-film crystalline Si solar cells R&D: Overview of running projects and underlying roadmap**

19th European Photovoltaic Solar Energy Conference

Paris, France 07. Jun - 11. Jun 2004

## Poster

*Rau, B.; Schneider, J.; Muske, M.; Sieber, I.; Gall, S.; Stöger-Pollach, M.; Schattschneider, P.; Fuhs, W.*

**Epitaxial Si Growth on Polycrystalline Si Seed Layers at Low Temperature**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Poster

*Saleh, R.; Nickel, N. H.*

**Silicon-Hydrogen Bonds in Boron and Phosphorous Doped Polycrystalline Silicon Thin Films**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

Poster

*Saleh, R.; Nickel, N. H.*

**Silicon-Hydrogen Bonds in Boron and Phosphorous Doped Polycrystalline Silicon Thin Films**

MRS Spring Meeting

San Francisco, USA 12. Apr - 16. Apr 2004

Oral

*Saleh, R.; Nickel, N. H.*

**Raman Spectroscopy of Doped and Compensated Laser Crystallized Polycrystalline Silicon Thin Films**

2nd Intern. Conf. on Technological Advances of Thin Films and Surface Coatings and 1st Intern. Conf. on Nanotechnology

Singapore 13. Jul - 17. Jul 2004

Poster

*Saleh, R.; Nickel, N. H.*

**Structural and Electrical Properties of Doped Microcrystalline and Polycrystalline Silicon**

14th Intern. Photovoltaic Science and Engineering Conference (PVSEC-14)

Bangkok, Thailand 26. Jan - 30. Jan 2004

Poster

*Saleh, R.; Nickel, N. H.; Brendel, K.*

**Hydrogen Bonding in Compensated Polycrystalline Silicon Thin Films**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

Poster

*Saleh, R.; Nickel, N. H.; Brendel, K.*

**Hydrogen Density-of-States Distribution in Compensates Polycrystalline Silicon Thin Films**

MRS Spring Meeting

San Francisco, USA 12. Apr - 16. Apr 2004

Poster

*Schneider, J.; Heimburger, R.; Klein, J.; Muske, M.; Gall, S.; Fuhs, W.*

**Aluminum-Induced Crystallization of Amorphous Silicon: Influence of Temperature Profiles**

Intern. Conf. Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

Poster

*Schneider, J.; Klein, J.; Muske, M.; Gall, S.; Fuhs, W.*

**Aluminum-Induced Crystallization of Amorphous Silicon: Al/a-Si-Interface Influence on Seed**

**Layer Formation**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

*Schneider, J.; Klein, J.; Muske, M.; Hübener, K.; Gall, S.; Fuhs, W.*

**Aluminium-Induced Crystallisation of Amorphous Silicon: Interface Influence on Grain Growth**

19th Europ. Photovoltaic Solar Energy Conf. and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Oral

*Sieber, I.; Urban, I.; Fuhs, W.*

**Orientierungsbestimmung an dünnen Siliziumschichten für die Photovoltaik**

EBS-D-Symposium

Berlin 02. Jul - 02. Jul 2004

Poster

*Weizman, M.; Nickel, N. H.; Sieber, I.; Bohne, W.; Röhrich, J.; Strub, E.; Yan, B.*

**Phase segregation in laser crystallized polycrystalline SiGe thin films**

Intern. Conference on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

---

### **SE1.Hetero**

---

Poster

*Angermann, H.*

**Electronic Interface Properties of Silicon Substrates for Solar Cells**

Tag der Chemie

Universität Potsdam, Golm 07. Jul - 07. Jul 2004

Poster

*Angermann, H.*

**Wet Chemical Preparation of Silicon Substrates for Photovoltaic Application**

9th Augustusburg Conf. of Advanced Science

Augustusburg, Germany 23. Sep - 25. Sep 2004

Poster

*Angermann, H.*

**Interface state densities and surface charge on wet-chemically prepared Si(100) surfaces**

7th Intern. Symp. on Ultra Clean Processing of Silicon Surfaces

Brussel, Belgium 19. Sep - 22. Sep 2004

Poster

*Goudovskikh, A.; Kleider, J.-P.; Stangl, R.; Schmidt, M.; Fuhs, W.*

**Interface Properties of a-Si:H/c-Si Heterojunctions Investigated by Admittance Spectroscopy**

19th Europ. Photovoltaic Solar Energy Conf. and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Oral

*Korte, L.; Kriefoth, K.; Laades, A.; Schmidt, M.*

**Ultrathin Hydrogenated Amorphous Silicon Layers on Crystalline Silicon a-Si:H Gap State**

**Density Distribution and a-Si/c-Si Interface Properties**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Oral

*Korte, L.; Schöpke, A.; Schmidt, M.*

**Determination of the Gap State Density Distribution in Silicon Based Heterostructures by**

**UV-Photoelectron Spectroscopy**

13. Arbeitstagung Angewandte Oberflächenanalytik AOFA 13

Dresden, Germany 14. Sep - 17. Sep 2004

Poster

*Laades, A.; Kriefoth, K.; Korte, L.; Brendel, K.; Stangl, R.; Schmidt, M.; Fuhs, W.*

**Surface Passivation of Crystalline Silicon Wafers by Hydrogenated Amorphous Silicon Probed**

**by Time Resolved Surface Photovoltage and Photoluminescence Spectroscopy**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Oral

*Laades, A.; Kliefoth, K.; Stangl, R.; Schmidt, M.; Fuhs, W.*

**Characterization of the Amorphous-Crystalline Silicon Interface by Time Resolved Surface Photovoltage and Photoluminescence Techniques**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Oral

*Levy- Clement, C.; Lust, S.; Mamor, M.; Bastide, S.; Rappich, J.; Dittrich, T.*

**Investigations of p-type Macroporous Silicon Formation**

4th Intern. Conf. on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

Poster

*Maydell, K. v.; Schmidt, M.; Korte, L.; Laades, A.; Stangl, R.; Scherff, M.; Fuhs, W.*

**Basis Electronic Properties and Optimization of TCO/a-Si:H/c-Si Hetero Solar Cells**

9th Augustusburg Conf. of Advanced Science

Augustusburg, Germany 23. Sep - 25. Sep 2004

Poster

*Rappich, J.; Fahoume, M.*

**Non-Radiative Recombination and Band Bending of p-Si(100) Surfaces during Electrochemical Deposition of Polycrystalline ZnO**

Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004

Potsdam, Germany 05. Sep - 10. Sep 2004

Oral

*Rappich, J.; Güell, A. G.; Merson, A.; Hartig, P.; Dittrich, Th.; Shapira, Y.*

**Surface Recombination and Band Bending During Organic Layer Deposition on Silicon**

55th Annual Meeting of the Intern. Society of Electrochemistry (ISE)

Thessaloniki, Greece 19. Sep - 24. Sep 2004

Oral

*Rappich, J.; Merson, A.; Dittrich, Th.; Hartig, P.; Schulze, S.; Güell, A. G.*

**Engineering of Si Surfaces by Electrochemical Organic Layer Deposition**

87. Bunsenkolloquium

Potsdam, Germany 31. Mar - 31. Mar 2004

Oral

*Schmidt, M.; Korte, L.; Kliefoth, K.; Schöpke, A.; Stangl, R.; Laades, A.; Brendel, K.; Scherff, M.*

**Basic Electronic Properties of TCO/a-Si:H/c-Si Heterostructure-Solar-Cells**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Poster

*Stangl, R.; Froitzheim, A.; Kriegel, M.; Kirste, S.; Elstner, L.; Brammer, T.; Fuhs, W.*

**AFORS-HET, a Numerical PC Program for Simulation of (Thin Film) Heterojunction Solar Cells, Version 1.1 (Open-Source on Demand), to be Distributed for Public Use**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Poster

*Stangl, R.; Schaffarzik, D.; Laades, A.; Kliefoth, K.; Schmidt, M.; Fuhs, W.*

**Characterisation of Interfaces in Amorphous/Crystalline Silicon Heterojunction Solar Cells by Surface Photovoltage Spectroscopy**

19th Europ. Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

Oral

*Yukecheva, J.; Müller, F.; Suzuki, Y.; Müller, A.-D.; Angermann, H.; Hietschold, M.*

**Electrical Force Spectroscopy of Silicon Surfaces - Experiment and Theory**

DPG- Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

**SE1.Others**

Poster

*Aggour, M.; Dittrich, T.; Sieber, I.; Rappich, J.*

**Anodic Preparation of Porous  $TiO_2$  in Fluoride Solution**

4th Intern. Conference on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

Oral

*Boit, C.; Kerst, U.; Sadewater, P.; Leihkauf, R.; Schömann, K. S.; Le Roy, E.; Lundquist, T.*

**Contacting Silicon with FIB for Backside Circuit Edit**

30th Internat. Symp. for Testing and Failure Analysis ISTFA,

Worcester, Massachusetts, USA 14. Nov - 18. Nov 2004

Poster

*Tanaka, S.; Yamamoto, A.; Makiuchi, S.; Matsuyama, R.; Rebien, M.; Henrion, W.; Tatsuoka, H.; Kuwabara, H.*

**Growth and Morphological Properties of  $\beta\text{-FeSi}_2$  Layers**

12th Intern. Conf. on Solid Films and Surfaces (ICSF-12)

Hammamatsu, Japan 21. Jun - 25. Jun 2004

Poster

*Würz, R.; Meeder, A.; Fuertes Marrón, D.; Schedel-Niedrig, Th.; Lauermann, I.; Vogel, M.; Lux-Steiner, M. Ch.; Lips, K.; Bluhm, H.*

**Oxidation of CuGaSe<sub>2</sub> Crystals And Thin Films Studied by Electron Paramagnetic Resonance and X-Ray Photoelectron Spectroscopy**

E-MRS Conference

Strasbourg, France 24. May - 28. May 2004

Oral

*Würz, R.; Meeder, A.; Fuertes Marrón, D.; Schedel-Niedrig, Th.; Lips, K.; Knop-Gericke, A.*

**Oxidation of Single and Polycrystalline CuGaSe<sub>2</sub> Studied by Means of Electron Paramagnetic Resonance and Photoelectron Spectroscopy**

14th Intern. Conf. on Ternary and Multinary Compounds ICTMC-14

Denver, Colorado, USA 27. Sep - 01. Oct 2004

**SE2 - Heterogeneous material systems**

**ISL.User**

Oral

*Papathanasiou, O.; Siebentritt, S.; Bohne, W.; Strub, E.; Röhrich, J.; Calvet, W.; Pettenkofer, Ch.; Kristukat, Ch., Lux-Steiner, M.*

**Cd-freie Pufferschichten für die Anwendung in CuInS<sub>2</sub> Dünnschichtsolarzellen**

AKF-Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

**SE1.Others**

Poster

*Würz, R.; Meeder, A.; Fuertes Marrón, D.; Schedel-Niedrig, Th.; Lauermann, I.; Vogel, M.; Lux-Steiner, M. Ch.; Lips, K.; Bluhm, H.*

**Oxidation of CuGaSe<sub>2</sub> Crystals And Thin Films Studied by Electron Paramagnetic Resonance and X-Ray Photoelectron Spectroscopy**

E-MRS Conference

Strasbourg, France 24. May - 28. May 2004

**SE2.Analytics**

Invited Talk

*Fischer, Ch.-H.; Bär, M.; Glatzel, Th.; Lauermann, I.; Lux-Steiner, M. Ch.*

**Interface Engineering in Chalcopyrite Thin Film Solar Devices**

International Conference on Condensed Matter and Statistical Physics, 8ICCMSP 2004

Marrakech, Morocco 21. Sep - 21. Sep 2004

Oral

*Fischer, Ch.-H.; Bär, M.; Grimm, A.; Kötschau, I.; Lauermann, I.; Rahne, K.; Reichardt, J.; Sokoll, S.; Lux-Steiner, M. Ch.; Heske, C.; Weinhardt, L.; Fuchs, O.; Storch, G.; Umbach, E.; Jung, C.; Gudat, W.; Niesen, T.P.; Visbeck, S.; Karg, F.*

**Synchrotroncharakterisierung von Chalkopyrit-Solarzell- und Modulstrukturen**

BMBF Statusseminar Erneuerbare Energien 2004

Stuttgart, Germany 17. Mar - 18. Mar 2004

Oral

*Glatzel, Th.; Schwarzman, A.; Grünbaum, E.; Barnham, K.; Mazzer, M.; Lux-Steiner, M.Ch.; Rosenwaks, Y.*

**Low Temperature Kelvin Probe Force Microscopy of Multi-Quantum Well Solar Cells**

7th International Conference on Noncontact Atomic Force Microscopy (NC-AFM 2004)

Seattle, U.S.A. 12. Sep - 15. Sep 2004

Oral

*Glatzel, Th.; Steigert H.; Klenk R.; Lux-Steiner M.Ch.*

**Zn<sub>1-x</sub>Mg<sub>x</sub>O as a Window Layer in Completely Cd-Free Cu(In,Ga)(S,Se)2-Based Thin Film Solar Cells**

14th International Photovoltaic Science and Engineering Conference (PVSEC-14)

Bangkok, Thailand 26. Jan - 30. Jan 2004

Oral

*Glatzel, Th.; Steigert, H.; Sadewasser, S.; Klenk, R.; Lux-Steiner, M. Ch.*

**Kelvin Probe Force Microscopy in Ultrahigh Vacuum for Direct Imaging of Potential Distributions of semiconductor surfaces and interfaces**

8th Int. Conference on Nanometer Scale Science and Technology

Venice, Italy 28. Jun - 02. Jul 2004

Poster

*Hanna, G.; Ott, N.; Strunk, H.P.; Glatzel, Th.; Sadewasser, S.; Rau, U.; Werner, J.H.*

**Influence of Film Texture on Grain Boundary Activity in Cu(In,Ga)Se<sub>2</sub> Films**

Spring-Meeting of the German Physical Society

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

*Koeble, J.; Uder, B.; Sadewasser, S.; Glatzel, Th.*

**Kelvin Probe Force Microscopy in Ultrahigh Vacuum: Operation at variable temperature and electrical characterization of nanodevices**

7th International Conference on Noncontact Atomic Force Microscopy (NC-AFM 2004)

Seattle, U.S.A. 12. Sep - 15. Sep 2004

**Poster**

Kötschau, I.M.; Bär, M.; Pistor, P.; Grimm, A.; Lauermann, I.; Lehmann, S.; Lux-Steiner, M.Ch.; Rusu, M.; Sokoll, S.; Fischer, Ch.-H.; Weinhardt, L.; Fuchs, O.; Heske, C.; Niesen, T.P.; Visbeck, S.; Karg, F.; Jung, C.; Gudat, W.

**Quantification of x-ray emission and photoelectron spectra of layered polycrystalline thin film structures**

BESSY User Meeting

Berlin, Germany 02. Dec - 03. Dec 2004

**Oral**

Muffler, H.-J.; Bär, M.; Lauermann, I.; Rahne, K.; Schröder, M.; Lux-Steiner, M.Ch.; Fischer, Ch.-H.; Niesen, T.P.; Karg, F.

**Colloid attachment by ILGAR-layers: Creating fluorescing layers to increase quantum efficiency of solar cells Cells in the Blue Wavelength Region**

14th International Photovoltaic Science and Engineering Conference (PVSEC-14)

Bangkok, Thailand 26. Jan - 30. Jan 2004

**Poster**

Rissom, T.; Siebentritt, S; Lux-Steiner, M. Ch.;

**Effect of proton irradiation on CuGaSe<sub>2</sub> epitaxial films**

2004 E-MRS SPRING MEETING

Strasbourg 24. May - 28. May 2004

**Oral**

Sadewasser, S.

**Kelvin Probe Force Microscopy**

Workshop on Advanced Dynamic AFM Methods

Madrid, Spain 08. Oct - 10. Oct 2004

**Oral**

Schwarzman A., Glatzel Th., Rosenwaks Y., Saraf S., Strassburg E., Grunbaum E., Barkay Z., Wilshaw P., Barnham K., Bushnell D.B., Ekins-Daukes N.J., Mazzer M.

**Ultra High Vacuum Kelvin Probe Force Microscopy of Multi Quantum Wells**

8th Int. Conference on Nanometer Scale Science and Technology

Venice, Italy 28. Jun - 02. Jul 2004

---

**SE2.Chemistry**

---

**Poster**

Allsop, N.; Schönmann, A.; Muffler, H.-J.; Bär, M.; Kropp, T.;

**CuInS<sub>2</sub> and In<sub>2</sub>S<sub>3</sub> thin films prepared by Spray ILGAR**

E-MRS Spring Meeting 2004

Strasbourg, France 24. May - 28. May 2004

**Oral**

Bär, M.; Muffler, H.-J.; Lux-Steiner, M.Ch.; Fischer, Ch.-H.; Weinhardt, L.; Heske, C.; Umbach, E.;

Niesen, T.P.; Karg, F.

**Chemical processes during Cd<sup>2+</sup>/NH<sup>3</sup>-treatment of Cu(In, Ga)(S, Se)<sub>2</sub>-absorbers**

14th International Photovoltaic Science and Engineering Conference (PVSEC-14)

Bangkok (Thailand) 26. Jan - 30. Jan 2004

**Poster**

Chraibi, F.; Fahoume, M.; Ennaoui, A.; Delaplancke, J.L.

**Formation and characterization of CuInSe<sub>2</sub> nanoparticles**

8th ICCMSP

Morocco 21. Sep - 24. Sep 2004

## Poster

*Ennaoui, A.; Chraibi, F.; Fahoume, M.; Rami, M.; Benamar, E.; Aggour, M.; Delplancke, J. L.; Lux-Steiner, M. Ch.*

**Non-vacuum processes for chalcogenide photovoltaic materials**

8th ICCMSP

Morocco 21. Sep - 24. Sep 2004

## Oral

*Ennaoui, A.; Lux-Steiner, M. Ch.*

**Cu chalcopyrite thin film solar cells with Zn-compound buffer layers: Materials, Device analysis and Performance**

8th ICCMSP

Morocco 21. Sep - 24. Sep 2004

## Poster

*Fahoume, M.; Maghfoul, O.; Aggour, M.; Hartiti, B.; Chraibi, F.; Ennaoui, A.*

**Growth and characterization of ZnO thin films prepared by electrodeposition technique**

8th ICCMSP

Morocco 21. Sep - 24. Sep 2004

## Poster

*Fischer, Ch.-H.; Bär, M.; Grimm, A.; Kötschau, I.M.; Lauermann, I.; Reichardt, J.; Sokoll, S.; Lux-Steiner, M. Ch.; Heske, C.; Weinhardt, L.; Fuchs, O.; Storch, G.; Visbeck, S.; Niesen, T.P.; Karg, F.; Jung, C.; Gudat, W.*

**Probing local damp heat induced changes in un-encapsulated Cu(In,Ga)(S,Se)2 solar modules by synchrotron radiation**

European Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Poster

*Muffler, H.-J.; Belaidi, A.; Vogel, M.; Guminskaya, T.; Ogacho, A.; Hilt, O.; Fischer, Ch.-H.; Dittrich, Th.*  
**Modifikation elektronischer und chemischer Eigenschaften von TiO<sub>2</sub>-Oberflächen durch**

**Abscheidung extrem dünner oxidischer Schichten**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

## Poster

*Sankapal, B. R.; Ennaoui, A.; Guminskaya, T.; Dittrich, Th.; Bohne, W.; Röhrich, J.; Strub, E.; Lux-Steiner, M. Ch.*

**Characterization of p-CuI prepared by the SILAR technique on Cu-tape/n-CuInS<sub>2</sub> for solar cells**

EMRS 2004

Strasbourg, France 24. May - 28. May 2004

## Oral

*Sankapal, B. R.; Lux-Steiner, M. Ch.; Ennaoui, A.*

**TiO<sub>2</sub> and TiO<sub>2</sub>-SiO<sub>2</sub> thin films and powders by one-step soft-solution method: Synthesis and characterizations**

8th ICCMSP

Morocco 21. Sep - 24. Sep 2004

## Oral

*Sankapal, B. R.; Sartale, S.D.; Ennaoui, A.*

**Chemical and Electrochemical synthesis of nanosized TiO<sub>2</sub> anatase for large area photon conversion**

IPS-15

Paris, France 04. Jul - 09. Jul 2004

Poster

Sartale, S. D.; Ennaoui, A.; Lux-Steiner, M. Ch.

**Fabrication of electroplated CuInS<sub>2</sub> thin film based solar cells**

19th European PV conference

Paris, France 07. Jun - 11. Jun 2004

Poster

Sartale, S.D.; Sankapal, B. R.; Ennaoui, A.

**Preparation of Nanocrystalline ZnS by a New Chemical Bath Deposition Route**

EMRS-2004

Strasbourg, France 24. May - 28. May 2004

---

**SE2.Concepts**

---

Poster

Aggour, M.; Dittrich, Th.; Sieber, I.; Rappich, J.

**Anodic preparation of porous TiO<sub>2</sub> in fluoride solution**

4th Int. Conf. on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

Oral

Bayon, R.; Musembi, R.; Belaidi, A.; Guminiskaya, T.; Lux-Steiner, M. Ch.; Dittrich, Th.

**Highly structured TiO<sub>2</sub> / In(OH)xSy / PbS / PEDOT:PSS for photovoltaic applications**

15th Int. Conf. on Photochemical Conversion and Storage of Solar Energy

Paris, France 04. Jul - 09. Jul 2004

Poster

Belaidi, A.; Bayon, R.; Dittrich, Th.; Muffler, H.-J.; Fischer, Ch.-H.; Lux-Steiner, M. Ch.

**On the role of buffer layers in solar cells with extremely thin absorbers**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Oral

Belaidi, A.; Bayon, R.; Dittrich, Th.; Muffler, H.-J.; Fischer, Ch.-H.; Lux-Steiner, M. Ch.

**On the role of buffer layers in solar cells with extremely thin absorbers**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

Poster

Belaidi, A.; Muffler, H.-J.; Dittrich, Th.

**ILGAR deposition of buffer and absorber layer for eta-solar cell**

15th Int. Conf. on Photochemical Conversion and Storage of Solar Energy

Paris, France 04. Jul - 09. Jul 2004

Oral

Gayvoronsky, V.; Galas, A.; Nepijko, S.; Brodyn, M.; Timoshenko, V.; Dittrich, Th.; Koch, F.; Petrik, I.;

Smirnova, N.; Eremenko, A.

**Giant nonlinear optical response for nanoporous titanium dioxide photocatalytic activity monitoring**

4th Int. Conf. on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

Poster

Gayvoronsky, V.; Galas, A.; Nepijko, S.; Brodyn, M.; Timoshenko, V.; Dittrich, Th.; Koch, F.; Petrik, I.;

Smirnova, N.; Eremenko, A.

**Application of nonlinear optical response for monitoring of nanoporous TiO<sub>2</sub> photocatalytic activity**

15th Int. Conf. on Photochemical Conversion and Storage of Solar Energy

Paris, France 04. Jul - 09. Jul 2004

## Poster

Guminskaya, T.; Bayon, R.; Urban, I.; Grigorieva, N.; Dittrich, Th.

**Photospannungsuntersuchungen an In(OH)xSy - und PbS Dünnschichten und -systemen**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

## Oral

Guminskaya, T.; Bayon, R.; Urban, I.; Grigorieva, N.; Dittrich, Th.

**Photospannungsuntersuchungen an In(OH)xSy und PbS Dünnschichten und systemen**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

## Invited Talk

Harneit, W.

**Molecular structures of endohedral fullerenes for quantum computation**

8th Int. Conf. on Condensed Matter & Statistical Physics

Marrakech, Morocco 21. Sep - 24. Sep 2004

## Poster

Harneit, W.; et al.

**Molecular Spintronics**

Nanofair Exhibition

Karlsruhe, Germany 22. Nov - 24. Nov 2004

## Poster

Hübener, K.

**Diamond as a substrate for a fullerene based quantum computer**

8. Deutsche Physikerinnentagung

Aachen, Germany 04. Nov - 07. Nov 2004

## Poster

Koenenkamp, R.; Dloczik, L.

**Material transfer in nano-scale compound structures**

MRS spring meeting

San Francisco, CA 12. Apr - 16. Apr 2004

## Oral

Koenenkamp, R.; Dloczik, L.; Gunther, D.

**Optical and electrical properties of low temperature ZnO nano-wires**

MRS spring meeting

San Francisco, CA 12. Apr - 16. Apr 2004

## Poster

Korolev, F. A.; Nosova, L.; Belaidi, A.; Kytin, V. G.; Dittrich, Th.; Kozlov, S. N.

**Impedance spectroscopy of nanoporous Al<sub>2</sub>O<sub>3</sub> with adsorbed water**

4th Int. Conf. on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

## Oral

Levy-Clement, C.; Lust, S.; Mamor, M.; Bastide, S.; Rappich, J.; Dittrich, Th.

**Investigations of p-type macroporous silicon formation**

4th Int. Conf. on Porous Semiconductors - Science and Technology

Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

## Oral

Mahrov, B.; Dittrich, Th.; Boschloo, G.; Dloczik, L.; Hagfeldt, A.

**Photospannung bei Ladungsträgerinjektion von Farbstoffmolekülen in transparente Löcher-**

**und Elektronenleiter**

DPG Frühjahrstagung

Regensburg, Germany 08. Mar - 12. Mar 2004

## Poster

*Mahrov, B.; Dittrich, Th.; Boschloo, G.; Hagfeldt, A.; Siegbahn, H.; Rensmo, H.*  
**Photo-electron spectroscopy and photovoltage studies of Ru(dcpbyH2)2(NCS)2 / CuI and Ru(dcpbyH2)2(NCS)2 / CuSCN interfaces for solar cell application**

15th Int. Conf. on Photochemical Conversion and Storage of Solar Energy  
Paris, France 04. Jul - 09. Jul 2004

## Oral

*Mahrov, B.; Dittrich, Th.; Dloczik, L.; Boschloo, G.; Hagfeldt, A.*  
**Photovoltage study of charge injection from dye molecules into transparent hole and electron conductors**

DPG-Tagung  
Regensburg 08. Mar - 12. Mar 2004

## Poster

*Merson, A.; Dittrich, Th.; Rappich, J.; Zidon, Y.; Burstein, L.; Shapira, Y.*  
**Electrochemical deposition of organic monolayers on TiO<sub>2</sub> surfaces**

16th International Vacuum Congress  
Venice, Italy 28. Jun - 02. Jul 2004

## Poster

*Muffler, H.-J.; Belaidi, A.; Vogel, M.; Guminiskaya, T.; Fischer, Ch.-H.; Dittrich, Th.*  
**Modifikation elektronischer und chemischer Eigenschaften von TiO<sub>2</sub>-Oberflächen durch Abscheidung extrem dünner oxidischer und sulfidischer Schichten**

DPG Frühjahrstagung  
Regensburg, Germany 08. Mar - 12. Mar 2004

## Poster

*Naydenov, B.; Harneit, W.; Meyer, C.*  
**Spin-spin Relaxation of Highly Diluted P@C<sub>60</sub>**  
330th WE-Heräus Seminar on "Controlling Decoherence"  
Bad Honnef, Germany 26. Jul - 28. Jul 2004

## Poster

*Nosova, L.; Belaidi, A.; Guminiskaya, T.; Gavrilov, S.; Bayon, R.; Sieber, I.; Timoshenko, V.; Urban, I.; Grigorieva, N.; Dittrich, Th.*  
**Wet chemical deposition of semiconducting materials into porous Al<sub>2</sub>O<sub>3</sub>**  
DPG Frühjahrstagung  
Regensburg, Germany 08. Mar - 12. Mar 2004

## Poster

*Nosova, L.; Gavrilov, S.; Kravchenko, D.; Grigorieva, N.; Urban, I.; Bayon, R.; Belaidi, A.; Guminiskaya, T.; Muffler, H.-J.; Sieber, I.; Dittrich, Th.*  
**Deposition of materials into porous alumina by different techniques**  
4th Int. Conf. on Porous Semiconductors - Science and Technology  
Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

## Oral

*Rühle, S.; Dittrich, Th.; Cahen, D.*  
**The role of built-in fields in dye sensitized solar cells with and without dense TiO<sub>2</sub> underlayer**  
15th Int. Conf. on Photochemical Conversion and Storage of Solar Energy  
Paris, France 04. Jul - 09. Jul 2004

## Oral

*Sankapal, B.R.; Ennaoui, A.; Guminiskaya, T.; Dittrich, Th.; Bohne, W.; Röhrich, J.; Strub, E.; Lux-Steiner, M. Ch.*  
**Characterization of p-CuI prepared by the SILAR technique on Cu-tape/n-CuInS<sub>2</sub> for solar cells**  
E-MRS Spring Meeting 2004  
Strasbourg, France 24. May - 28. May 2004

**Poster**

*Schwen, D.; Nix, A.-K.; Hofsaess, H.; Zollondz, J.-H.; Weidinger, A.; Trautmann, C.; Krauser, J.*  
**Electrical properties of tracks in swift heavy ion irradiated tetrahedral amorphous carbon**  
14th International Conference on Ion Beam Modification of Materials (IBMM 2004)  
Monterey, California, USA 05. Sep - 10. Sep 2004

**Oral**

*Schwen, D.; Ronning, C.; Hofsaess, H.; Zollondz, J.-H.; Weidinger, A.*  
**Field emission studies on swift heavy ion irradiated tetrahedral amorphous carbon (ta-C)**  
2nd Workshop on Ion Track Technology  
Uppsala, Sweden 26. Feb - 27. Feb 2004

**Oral**

*Seeger, S.; Weiß, V.; Tributsch, H.; Dittrich, Th.; Guminiskaya, T.; Mientus, R.; Ellmer, K.*  
**Reactively sputtered MoS<sub>x</sub> and WS<sub>x</sub> absorber for thin film solar cells**  
19th European Photovoltaic Solar Energy Conference and Exhibition  
Paris, France 07. Jun - 11. Jun 2004

**Poster**

*Skryshevsky, V. A.; Zinchuk, V. M.; Milovanov, Y. A.; Benilov, A. I.; Boyko, Y. V.; Tretyak, O. V.; Dittrich, Th.*  
**Influence of adsorbates on energetic structure of localised states in porous silicon**  
4th Int. Conf. on Porous Semi-conductors - Science and Technology  
Cullera-Valencia, Spain 14. Mar - 19. Mar 2004

**Oral**

*Zollondz, J.-H.; Schwen, D.; Hofsaess, H.; Weidinger, A.; Trautmann, C.; Meijer, J.; Vogel, T.; Krauser, J.; Bert-hold, J.; Schultrich, B.*  
**Grundlagen und Anwendung von leitenden Ionenspuren**  
Arbeitstreffen Forschung mit Sonden und Ionen, 29.9. 1.10.2004  
Stuttgart, Germany 29. Sep - 01. Oct 2004

---

**SE2.Contacts**

---

**Oral**

*Bakehe, S.; Klenk, R.; Lux-Steiner, M. Ch.*  
**Wide-gap Cu(In,Ga)S<sub>2</sub> Thin Film Solar Cells on Transparent Substrates**  
19th European Photovoltaic Solar Energy Conference  
Paris, France 07. Jun - 11. Jun 2004

**Oral**

*Glatzel, Th.; Steigert, H.; Sadewasser, S.; Klenk, R.; Lux-Steiner, M. Ch.*  
**Potential distribution of Cu(In,Ga)(S,Se)2 solar cell cross-sections measured by kelvin probe force microscopy**  
E-MRS 2004 Spring Meeting  
Strasbourg, France 24. May - 28. May 2004

**Poster**

*Kaigawa, R.; Wada, T.; Bakehe, S.; Klenk, R.*  
**The effect of sulfur pressure on the depth distribution of impurities in Cu(In,Ga)S<sub>2</sub> Films**  
E-MRS 2004 Spring Meeting  
Strasbourg, France 24. May - 28. May 2004

**Oral**

*Kaufmann, C. A.; Neisser, A.; Klenk, R., Scheer, R.*  
**Transfer of Cu(In,Ga)Se<sub>2</sub> Thin Film Solar Cells to flexible substrates**  
E-MRS 2004 Spring Meeting  
Strasbourg, France 24. May - 28. May 2004

**Poster**

Kaufmann, C. A.; Neisser, A.; Scheer, R.; Klenk, R.; Kroon, M. A.

**Cu(In,Ga)Se<sub>2</sub> Thin Film Solar Cells on Flexible Substrates**

19th European Photovoltaic Solar Energy Conference

Paris, France 07. Jun - 11. Jun 2004

**Invited Talk**

Klenk, R.; Kaufmann, Ch.; Neisser, A.; Scheer, R.

**Development of Flexible Chalcopyrite-Based Solar Cells**

European Space Technology Harmonisation (Mapping Meeting)

Noordwijk, NL 15. Sep - 15. Sep 2004

**Invited Talk**

Klenk, R.; Klaer, J.; Scheer, R.; Lux-Steiner, M. Ch.; Luck, I.; Meyer, N.; Rühle, U.

**Solar cells based on CuInS<sub>2</sub> an overview**

E-MRS 2004 Spring Meeting

Strasbourg, France 24. May - 28. May 2004

**Oral**

Lauermann, I.; Grimm, A.; Kötschau, I.; Fischer, Ch.-H.; Sokoll, S.; Klenk, R.; Glatzel, Th.; Lux-Steiner, M. Ch.; Weinhardt, L.; Storch, G.; Fuchs, O.; Heske, C.; Jung, C.; Gudat, W.; Niesen, T. P.; Visbeck, S.; Karg, F.

**Interface Analysis of ZnO/CIGSSe and (Zn,Mg)O/CIGSSe by synchrotron-based spectroscopy**

E-MRS 2004 Spring Meeting

Strasbourg, France 24. May - 28. May 2004

**Oral**

Meyer, N.; Luck, I.; Rühle, U.; Klaer, J.; Klenk, R.; Lux-Steiner, M.Ch.; Scheer, R.

**Towards Thin Film Module Production Using a Simplified CIS Process**

19th European Photovoltaic Solar Energy Conference

Paris, France 07. Jun - 11. Jun 2004

**Poster**

Neisser, A.; Kaufmann, C. A.; Klenk, R.; Scheer, R.

**Laser-light scattering as an in-situ process control for pvd deposition of Cu(In,Ga)Se<sub>2</sub> thin films**

E-MRS 2004 Spring Meeting

Strasbourg, France 24. May - 28. May 2004

**Oral**

Würz, R.; Meeder, A.; Fuertes Marrón, D.; Rusu, M.; Schedel-Niedrig, Th.; Lips, K.; Knop-Gericke, A.

**Oxidation of Single and Polycrystalline CuGaSe<sub>2</sub> Studied by Means of Electron Paramagnetic****Resonance and Photoelectron Spectroscopy**

ICTMC 14

Denver, USA 27. Sep - 01. Oct 2004

---

**SE2.Semico**

---

**Oral**

Bakehe, S.-N.; Klenk, R.; Lux-Steiner, M.-Ch.

**WIDEGAP CU(IN,GA)S<sub>2</sub> THIN FILM SOLAR CELLS ON TRANSPARENT SUBSTRATES**

19th European Photovoltaic Solar Energy Conference 2004 in Paris, France

Paris, Frankreich 07. Jun - 11. Jun 2004

**Poster**

Dworzak, M.; Hoffmann, A.; Riemann, T.; Christen, J.; Beckers, I.; Siebentritt, S.

**Relaxation and Radiative Recombination Dynamics in CuGaSe<sub>2</sub>**

Spring Meeting of the European Materials Research Society

Strasbourg 24. May - 28. May 2004

Invited Talk

*Klenk, R.*

**Präparationsverfahren für Chalkopyrit-Solarmodule**

Frühjahrstagung des Arbeitskreises Festkörperphysik (DPG)

Regensburg 08. Mar - 12. Mar 2004

Poster

*Papathanasiou, O.; Siebentritt, S.; Bohne, W.; Klaer, J.; Lauermann, I.; Rahne, K.; Röhrich, J.; Rusu, M.; Strub, E.; Lux-Steiner, M. Ch.*

**Cd-free buffer layers for CuInS<sub>2</sub> solar cells prepared by a dry process**

19th European Photovoltaic Solar Energy Conference

Paris, France 07. Jun - 11. Jun 2004

Poster

*Rega, N.; Siebentritt, S.; Albert, J.; Nishiwaki, S.; Zajogin, A.; Lux-Steiner, M. Ch.; Kniese, R. (ZSW); Romero, M. (NREL)*

**Excitonic Luminescence of Cu(In<sub>1-x</sub>Ga<sub>x</sub>)Se<sub>2</sub>**

E-MRS

Strasbourg 24. May - 28. May 2004

Poster

*Riemann, T.; Christen, J.; Dworzak, M.; Hoffmann, A.; Siebentritt, S.; Beckers, I.*

**Kinetics of Donor-Acceptor-pair Recombinations in Cu-deficient CuGaSe<sub>2</sub>**

Spring Meeting of the European Materials Research Society

Strasbourg 24. May - 28. May 2004

Oral

*Rusu, M.; Doka, S.; Bohne, W.; Schedel-Niedrig, Th.; Arushanov, E.; Lux-Steiner, M. Ch.*

**The CCSVT-Growth of CuGaSe<sub>2</sub> Absorbers, Material Properties and Solar Cell Performance**

ICTMC 14

Denver, USA 27. Sep - 01. Oct 2004

Oral

*Rusu, M.; Doka, S.; Kaufmann, Ch. A.; Grigoreva, N.; Schedel-Niedrig, Th.; Lux-Steiner, M. Ch.*

**Solar Cells based on CCSVT-Grown CuGaSe<sub>2</sub> Absorber and Device Properties**

E-MRS 21th Spring Meeting 2004

Strasbourg, France 24. May - 28. May 2004

Poster

*Rusu, M.; Doka, S.; Meeder, A.; Würz, R.; Strub, E.; Röhrich, J.; Bloeck, U.; Schubert-Bischoff, P.; Bohne, W.; Schedel-Niedrig, Th.; Lux-Steiner, M. Ch.*

**Structural Peculiarities of CCSVT-Grown CuGaSe<sub>2</sub> Thin Films**

E-MRS 21th Spring Meeting 2004

Strasbourg, France 24. May - 28. May 2004

Invited Talk

*Schedel-Niedrig, Th.*

**Material Properties and Application Issues of Chalcopyrite Thin Films**

Polarized Electron Sources and Polarimeters - PESP-Workshop 2004

Mainz, Germany 07. Oct - 09. Oct 2004

Invited Talk

*Siebentritt, S.*

**Defects and transport in wide gap chalcopyrites**

Conference on photoactive materials

Kariega, South Africa 25. Feb - 29. Feb 2004

Oral

*Siebentritt, S.*

**ELECTRONIC TRANSPORT MECHANISMS IN CUGASE2**

Springmeeting of the European Material Reserach Society

Strassbourg, France 24. May - 28. May 2004

Poster

*Siebentritt, S.*

**The amphoteric defect modell in chalcopyrites**

Gordon Conference

Gordon, New England, New Hampshire, USA 18. Jul - 23. Jul 2004

Oral

*Siebentritt, S.*

**Doping defects in chalcopyrites**

Gordon Conference on Defects in Semiconductors

New London, USA 18. Jul - 23. Jul 2004

---

**SE3.Baseline**

---

Poster

*Klaer, J.; Scheer, R.; Klenk, R.; Boden, A.; Köble, C.*

**Stress behaviour of CuInS<sub>2</sub> thin film PV-modules studied by a specific test structure**

19th European Photovoltaic Solar Energy Conference

Paris 07. Jun - 11. Jun 2004

Oral

*Meyer, N.; Luck, I.; Rühle, U.; Klaer, J.; Klenk, R.; Lux-Steiner, M.C.; Scheer, R.*

**Towards thin film module production using a simplified CIS process**

19th European Photovoltaic Solar Energy Conference

Paris 07. Jun - 11. Jun 2004

---

**SE3 - Technology**

---

**SE2.Contacts**

---

Invited Talk

*Klenk, R.; Kaufmann, Ch.; Neisser, A.; Scheer, R.*

**Development of Flexible Chalcopyrite-Based Solar Cells**

European Space Technology Harmonisation (Mapping Meeting)

Noordwijk, NL 15. Sep - 15. Sep 2004

---

**SE3.Baseline**

---

Poster

*Asenjo B.; Chaparro A.M.; Gutiérrez M.T.; Herrero J.; Klaer J.*

**Growth and properties of In<sub>2</sub>S<sub>3</sub> thin films for buffer layers of CuInS<sub>2</sub> based solar cells**

19th European Photovoltaic Solar Energy Conference

Paris 07. Jun - 11. Jun 2004

Poster

*Asenjo, B; Chaparro A.M.; Gutiérrez, M.T.; Herrero, J.; Klaer, J.*

**Growth and properties of In<sub>2</sub>S<sub>3</sub> thin films for buffer layers of CuInS<sub>2</sub> based solar cells**

19th European Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Poster

Klaer, J.; Scheer, R.; Klenk, R.; Boden, A.; Köble, C.

**Stress behaviour of CuInS<sub>2</sub> thin film PV-modules studied by a specific test structure**

19th European Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Poster

Klaer, J.; Scheer, R.; Klenk, R.; Boden, A.; Köble, C.

**Stress behaviour of CuInS<sub>2</sub> thin film PV-modules studied by a specific test structure**

19th European Photovoltaic Solar Energy Conference

Paris 07. Jun - 11. Jun 2004

## Oral

Meyer, N.; Luck, I.; Rühle, U.; Klaer, J.; Klenk, R.; Lux-Steiner, M.C.; Scheer, R.

**Towards thin film module production using a simplified CIS process**

19th European Photovoltaic Solar Energy Conference

Paris 07. Jun - 11. Jun 2004

---

**SE3.Control**

---

## Oral

Rudigier, E.; Djordjevic J.; von Klopmann; Scheer R.

**Real-time studies of Cu-In chalcogenization using in-situ XRD and Raman spectroscopy**

POLYSE 2004

Potsdam 06. Sep - 10. Sep 2004

## Poster

Rudigier, E.; Palm, J.; Scheer, R.

**TOWARDS A FAST PROCESS CONTROL FOR Cu(In,Ga)(Se,S)<sub>2</sub> ABSORBERS. THE SURFACE CHALCOGEN RATIO ASSESSED BY RAMAN SPECTROSCOPY**

19th EU PVSEC

Paris 07. Jun - 11. Jun 2004

## Poster

Sakurai K. ; Scheer, R.; Nakamura, Y.; Kimura, Y.; Baba, T.; Kaufmann, C.A.; Neisser, A.; Ishizuka, S.; Yamada, A.; Matsubara, K.; Iwata, K.; Fons, P.; Nakanishi, H.; Niki, S.

**Structural changes of CIGS during deposition investigated by spectroscopic light scattering: a study on Ga concentration and Se pressure**

PVSEC-14

Bangkok 26. Jan - 30. Jan 2004

---

**SE4 - Dynamics of interfacial reactions**

---

**SF4.Cells**

---

## Poster

Batyrev, I.G.; Hannappel, T.; McMahon, W.E.; Zhang, S.B.; Olson, J.M.; Wei, S.-H.

**Ab-initio calculations of RDS of ordered GaInP: Bulk and surface with steps**

Palais des Congres de Montreal, Annual APS March Meeting 2004

Quebec, Canada 22. Mar - 26. Mar 2004

## Oral

Bork, T.; Bakin, A.;

**In-Situ Reflectance Anisotropy Spectra (RAS) Investigation**

DPG Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

## Poster

Giesen, Ch.; Heuken, M.; Dimroth, F.; Bett, A.W.; Hannappel, T.; Kollonitsch, Z.; Möller, K.; Seip, M.; Koch, J.; Greiling, A.

**MOVPE growth of Sb-based semiconductors in a 9x2-inch planetary reactor**

6th International Conference on the Thermophotovoltaic Generation of Electricity  
Freiburg 14. Jun - 16. Jun 2004

## Invited Talk

Hannappel, T.; Kollonitsch, Z.; Möller, K.; Neumann, S.; Tegude, F.-J.; Willig, F.

**InP/GaAsSb-Grenzflächenuntersuchungen im Hinblick auf InP-basierte Bauelemente**

19. DGKK -Arbeitskreistreffen Epitaxie von III/V-Halbleitern  
Freiburg 09. Dec - 10. Dec 2004

## Poster

Hannappel, T.; McMahon, W.E.; Olson, J.M.

**MOCVD preparation and termination of Si(100) surfaces**

12th International Conference on Metal Organic Vapor Phase Epitaxy  
Maui, Hawaii, USA 30. May - 04. Jun 2004

## Invited Talk

Hannappel, T.; Toebe, L.; Gundlach, L.; Ernstorfer, R.; Willig, F.

**Atomic order, energetics and femtosecond electron dynamics of MOCVD-grown III-V semiconductor surfaces**

16th Workshop on Quantum Solar Energy Conversion  
Salzburg, Austria 14. Mar - 20. Mar 2004

## Poster

Kollonitsch, Z.; Möller, K.; Neumann, S.; Tegude, F.-J.; Neges, M.; Willig, F.; Hannappel, T.

**RAS und UHV study of MOVPE grown GaAsSb on InP(100) and InP/GaAsSb heterointerfaces**

12th International Conference on Metal Organic Vapor Phase Epitaxy  
Maui, Hawaii, USA 30. May - 04. Jun 2004

## Oral

Kollonitsch, Z.; Neges, M.; Möller, K.; Willig, F.; Hannappel, T.

**In-situ- and UHV-investigation of MOCVD-grown GaAsSb-interfaces**

Frühjahrstagung der DPG  
Regensburg 08. Mar - 12. Mar 2004

## Oral

Kollonitsch, Z.; Neges, M.; Möller, K.; Willig, F.; Hannappel, T.;

**In-Situ- and UHV-Investigation of MOCVD-Grown GaAsSb-Interfaces**

DPG Frühjahrstagung  
Regensburg 08. Mar - 12. Mar 2004

## Poster

Letzig, T.; Schimper, H-J.; Hannappel, T.; Willig, F.;

**Direct evidence from FTIR for hydrogen incorporation into the MOCVS-grown P-rich reconstructed InP(100) surface**

DPG Frühjahrstagung  
Regensburg 08. Mar - 12. Mar 2004

## Poster

Möller, K.; Kollonitsch, Z.; Seidel, U.; Giesen, Ch.; Heuken, M.; Willig, F.; Hannappel, T.

**In-situ monitoring and UHV-characterization of MOVPE-grown InSb(100)**

12th International Conference on Metal Organic Vapor Phase Epitaxy  
Maui, Hawaii, USA 30. May - 04. Jun 2004

**Poster**

Möller, K.; Toeben, L.; Kollonitsch, Z.; Giesen, Ch.; Heuken, M.; Willig, F.; Hannappel, T.

**MOVPE in-situ monitoring and analysis of substrate deoxidation of GaSb(100)**

Frühjahrstagung der DPG

Regensburg 08. Mar - 12. Mar 2004

**Invited Talk**

Olson, J.M.; Geisz, J.; McMahon, W.E.; Hannappel, T.; Jones, K.M.; Moutinho, H.; Al-Jassim, M.M.

**MOCVD growth of GaPN on Si**

12th International Conference on Metal Organic Vapor Phase Epitaxy

Hawaii, USA 30. May - 04. Jun 2004

**Invited Talk**

Schimper, H.-J.; Kollonitsch, Z.; Möller, K.; Seidel, U.; Bloeck, U.; Giesen, C.; Heuken, M.; Schwarzburg, K.; Willig, F.; Hannappel, T.

**Untersuchungen zur Entwicklung von InP-basierten III-V Solarzellen**

19. DGKK - Arbeitskreistreffen Epitaxie von III/V-Halbleitern

Freiburg 09. Dec - 10. Dec 2004

---

**SE4.Dynamics**

---

**Oral**

Ernstorfer, R.;

**Ultrafast molecule to semiconductor electron transfer via different anchor groups in ultra-high-vacuum**

14th International Conference on Ultrafast Phenomena

Niigata, Japan 25. Jul - 30. Jul 2004

**Poster**

Ernstorfer, R.; Gundlach, L.; Felber, S.; Eichberger, R.; Zimmermann, C.; Storck, W.S.; Willig, F.

**Ultrafast molecule to semiconductor electron transfer via different bridge groups in ultra-high-vacuum**

14th International Conference on Ultrafast Phenomena

Niigata, Japan 25. Jul - 30. Jul 2004

**Oral**

Ernstorfer, Ralph.; Gundlach, Lars.; Felber, Silke.; Perrson, Petter.; Letzig, Tobias.; Zimmermann, Carsten.; Eichberger, Rainer.; Willig, Frank.

**Pump-Probe-Spectroscopy of Ultrafast Heterogeneous Electron Transfer from Perylene to colloidal TiO<sub>2</sub>**

DPG 68 Physikertagung und AMOP-Frühjahrstagung

Ludwig-Maximilians-Universität 22. Mar - 26. Mar 2004

**Oral**

Neges, M.; Schwarzburg, K.; Willig, F.;

**Fingerprints of not thermal distributed charge carriers in the photocurrent of an InP photovoltaic structure at low temperatures**

DPG Frühjahrstagung

Regensburg 08. Mar - 12. Mar 2004

**Invited Talk**

Willig F.

**Ultrafast photo-induced electron transfer from aromatic chromophores into semiconductors probed in ultra-high-vacuum**

205th ECS Meeting

San Antonio, USA 09. May - 13. May 2004

Invited Talk

*Willig, F.*

**Ultrafast electron transfer dynamics on the surface of semiconductors in the absence and presence of attached molecules**

49th International Symposium on Optical Science and Technology  
Denver, USA 02. Aug - 06. Aug 2004

Invited Talk

*Willig, F.*

**Heterogeneous electron transfer in ultra-high-vacuum probed with transient absorption and two-photon-photoemission**

Trombay Symposium BARC  
Mumbai, India 08. Jan - 12. Jan 2004

Oral

*Willig, F.*

**Direct time-resolved measurement of the strength of electronic coupling in the presence of a long saturated molecular spacer**

55th International Society of Electrochemistry Meeting  
Thessaloniki, Greece 19. Sep - 24. Sep 2004

Invited Talk

*Willig, F.*

**Ultrafast Electron Transfer Dynamics at the Surface of Semiconductors with/ without Attached Molecules**

Seminar of the SFB Advances Light Sources at the University of Vienna  
Wien, Austria 08. Oct - 08. Oct 2004

Oral

*Willig, F.*

**Measuring and modeling hot electron dynamics for third generation solar cells**

PVSEC-14

Bangkok 26. Jan - 30. Jan 2004

---

**SE4.Others**

---

Poster

*Alam, M.S., Rao, B.S.M., Janata, E.*

**Reactions of OH and H with aliphatic alcohols. A pulse radiolysis study.**

27th International Symposium on Free Radicals  
Taipei, Taiwan 25. Jul - 30. Jul 2004

Invited Talk

*Janata, E.*

**Pulse Radiolysis and its Application in Physical Chemistry**

83rd International Bunsen Discussion Meeting  
Dresden 24. Oct - 27. Oct 2004

Oral

*Janata, E.; Karolczak, S.*

**The reaction of H, OH and eaq- with isobutene in aqueous solution. A pulse radiolysis study.**

XIII Meeting of the Polish Radiation Research Society Maria Skłodowska-Curie  
Lodz, Polen 13. Sep - 13. Sep 2004

## SE5 - Solar energy

### SE5.Energetics

Oral

*Herrmann, I.\*, Schmithals, G., Dorbandt, I., Bogdanoff, P., Fiechter, S., Tributsch, H.*

**New Materials for the electrochemical oxygen reduction: Effect of different morphologies on the activity of heat treated CoTMPP**

ISE 2004

Thessaloniki, Griechenland 19. Sep - 24. Sep 2004

Oral

*Herrmann, I.\*, Schmithals, G., Dorbandt, I., Bogdanoff, P., Fiechter, S., Tributsch, H.*

**New Materials for the electrochemical oxygen reduction: Effect of different morphologies on the activity of heat treated CoTMPP**

International Society of Electrochemistry 2004

Thessaloniki-Griechenland 19. Sep - 24. Sep 2004

Poster

*Matthias Junghänel und Helmut Tributsch*

**Monitoring the reactivity of oxide interfaces in dye solar cells with photocurrent imaging techniques.**

IPS-15 (International Conference on Photochemical Conversion and Storage of Solar Energy)

Paris 01. Aug - 06. Aug 2004

Poster

*Bogdanoff, P.\*, Herrmann, I., Schmithals, G., Dorbandt, I., Fiechter, S.*

**Structural characterisation of the oxygen reduction catalytic centre of pyrolyzed CoTMPP**

ISE 2004

Thessaloniki, Griechenland 19. Sep - 24. Sep 2004

Oral

*Ellmer, K.*

**Plasmagestützte Schichtabscheideverfahren für Dünnschichtsolarzellen: Prinzipien und Anwendungen**

Frühjahrstagung der Deutschen Physikalischen Gesellschaft, Arbeitskreis Festkörperphysik, Symposium

Regensburg 08. Mar - 12. Mar 2004

Invited Talk

*Ellmer, K.*

**Beweglichkeitsbegrenzung von entartet dotierten Zinkoxidschichten und deren mögliche Überwindung**

Transparente leitfähige Oxide-Grundlagen und Anwendungen in der flexiblen Elektronik (TCO2004)

Leipzig 29. Mar - 30. Mar 2004

Oral

*Ellmer, K.*

**Magnetronspattern von Sulfiden für die Photovoltaik**

XI. Erfahrungsaustausch

Mühlleithen 02. Mar - 04. Mar 2004

Invited Talk

*Ellmer, K., Unold, T.; Menner, R.*

**Reaktives Magnetronspattern von Sulfidschichten - eine neue**

**Dünnschichtsolarzellentechnologie**

EFDS-Workshop

Frankfurt / Main 01. Apr - 01. Apr 2004

Oral

*G. Schmithals, S. Fiechter, P. Bogdanoff, I. Herrmann, I. Dorbandt, H. Tributsch*

**Novel porphyrine based electrocatalysts for oxygen reduction**

Fuel Cells Science & Technology

München 06. Oct - 07. Oct 2004

Invited Talk

*Jungblut, H.; Jakubowicz, J.; Lewerenz, H.J.*

**Metastable nanostructure formation during porous Si formation**

ISE 2004 annual meeting Thesaloniki, Greece

Thesaloniki, Greece 17. Sep - 22. Sep 2004

Poster

*Kolenko, Yu. V.; Churagulov, B.R.; Kunst, M.; Colbeau-Justin, C.;*

**Photocatalytic properties of nanocrystalline TiO<sub>2</sub> powders**

EMRS Spring Meeting 2004

Strasbourg 24. May - 28. May 2004

Invited Talk

*Kunst, M.*

**Photocatalytic effects in TiO<sub>2</sub> powders**

Université Cergy-Pontoise (Frankreich)

Paris 21. Oct - 21. Oct 2004

Oral

*Kunst, M.; Colbeau-Justin c.;*

**The relation between excess charge carrier kinetics and photocatalytic properties in TiO<sub>2</sub> powders**

NanoChemistry Workshop 2004

Darmstadt 18. Jun - 20. Jun 2004

Invited Talk

*Lewerenz, H.J.*

**HREELS Investigation on the Self Organized Nanostructure Formation on Silikon.**

HREELS- Minisymposium

Cottbus 20. Apr - 20. Apr 2004

Oral

*M. Thomalla, H. Tributsch*

**Chromatographic Studies of Photodegradation of RuL<sub>2</sub>(SCN)<sub>2</sub> in Nanostructured Dye Sensitization Solar Cells**

IPS-15 (International Conference on Photochemical Conversion and Storage of Solar Energy)

Paris 01. Aug - 06. Aug 2004

Poster

*P. Maruthamuthu\*, S. Fiechter, H. Tributsch*

**Lipid (Detergent) Based Composite Dye Solar Cell**

IPS-15 (International Conference for Photochemical Conversion and Storage of Solar Energy)

Paris 01. Aug - 06. Aug 2004

Oral

*Schmithals, G.\*; Bogdanoff, P.; Herrmann, I.; Dorbandt, I.; Fiechter, S.; Tributsch, H.*

**Novel carbon supported electrocatalysts for oxygen reduction**

CarboCat

Lausanne 18. Jul - 20. Jul 2004

Poster

*Schwarz, R.; Braz, T.; Sanguino, P.; Macarico, A.; Vieira, M.; Wünsch, F.; Kunst, M.; Marques, C. P.;*

*Alves, E.*

**Changes in Spectral Response of Thick Amorphous Silicon Detectors After Irradiation**

19th EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE AND EXHIBITION

Paris 07. Jun - 11. Jun 2004

## Poster

*Seeger, S.; V. Weiß; H. Tributsch; T. Dittrich; T. Guminiskaya; R. Mientus; K. Ellmer*  
**REACTIVELY SPUTTERED MOS<sub>x</sub> AND WS<sub>x</sub> ABSORBERS FOR THIN FILM SOLAR CELLS**

19th European Photovoltaic Solar Energy Conference and Exhibition

Paris, France 07. Jun - 11. Jun 2004

## Oral

*Skorupska, K.; Aggour, M.; Goncalves, E.; Hunger, R.; Jungblut, H.; Kanis, M.; Lublow, M.; Rüther, E.; Wilhelm, T.; Lewerenz, H-J*

**Initial stage of Si dissolution in alkaline media using photoelectron spectroscopy and atomic force microscopy**

DPG-Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

## Invited Talk

*Skorupska, K.; Jakubowicz, J.; Jungblut, H.; Lewerenz, H.J.*

**Observation of Metastable Self-Organised Structure During Porous Silicon Formation**

E-MRS 2004

Strasbourg 24. May - 28. May 2004

## Oral

*Skorupska, K.; Wilhelm, T.; Kanis, M.; Aggour, M.; Goncalves, E.; Lublow, M.; Rüther, E.; Jungblut, H.; Lewerenz, H.J.*

**Oxidation and Dissolution Phenomena in the Chemical and Electrochemical Pathways of Silicon Etching**

BESSY user meeting 2004

Berlin 02. Dec - 02. Dec 2004

## Invited Talk

*Tomm, Y.*

**Crystal Growth of Materials for Photovoltaics**

2004 Fall International Symposium on Crystal Growth and Devices

Seoul, Korea 10. Nov - 13. Nov 2004

## Invited Talk

*Tributsch, H.*

**Kinetically determined Solar Cells**

IPS-15 (International Conference on Photochemical Conversion and Storage of Solar Energy

Paris 01. Aug - 06. Aug 2004

## Oral

*Tributsch, H.*

**PEM-Brennstoffzellen: Neue Katalysatoren und bionische Aspekte**

Jahrestagung, Forschungsverbund Solarenergie

Berlin 25. Nov - 26. Nov 2004

## Invited Talk

*Tributsch, H.*

**Bionic Strategies Towards a Sustainable Solar Hydrogen and Fuel Technology**

International Steering Committee Meeting on Solar-Hydrogen

Sydney 22. Aug - 27. Aug 2004

## Invited Talk

*Tributsch, H.*

**Material Research Challenges towards a Corrosion Stable Photovoltaic Hydrogen Generating Membrane**

International Conference on Materials for Hydrogen Energy

Sydney 27. Aug - 27. Aug 2004

Invited Talk

*Tributsch, H.*

**Bionische Forschung zur tensilen Wasser-Technologie der Baeume**

Bionik: Innovationsimpulse aus der Natur

Bremen 29. Oct - 30. Oct 2004

Oral

*Wilhelm, T.; Berenguier, B.; Aggour, M.; Gaul, M.; Winkelkemper, M.; Kanis, M.; Goncalves, E.; Jungblut, H.; Lewerenz, H.-J.*

**8% efficient CuInS<sub>2</sub> (CIS) solar cells with electrochemically removed Cu-S-phases**

DPG Frühjahrstagung

Regensburg 08. Mar - 08. Mar 2004

Oral

*Wilhelm, T.; Berenguier, B.; Aggour, M.; Kanis, M.; Jungblut, H.; Lewerenz, H.-J.*

**Efficient CuInS<sub>2</sub> (CIS) solar cells by photoelectrochemical conditioning**

International Conference on Photochemical Conversion and Storage of Solar Energy (IPS-15)

Paris 04. Jul - 09. Jul 2004

Oral

*Wilhelm, T.; Berenguier, B.; Aggour, M.; Kanis, M.; Lewerenz, H.-J.*

**Electrochemically Processed CuInS<sub>2</sub> (CIS) Absorber Layers**

EMRS Spring Meeting 2004

Straßburg 24. May - 28. May 2004

Invited Talk

*Wünsch, F.*

**Characterization of Silicon by Non-Invasive Microwave Conductivity Techniques**

Hydrogen Related Defects in Semiconductors

University of Salerno 25. Nov - 25. Nov 2004

---

**SE5.Interfaces**

---

Poster

*Jungblut, H., Lewerenz, H. J.*

**Nascent Phases of Porous Silicon: Surface Chemistry and Nanostructure Formation**

79. AGEF-Symposium: 25 Jahre Elektrochemie in Düsseldorf

Düsseldorf 18. Nov - 19. Nov 2004

Oral

*Lewerenz, H. J.; Jakubowicz, J.; Jungblut, H.*

**Nascent and Metastable Phases in Nanostructure Evolution on Silicon**

4th Joint International Meeting of the Electrochemical Societies of the US and Japan

Honolulu, Hawaii, USA 03. Oct - 08. Oct 2004

Invited Talk

*Lewerenz, H. J.; Jakubowicz, J.; Jungblut, H.*

**Site specific electrolyte interaction at terraced Si(111) surfaces**

4th Joint International Meeting of the Electrochemical Societies of the Us and Japan

Honolulu, Hawaii, USA 03. Oct - 08. Oct 2004

Invited Talk

*Lublow, M.*

**Comparison of Spectroscopic Ellipsometry and Brewster-Angle Spectroscopy on chemically modified Si(111) surfaces**

Seminar

BTU-Cottbus 13. Jan - 13. Jan 2004

## SE6 - Elektronic structure of semiconductor interfaces

### **SE6.BESSY**

Oral

Hunger, R.; Jaegermann, W.; Calvet, W.; Lehmann, C.; Pettenkofer, C.; Sakurai, K.; Niki, S.

#### **Angle-resolved photoelectron spectroscopy of CuInSe<sub>2</sub>(001)**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

Poster

Lehmann, C.; Calvet, W.; Pettenkofer, C.

#### **Epitaxial CuInS<sub>2</sub> on Si(111) using di-tert-butyl disulfide as sulphur precursor**

EMRS spring meeting

Strasbourg 24. May - 28. May 2004

Oral

Lehmann, C.; Calvet, W.; Pettenkofer, C.

#### **Metal organic molecular beam epitaxy (MOMBE) of CuInS<sub>2</sub> on Si(111)**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

Invited Talk

Pettenkofer, C.

### **Gennesys, Photovoltaics**

Gennesys Workshop FZJ

Jülich 15. Apr - 15. Apr 2004

Oral

Schmidt, P.-M.; Winter, B.; Weber, R.; Freyer, W.; Hertel, I.V.; Pettenkofer, C.; Faubel, M.

#### **The triiodide equilibrium in water investigated by photoemission**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

### **SF6.Interfaces**

Poster

Andres, S.; Calvet, W.; Plake, T.; Pettenkofer, C.

#### **Indium- und Indiumselenid-terminierte Si(111)-Oberflächen als neuartige Pufferschichten in der Heteroepitaxie**

DPG-Frühjahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004

Oral

Wolf, H.; Meier, U.; Plake, T.; Pettenkofer, C.

#### **Einfluss photoinduzierter Effekte auf die Photoemissionsspektren gesputterter ZnO-Schichten auf Si(111)**

DPG-Frühfahrstagung (AKF)

Regensburg 08. Mar - 12. Mar 2004



# **Invited Lectures**

## SF - Structural Research

### **SF - BENSC**

**SF1.BENSC**

*Mezei, F.*

**Multi-MW Spallation Sources:A Quantum Leap in Neutron Research Opportunities**

Seminar

Universität Braunschweig, 22.06.2004

*Steitz, R.*

**Neutron reflectivity and soft condensed matter**

Institutsseminar, Lehrstuhl für Angewandte Physikalische Chemie: Prof. Dr. M. Grunze,  
Heidelberg, 02.12.2004

*Steitz, R.*

**New aspects of water depletion and nanobubbles at extended solid/liquid interfaces**

GemSem, Stranski-Laboratorium, TU Berlin

Berlin, 30.06.2004

*Treimer, W.*

**Was ich schon immer über Computertomographie wissen wollte**

Vortrag an Fritz Reuter Oberschule

Hohenschönhausen,, 17.03.2004

*Treimer, W.*

**Alte und neue bildgebende Signale in der Computertomography**

Seminarvortrag

Universität Wien, 09.05.2004

*Treimer, W., Strobl, M., Hilger, A., Kardjilov, N.*

**Neue Wege in der Neutronentomography**

Seminarvortrag

TUM Garching, 10.02.2004

### **SF - ISL**

**ISL.User**

*Strub, E., Bohne, W., Röhrich, J.*

**ERDA am HMI - Auf dem Weg zur "Routineanalytik" für dünne Schichten**

Fachgruppenseminar der Fachgruppe I.4 der BAM

Berlin, 16.11.2004

### **SF - BESSY**

**SE6.BESSY**

*Pettenkofer, C.*

**Zur Photoemission an Ag(111) Inseln - einige recht merkwürdige Beobachtungen**

Oberflächenseminar, Humboldt Universität

Humboldt Universität Berlin, 06.12.2004

*Pettenkofer, C.*

**Energy Converting Interfaces**

Chalmers University Göteborg

Göteborg, S, 28.05.2004

*Pettenkofer, C.*

**Faculty opponent introduction to PES study of layered materials and alkali metal intercalation**

Examination at Chalmers University Gotenborg, S

Göteborg, S, 29.05.2004

---

**SF3.BESSY**

---

*Haibel, A.*

**Synchrotron-Tomographie und 3D-Bildanalyse an keramischen und metallischen Schäumen**

Seminarveranstaltung der Arbeitsgruppe Prof. Schubert

Berlin, 22.11.2004

---

**SF4.BESSY**

---

*Darowski, N.*

**Zerstörungsfreie Materialcharakterisierung mittels Synchrotronstrahlung**

Kolloquium des Institutes für Festkörperphysik der Friedrich-Schiller-Universität Jena

Jena, 10.12.2004

## SF1 - Methods and Instruments

---

### **SF1.Dynamics**

---

*Lieutenant, Klaus;*

#### **Protein dynamics investigated by EPR and neutron scattering experiments**

Physik-Seminar, Universität Osnabrück

Osnabrück, Germany, 04.05.2004

*Mezei, F.*

#### **The European Spallation Source Project**

Seminar

Research Institute for Nuclear Physics, Debrecen, Ungarn, 24.05.2004

### **SF1.Methods**

---

*Krist, T.*

#### **Neutron optics from Hahn-Meitner Institute Berlin**

Seminar talk

Kyoto University, Research Reactor Insti, 08.01.2004

*Krist, T.*

#### **Neutronenoptische Bauelemente vom HMI Berlin**

Vortrag

Institut für Gerätebau, Berlin Adlershof, 05.11.2004

### **SF1.Spallation**

---

*Hilscher, Dietrich;*

#### **Transmutation - eine Option für die Zukunft?**

Festkolloquium zur Verabschiedung von Prof. Dr. D. Filges, IKP-FZJ

Jülich, Germany, 13.02.2004

*Lieutenant, Klaus;*

#### **Introduction to VITESS**

VITESS at KAERI, Korean Atomic Energy Research Institute (KAERI)

Daejon, Korea, 31.05.2004

*Lieutenant, Klaus;*

#### **Simulation of guides using VITESS**

VITESS at KAERI, Korean Atomic Energy Research Institute (KAERI)

Daejon, Korea, 01.06.2004

*Lieutenant, Klaus;*

#### **Simulation off Reflectometers using VITESS**

VITESS at KAERI, Korean Atomic Energy Research Institute (KAERI)

Daejon, Korea, 04.06.2004

*Lieutenant, Klaus; Dr. Geza Zsigmond*

#### **Simulation of SANS instruments using VITESS**

VITES at KAERI, Korean Atomic Energy Research Institute (KAERI)

Daejon, Korea, 30.06.2004

*Manoshin, Sergey; Drabkin,G.;Mezei,F.*

#### **Simulation of double Drabkin 2-PI resonators**

Joint VITESS and McStas Training Course & Workshop, ISIS Facility

Abingdon, United Kingdom, 05.02.2004

### SF3 - Materials

#### **SF3.Light weight mat.**

Banhart, J.

**Schäume aus Metall - Herstellung, Eigenschaften, Anwendungen**

Kolloquium WTM

Erlangen, 13.01.2004

Banhart, J.

**Metallschäume**

Kolloquium der Staatlichen Materialprüfungsanstalt

Darmstadt, 08.07.2004

#### **SF3.Microstructure**

Abromeit, C.

**Heterogeneous phase changes in alloys induced by a-thermal transport processes**

TROISIÈME CYCLE DE LA PHYSIQUE EN SUISSE ROMANDE

EPFL Lausanne (Switzerland), 11.03.2004

Abromeit, C.

**On the nature of the decomposition of Fe-Ni Invar alloys under and without irradiation**

Colloquium, Kharkov Institute of Physics & Technology

Kharkov, Ukraine, 15.09.2004

Abromeit, C.

**Decomposition in Fe-Ni Invar alloys: an unsolved problem**

Seminar

Kyushu University, Japan, 26.11.2004

Abromeit, C.

**Dynamical phase diagram**

Seminar

KIPT Kharkov, Ukraine, 14.09.2004

Leitner, H., Clemens, H., Jamnig, B., Höring, S., Wanderka, N., Banhart, J., Staron, P.

**Untersuchungen an Maragingstahl mittels 3D-Atomsonde und SANS**

50. Metallkundekolloquium

Lech (A), 15.04.2004

#### **SF3.Nanostructures**

Wiedenmann, A.

**Magnetic Nanostructures as probed by Polarized Small Angle Neutron Scattering**

General seminar at ILL (College 9)

Grenoble, France, 03.03.2004

Wiedenmann, A.

**Time resolved SANSPOL on Ferrofluids**

20.10.2004

Wiedenmann, A.; May, R.; Dewhurst, Ch.

**Polarisation option on D22**

ILL General seminar (College 1)

Grenoble, France, 13.09.2004

**SF3.Others**

---

Rack, Alexander; Nico Eschricht

**Charakterisierung von Metallschäumen mittels Synchrotron-Tomographie und 3D-Bildanalyse**

Kooperation HMI-ITWM, ITWM Fraunhofer

Kaiserslautern, Germany, 21.06.2004

Vierke, J.

**Empfindlichkeitseinstellung und Echohöhenbewertung von Ultraschallprüfköpfen mit schmalen rechteckigen Schwingern**

außerordentlicher Vortrag am Institut für metallische Werkstoffe der TU-Berlin

Berlin, 09.12.2004

**SF4 - Structure and Dynamics****SF4.Dynamics**

---

Mahnke, H.-E.

**From the photo effect to the analysis of nanostructures - X-ray absorption spectroscopy**

Seminar, Materials Science Department, State University of New York at Stony Brook

Stony Brook, NY, USA, 27.07.2004

**SF5 - Theory****SF5.Biosystems**

---

Falcke, M.

**Muster im Lebendigen - Selbstorganisation in Organismen**

Auricher Wissenschaftstage

Aurich, 25.11.2004

**SF5.Soft Matter**

---

Kroy, Klaus;

**Nichtgleichgewichts-Dynamik weicher Materie**

Seminar, Universität Leipzig

Leipzig, Germany, 10.02.2004

**SF7 - Measurement instrumentation****SF7.ERDA**

---

Von Oertzen, Wolfram

**Nuclear Clusters and Covalently bound Nuclear Molecules**

Nuclear Clusters and Covalently bound Nuclear Molecules

Paris, Université de Paris Süd, Orsay, 15.03.2004

## SE - Solar Energy Research

### SE1 - Silicon photovoltaics

#### SE1.Cells

*Böhme, C.*

**The Electrical Detection of Spin Coherence - Applicatins for Semiconductor Spectroscopy and Implications for Quantum Information Concepts**

Kolloquium der Universität Stuttgart

Stuttgart, Germany, 06.12.2004

*Böhme, C.*

**The Electrical Detection of Spin Coherence - a Potential Key to the Readout of Semiconductor Based Spin Qubits**

Seminar der Universität Dortmund,

Dortmund, Germany, 30.11.2004

*Böhme, C.*

**The Electrical Detection of Spin Coherence - One Approach to an Ultrasensitive Spin Measurement**

National High Magnetic Field Laboratory Tallahessee

Tallahessee, Florida, USA, 09.11.2004

*Böhme, C.:*

**Wie man mit Echos im Probenstrom zu besseren Halbleitern gelangen kann**

Industrie- und Handelskammer Nordhessen

Marburg, Germany, 17.06.2004

*Fuhs, W.*

**Scientific Challenges in Photovoltaics**

North Carolina State University, Raleigh

Raleigh, North Carolina, USA, 30.11.2004

*Fuhs, W.*

**Polycrystalline Silicon Thin-Film Solar Cells**

National Renewable Energy Laboratory

Golden, Colorado, USA, 23.11.2004

*Fuhs, W.*

**Kann man mit weniger mehr erreichen?**

Kolloquium am ISFH

Hameln, Germany, 27.09.2004

*Lips, K.*

**Magnetic Fingerprints in the Photocurrent of Silicon Solar Cells**

Ornstein Colloquium, Universität Utrecht

Utrecht, Netherland, 17.12.2004

*Nickel, N. H.*

**Properties of Hydrogen in Semiconductors**

Seminarvortrag an Ecole Polytechnique Palaiseau

Paris, France, 11.12.2004

*Nickel, N. H.*

**Electrical and Optical Properties of Laser Crystallized Poly-Si Films**

Seminarvortrag, Université de Rennes I

Rennes, France, 13.12.2004

**SE1.Hetero**

---

*Angermann, H.*

**Electronic Properties of Hydrogen-Terminated Silicon Surfaces During Wet-Chemical Preparation and Storage in Clean-Room Air**

Seminar der Technischen Universität Chemnitz,  
Chemnitz, Germany, 01.12.2004

*Korte, L.*

**Determination of the Gap State Density Distribution in Silicon Based Heterostructures by UV-Photoelectron Spectroscopy**

PV-Kolloquium der Universität Leipzig  
Leipzig, Germany, 29.11.2004

*Rappich, J.*

**Electronic Surface Conditioning of Silicon Electrochemical Organic Layer Deposition**

Werkstoffwiss. Kolloquium der Universität Erlangen-Nürnberg  
Erlangen, Germany, 09.11.2004

*Schmidt, M.; Korte, L.; Kliefoth, K.; Schöpke, A.; Stangl, R.; Laades, A.; Brendel, K.; Scherff, M.*

**Basic Electronic Properties of TCO/a-Si:H/c-Si Heterostructure-Solar-Cells**

3rd aSi-Net Workshop & 10th Euroregional Workshop on  
Bratislava, Slovak Republic, 25.02.2004

---

**SE2 - Heterogeneous material systems**

---

**SE2.Analytics**

---

*Bär, M.*

**Cd<sub>2+</sub>/NH<sub>3</sub>-treatment an CGSe-Absorbern; ILGAR-SnO<sub>2</sub>-Minimodule**

CISSY-Projekttreffen bei Shell Solar  
Munic, Germany, 02.07.2004

*Bär, M.; Lehmann, S.*

**DH-induzierte chemische Veränderungen am Rückkontakt**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

*Bär, Marcus;*

**Cu(In,Ga)(S,Se)2 solar cells with ILGAR-ZnO: Surface modification and window extension layer concept**

Kolloquium, Energy Research Centre of the Netherlands  
Petten, Netherlands, 25.04.2004

*Bär, Marcus;*

**Cu(In,Ga)(S,Se)2 solar cells with ILGAR-ZnO: Surface modification and window extension layer concept**

Kolloquium, Universität Würzburg  
Würzburg, Germany, 25.06.2004

*Fischer, Ch.-H.; Klaer, J.; Sokoll, S.*

**XES-Untersuchungen an unverkapselten CIS-Modulstrukturen vor und nach Damp-Heat Test**

CISSY-Projekttreffen bei Shell Solar  
Munic, Germany, 02.07.2004

*Glatzel, Th.*

**Nanoscale Characterisation with UHV - Kelvin Probe Force Microscopy**

Dep. of Electrical Engineering, University of Tel Aviv (Israel)  
Tel Aviv, Israel, 09.03.2004

Glatzel, Th.

**Nanoscale Characterisation with UHV - Kelvin Probe Force Microscopy**

National Center of Competence in Research  
Basel, Switzerland, 03.06.2004

Grimm, A.

**Herstellung und Charakterisierung von RF-gesputterten (Zn,Mg)O-Schichten als alternativer Puffer zu CdS/i-ZnO**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Kötschau, I.

**Status und Aussichten der ortsaufgelösten Spektroskopie; Initiales Schichtwachstum von CdS auf CGSe und ZSW-CIGSe**

CISSY-Projekttreffen bei Shell Solar  
Munic, Germany, 02.07.2004

Kötschau, I.

**Quantitative Auswertung von XES-Spektren polykristalliner Dünnschichten**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Kötschau, I.

**Growth of CdS layers on CuGaSe<sub>2</sub> and Cu(In,Ga)Se<sub>2</sub>**

Projekttreffen Hochspannungsnetz  
Berlin, Germany, 03.12.2004

Kötschau, I.

**Quantitative Auswertung von XES-Spektren von polykristallinen Dünnschichten**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Lauermann, I.

**PES und XES-Untersuchungen von sputter-ZnO/CIGSSe und (Zn,Mg)O/CIGSSe**

CISSY-Projekttreffen bei Shell Solar  
Munic, Germany, 02.07.2004

Lauermann, I.

**Valenzbandmessungen an ZnSe/epi-CuInS<sub>2</sub>**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Lauermann, I.

**Nachweis von Sulfit als Oxidationsprodukt auf CIGSSe-Absorbern und an**

**Zn(Mg)O/CIGSSe-Grenzflächen mit XES**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Pistor, P.

**"Quantitative" Röntgen-Emissionsspektroskopie an Schichtsystemen von**

**Dünnschicht-Solarzell-Materialien**

CISSY-Projekttreffen bei Shell Solar  
Munic, Germany, 02.07.2004

Reichardt, J.; Bär, M.

**ILGAR-Zn(O,OH) Materialsystem - Komposition vs. VBM**

CISSY-Projekttreffen  
Berlin, Germany, 06.12.2004

Sadewasser, S.

**Kelvin Probe Force Microscopy**

Universität Stuttgart (Germany)  
Stuttgart, Germany, 19.01.2004

**SE2.Chemistry**

---

*Allsop, N.*

**In2S3 buffer deposited by Spray-ILGAR**

CISSY-Projekttreffen

Berlin, Germany, 06.12.2004

*Fischer, Ch.-H.; Allsop, N.; Schönmann, A.*

**Ein neuer Cd-freier Spray-ILGAR Puffer mit resultierenden Wirkungsgraden nahe 14 %**

Shell Solar, München

Munic, Germany, 02.07.2004

*Muffler, Hans-Jürgen;*

**Functional ILGAR thin layers - applications and potential**

Projekt-Meeting, ECN

Petten, Netherlands, 25.03.2004

*Muffler, Hans-Jürgen;*

**Dünnschichtsolarzellen - Die wichtige Rolle der Grenz- und Oberflächenkonditionierung**

Projektplanung, BASF AG

Ludwigshafen, Germany, 04.10.2004

**SE2.Concepts**

---

*Dittrich, Th.*

**Solis state nanostructured solar cells**

Seminarvortrag bei Prof. A. Zaban an der Bar Ilan University (Israel)

Israel, 11.10.2004

*Dittrich, Th.*

**Nanotechnology for photovoltaic applications**

Seminar an der Universitat Jaume I (Spanien) (eingeladen von Prof. Bisquert)

Spain, 09.03.2004

*Dittrich, Th.*

**Photovoltage phenomena in panoscaled Materials**

Vortrag auf der Fest-Tagung anlässlich des 60. Geburtstages von Prof. Y. Shapira an der Tel Aviv University (Israel)

Tel Aviv, Israel, 10.10.2004

*Harneit, W.*

 **$N@C_60$  Fullerenes - Spin Molecules and their Applications**

Solid-state physics seminar

Zurich, Switzerland, 28.01.2004

*Harneit, W.*

 **$N@C_60$  - spin molecules and their applications**

CNM seminar

Eindhoven, Netherlands, 04.02.2004

*Naydenov, B.*

**Designer molecules for quantum computation**

Seminar Hulliger group

Berne, Switzerland, 19.10.2004

**SE2.Semico**

---

*Lux-Steiner, Martha Ch.;*

**Innovative Solarzellenkonzepte**

Statusseminar Photovoltaik, Bundesumweltministerium

Bonn, Germany, 25.03.2004

*Lux-Steiner, Martha Ch.;*  
**Photovoltaik auf nanoskopischer Ebene**  
nanomat-Tagung, Wissenschaftszentrum Karlsruhe  
Karlsruhe, Germany, 01.04.2004

*Lux-Steiner, Martha Ch.;*  
**Photovoltaik**  
Physikalisches Kolloquium, Ruhr-Universität Bochum  
Bochum, Germany, 03.05.2004

*Siebentritt, Susanne;*  
**Defects and Transport in chalcopyrites**  
Conference on Photoactive Materials,  
Kariega, South Afrika, 25.02.2004

*Siebentritt, Susanne;*  
**Doping and Transport in CuGaSe<sub>2</sub> and CuInSe<sub>2</sub>**  
Colloquium of the Center of Excellence on Photonic and Materials for Prospective Application,  
CEPHOMA  
Warsawa, Poland, 16.01.2004

*Siebentritt, Susanne;*  
**Halbleiterdefekte und Solarzellen**  
Colloquium Angewandte Physik, Otto-von-Guericke-Universität Magdeburg  
Magdeburg, Germany, 12.01.2004

### **SE3 - Technology**

#### **SE3.Baseline**

*Scheer, Roland;*  
**Chalcogenide based Semiconductors for 2nd Generation Photovoltaics**  
Invited Lecture, University of Barcelona  
Barcelona, Spain, 22.06.2004

#### **SE3.Control**

*Scheer, Roland*  
**Chalcopyrite film growth studies by diffuse light scattering**  
Invited lecture:Uppsala University  
Uppsala,, 11.03.2004

### **SE4 - Dynamics of interfacial reactions**

#### **SE4.Dynamics**

*Ernststorfer, R.;*  
**The Influence of Anchor and Bridge Groups on Ultrafast Heterogeneous Electron Transfer**  
Sfb 450 Nachmittage Sommersemester 2004  
Uni Potsdam, 13.07.2004

*Ernststorfer, R.;*  
**The role of molecular bridge-anchor groups in interfacial ultrafast electron transfer**  
BMO BioMolecular Optik,  
LMU München, 22.10.2004

*Willig, Frank;*

**Heterogeneous electron transfer in ultra-high-vacuum probed with transient absorption and two-photon-photoemission**

International Conference, Bhabha Atomic Research Centre, Mumbai

Mumbai, India, 11.01.2004

*Willig, Frank;*

**Surface reconstructions and hot electron dynamics of MOCVD-grown InP (100)**

Kolloquium, Indian Institute of Technology Kharagpur, India

Kharagpur, India, 16.01.2004

*Willig, Frank;*

**Surface reconstructions and hot electron dynamics of MOCVD-grown InP (100)**

Kolloquium, Institute of Physics, Bhubaneswar

Bhubaneswar, India, 23.01.2004

*Willig, Frank;*

**Surface reconstructions and hot electron dynamics of MOCVD-grown InP (100)**

Kolloquium, Tata Institute of Fundamental Research

Mumbai, India, 13.01.2004

## **SE5 - Solar energy**

### **SE5.Energetics**

*Bogdanoff, Peter;*

**Entwicklung Platin freier Katalysatoren für die Elektroreduktion von Sauerstoff in sauren Medien**

FEE - Kolloquium, Industriedenkmal Heizkraftwerk Moabit-Berlin

Berlin, Germany, 12.01.2004

*Fiechter, Sebastian;*

**Struktur und Wirkungsweise neuartiger Elektrokatalysatoren in Brennstoffzellen**

Habilitationssymposium, TU Berlin, Fakultät VI

10587 Berlin, Germany, 17.06.2004

*Tomm, Y.*

**Kristallzüchtung von Materialien für die Photovoltaik**

TU Chemnitz, Institut für Physik, 02.12.2004

*Tributsch, Helmut;*

**Some electrochemical challenges in sustainable energy research.**

Italian-German Workshop of Electrochemistry, Università di Bologna, Prof. Scrosati

Bologna, Italy, 20.05.2004

## **SE6 - Elektronic structure of semiconductor interfaces**

### **SE6.BESSY**

*Pettenkofer, C.*

**Zur Photoemission an Ag(111) Inseln - einige recht merkwürdige Beobachtungen**

Oberflächenseminar, Humboldt Universität

Humboldt Universität Berlin, 06.12.2004

*Pettenkofer, C.*

**Energy Converting Interfaces**

Chalmers University Göteborg

Göteborg, S, 28.05.2004

*Pettenkofer, C.*

**Faculty opponent introduction to PES study of layered materials and alkali metal intercalation**

Examination at Chalmers University Gotenborg, S

Göteborg, S, 29.05.2004

## I - Central Scientific-Technical Infrastructure

### **DN - Zentrale DV-Systeme und Netze**

#### **DN**

*Mädler, Fritz;*

**KI-Methoden in der naturwissenschaftlichen Forschungspraxis**

Perspektiven der Kognitionswissenschaft, Universität Osnabrück

Osnabrück, Germany, 30.09.2004

# Patents and Patent Applications

## Patents

Dep.	HGF-Programme	Inventor	Title	Date of filing	Date of grant
SE2	Energy	Mertesacker, B.; Pietzak, B.; Waiblinger, M.; Weidinger, A.	Elektronenemitter und Verfahren zu dessen Herstellung DE: 1157402 FR: 1157402 GB: 1157402	25.02.00	06.05.04
SE2	Energy	Chen, J.; Könenkamp, R.	Vertikale Transistoranordnung mit einem flexiblen, aus Kunststofffolien bestehenden Substrat und Verfahren zu deren Herstellung DE: 10142913	27.08.01	18.03.04
SE2	Energy	Fuertes-Marrón, D.; Lux-Steiner, M.C.; Meeder, A.; Schedel-Niedrig, T.; Würz, R.	Schichtanordnung aus heteroverbundenen Halbleiterschichten mit zumindest einer zwischengelagerten Trennschicht und Verfahren zu ihrer Herstellung, sowie ein Verfahren zur Herstellung einer Solarzelle DE: 10247735	09.10.02	15.04.04
SE3	Energy	Neisser, A.; Scheer, R.	Verfahren zur Herstellung einer Chalkogenid-Halbleiterschicht mit optischer in-situ-Prozesskontrolle und Vorrichtung zur Verfahrensdurchführung DE: 10256909	30.11.02	29.07.04
SE5	Energy	Rojas-Chapana, J.; Tributsch, H.	Verfahren zur mikrobiellen Laugung von sulfidhaltigen Materialien und Verwendung von schwefelhaltigen Aminosäuren bei der mikrobiellen Laugung US: 6767522	23.07.99	27.07.04
SE5	Energy	Berenguier, B.; Lewerenz, H.	Elektrochemisches Ätzverfahren zum selektiven Entfernen von Fremdphasen an der Oberfläche eines sulfidhaltigen Chalkopyrithalbleiters DE: 10344315	21.09.03	09.12.04
SF1	Structure of matter	Clemens, D.; Mezei, F.; Mokrani, L.	Neutronenoptisches Bauelement für die Neutronenkleinwinkelstreu-Messtechnik DE: 10239691	25.08.02	09.06.04

## Patent applications

Dep.	HGF-Programme	Inventor	Title	Date of filing
SE1	Energy	Kytin, V.; Kytina, I.; Lips, K.	Verfahren zur Herstellung eines Feststoff-Polymer-Lasermediums DE: 102004038307.3	04.08.04 Prior application
SE2	Energy	Hofsäss, H.; Krauser, J.; Mertesacker, B.; Weidinger, A.; Zollondz, J.	Quantenpunkt aus elektrisch leitendem Kohlenstoff, Verfahren zur Herstellung und Anwendung WO: PCT/DE2004/000231	05.02.04
SE2	Energy	Fostiropoulos, K.; Johnev, B.; Vogel, M.	Verfahren zur Passivierung der anorganischen Elektrode einer organischen Solarzelle und organische Solarzelle WO: PCT/DE2004/000232	05.02.04
SE2	Energy	Glatzel, T.; Lux-Steiner, M.C.; Sadewasser, S.	Elektrochemisches Verfahren zur direkten nanostrukturierbaren Materialabscheidung auf einem Substrat und mit dem Verfahren hergestelltes Halbleiterbauelement WO: PCT/DE2004/000748	07.04.04
SE2	Energy	Chen, J.; Könenkamp, R.	Vertikaler Nano-Transistor, Verfahren zu seiner Herstellung und Speicheranordnung WO: PCT/DE2004/001839	16.08.04
SE2	Energy	Chen, J.; Lux-Steiner, M.C.	Vertikaler Nano-Transistor, Verfahren zu seiner Herstellung und Speicheranordnung WO: PCT/DE2004/001838	16.08.04
SE2	Energy	Bär, M.; Fischer, C.; Hilgendorff, M.; Lauermann, I.; Lux-Steiner, M.C.; Muffler, H.; Rahne, K.	Beschichtungsverfahren zur Deposition und Fixierung von Partikeln auf einer Substratoberfläche und Solarzellen mit funktionellem Schichtenaufbau EP: 04090308.0	06.08.04
SE2	Energy	Ennaoui, A.; Kropp, T.; Lux-Steiner, M.C.	Verfahren zum Aufbringen einer Zinksulfid-Pufferschicht auf ein Halbleitersubstrat mittels chemischer Badabscheidung, insbesondere auf die Absorberschicht einer Chalkopyrit-Dünnschicht-Solarzelle DE: 102004040546.8-33	18.08.04 Prior application

<b>Dep.</b>	<b>HGF-Programme</b>	<b>Inventor</b>	<b>Title</b>	<b>Date of filing</b>
SE2, SE5	Energy	Dittrich, T.; Dloczik, L.; Lux-Steiner, M.C.; Tomm, Y.	Verfahren zur Herstellung von transparentem p-leitendem CuAlO <sub>2</sub> WO: PCT/DE2004/001069	18.05.04
SE3	Energy	Pietzker, C.; Scheer, R.	Verfahren zur Herstellung einer Chalkogenid-Halbleiterschicht des Typs ABC <sub>2</sub> mit optischer Prozesskontrolle HK: 04105155.6	14.07.04
SE3	Energy	Scheer, R.	Verfahren und Vorrichtung zur Diagnose und Qualitätssicherung von halbleitenden Dünnschichtsolarmodulen DE: 102004046324.7-33	19.09.04 Prior application
SE4	Energy	Ernststorfer, R.; Hannappel, T.; Kubala, S.; Willig, F.	Vorrichtung und Verfahren zur nasschemischen Präparation von hochreinen Festkörperoberflächen DE: 102004014430.3	19.03.04 Prior application
SE5	Energy	Küppers, U.; Rojas-Chapana, J.; Tributsch, H.	Transparentes Versiegelungsmaterial für lichtbestrahlte, photoelektronisch aktive Oberflächen, Verfahren zur Herstellung und Anwendung EP: 04090201.7-1235	18.05.04
SE5	Energy	Tributsch, H.	Photovoltaiksystem für die direkte Wasserstofferzeugung und -sammlung WO: PCT/DE2004/001542	13.07.04
SE5	Energy	Berenguier, B.; Lewerenz, H.	Elektrochemisches Ätzverfahren zum selektiven Entfernen von Fremdphasen an der Oberfläche eines sulfidhaltigen Chalkopyrithalbleiters WO: PCT/DE2004/001976	05.09.04
SE5	Energy	Lewerenz, H.	Photovoltaische Solarzelle mit metallischen Nanoemittern und Verfahren zur Herstellung WO: PCT/DE2004/002228	05.10.04
SE5	Energy	Fiechter, S.; Maruthamuthu, P.; Tributsch, H.	Photoelektrochemische Solarzelle mit einem Detergens auf Lipidbasis WO: PCT/DE2004/002505	10.11.04
SE5	Energy	Dorbandt, I.; Fiechter, S.; Leem, H.; Rojas-Chapana, J.; Tributsch, H.	Niedertemperatur-Brennstoffzelle mit einer Hybridmembran und Verfahren zur Herstellung DE: 102004032671.1-45	02.07.04 Prior application

<b>Dep.</b>	<b>HGF-Programme</b>	<b>Inventor</b>	<b>Title</b>	<b>Date of filing</b>
SE5, SF4	Energy	Fink, D.; Küppers, U.; Rojas-Chapana, J.; Tributsch, H.	Flexible, atmungsaktive Polymerfolie und Verfahren zu deren Herstellung WO: PCT/DE2004/000091	15.01.04
SF1	Structure of matter	Flechter, S.; Mecklenburg, A.; Nabein, H.; Schneider, R.P.	Verfahren und Anordnung zur Kristallzüchtung aus metallischen Schmelzen oder Schmelzlösungen DE: 102004018664.2-43	13.04.04 Prior application
SF1	Structure of matter	Cussen, L.; Krist, T.; Mezei, F.	Strahlungsoptisches Bauelement DE: 102004031934.0-54	27.06.04 Prior application
SF4	Structure of matter	Fahrner, W.; Fink, D.; Hoppe, K.; Petrov, A.; Sandkühler, U.; Stanski, B.; Ulyashin, A.	Parametrierte Halbleiterverbundstruktur mit integrierten Dotierungskanälen, Verfahren zur Herstellung und Anwendungen davon WO: PCT/DE2004/001070	18.05.04
SF4	Structure of matter	Fink, D.	Sensor mit einem Feld aus Nanoporen und Verfahren zur Herstellung DE: 102004040239.6-52	13.08.04 Prior application
SF4	Structure of matter	Fink, D.	Flexibler Nanotransistor und Verfahren zur Herstellung DE: 102004040238.8-33	13.08.04 Prior application
SF4	Structure of matter	Fink, D.	Elektronisches Nanobaelement mit einer Tunnelstruktur und Verfahren zur Herstellung DE: 102004058765.5	01.12.04 Prior application

# Academic Education

## Lectures, Courses, ...

Dep.	Lecturer	Topic	Course	University	Hrs/week
------	----------	-------	--------	------------	----------

<b>Summer Term 2004</b>					
SF	Steitz, R.; Lang (FZ Jülich), P.	0235 L 083: Streumethoden: Grundlage und Anwendung auf Polymer u. Kolloidlösungen	lecture	TU-Berlin	2
SF1	Mezei, F.	Doktorandenseminar	seminar	TU-Berlin	2
SF1	Treimer, W.	Bildgebende Verfahren in der Medizin	lecture	TFH-Berlin	4
SF1	Treimer, W.	Atom- und Kernphysik	lecture	TFH-Berlin	4
SF1	Treimer, W.	Bildgebende Verfahren in der Medizin	tutorial	TFH-Berlin	2
SF3	Abromeit, C.	Heterogeneous phase changes in alloys induced by a-thermal transport processes	lecture	EPFL-IPMC Lausanne	3
SF3	Banhart, J.; Schiffmann, R.	Technologie der Aluminiumwerkstoffe	lecture	TU-Berlin	2
SF4	Schiwietz, G.	Kurzzeitdynamik des Festkörpers	seminar	TU-Berlin	2
SF4	Schiwietz, G.	Einführung in das physikalische Grundpraktikum 3	lecture	TU-Berlin	2
SF5	Falcke, M.	Exp. Physik III (Einf. in die Quantenphysik)	lecture	FU-Berlin	4
SF5	Frey, E.	Theoretische Physik V (Quantentheorie II)	lecture	FU-Berlin	4
SF5	Frey, E.; Santos, J.	Theoretische Physik V (Quantentheorie II)	tutorial	FU-Berlin	2
SF6	Kyriakopoulos, A.	Biochemie von Spurenelementen	lecture	FU-Berlin	2
SF6	Kyriakopoulos, A.; Behne, D.	Doktorandenseminar: Ausgewählte Gebiete der Spurenelementforschung	seminar	FU-Berlin	2
SF6	Kyriakopoulos, A.; Behne, D.	Biochemie von Spurenelementen	lab course	FU-Berlin	5
SE1	Gall, S.	Grundlagen der Bauelemente für die photovoltaische Energiewandlung	lecture	TU-Berlin	2
SE1	Nickel, N.; Richter, W.; Esser, N.	Festkörperphysik I	lecture	TU-Berlin	4
SE2	Ennaoui, A.	Quanten Mechanik II	lecture	University Mohamed V, Morocco	4
SE2	Fischer, C.; Lauermann, I.	Instrumentelle Analytik, Analytik anorganischer Dünnenschichtsysteme	lab course	FU-Berlin	2
SE2	Lux-Steiner, M.C.	Lehrseminar A (Festkörperspektroskopie)	seminar	FU-Berlin	2
SE3	Scheer, R.	Physik erneuerbarer Energien	lecture	Universität Potsdam	2

<b>Dep.</b>	<b>Lecturer</b>	<b>Topic</b>	<b>Course</b>	<b>University</b>	<b>Hrs/week</b>
SE4	Hannappel, T.	Exp. Physik II (E-Dynamik u. Optik) Physik II	lecture	FU-Berlin	4
SE5	Lewerenz, H.J.	Oberflächenphysikalische Untersuchungen an energieumwandelnden Halbleiterstrukturen	seminar	TU-Berlin	2
SE5	Lewerenz, H.J.	Solarzellen	lecture	Cottbus	2
SE5	Tributsch, H.	Phys. Chem. II für Studierende der Biochemie	lecture	FU-Berlin	2
I	Nielsen, U.	Rechnergeführte elektronische Prozessleittechnik	lecture	TU-Berlin	2

<b>Winter Term 2004/2005</b>					
SF	Steitz, R.; Findenegg, G.; Hellweg, T.	0235 L 087: Aktuelle Themen der Grenzflächen- und Kolloidwissenschaft	lecture	TU-Berlin	3
SF1	Mezei, F.	25th Tutorial on Neutron Scattering	lecture	TU-Berlin	2
SF1	Mezei, F.	25th Tutorial on Neutron Scattering	tutorial	TU-Berlin	1
SF1	Mezei, F.	Doktorandenseminar	seminar	TU-Berlin	2
SF1	Treimer, W.	Grundlagen zur Röntgen- und Neutronencomputertomographie	lecture	TU-Berlin	3
SF1	Treimer, W.	Bildgebende Verfahren	tutorial	TFH-Berlin	2
SF1	Treimer, W.	Mathematische Verfahren in der Bildgebung	lecture	TFH-Berlin	4
SF3	Banhart, J.; Schiffmann, R.	Technologie der Aluminiumwerkstoffe	lecture	TU-Berlin	4
SF4	Schiwietz, G.	Kurzzeitdynamik des Festkörpers	seminar	TU-Berlin	2
SF4	Schiwietz, G.	Einführung in das physikalische Grundpraktikum 3	lecture	TU-Berlin	2
SF5	Falcke, M.	Theorie stoch. Prozesse	lecture	Universität Magdeburg	2
SF5	Falcke, M.	Theorie stoch. Prozesse	tutorial	Universität Magdeburg	1
SF6	Kyriakopoulos, A.; Behne, D.	Biochemie von Spurenelementen	lab course	FU-Berlin	5
SF6	Kyriakopoulos, A.	Biochemie von Spurenelementen	lecture	FU-Berlin	2
SF6	Kyriakopoulos, A.; Behne, D.	Doktorandenseminar: Ausgewählte Gebiete der Spurenelementforschung	seminar	FU-Berlin	2
SF7	von Oertzen, W.; Kokalova, T.; Hotzel, A.	Einführung in die Kern- und Teilchenphysik	lecture	FU-Berlin	4
SF7	von Oertzen, W.; Kokalova, T.; Hotzel, A.	Einführung in die Kern- und Teilchenphysik	tutorial	FU-Berlin	2
SE1	Nickel, N.; Richter, W.; Esser, N.	Festkörperphysik II	lecture	TU-Berlin	4
SE2	Fischer, C.	Quantitative analytische Chemie	lecture	FU-Berlin	2

<b>Dep.</b>	<b>Lecturer</b>	<b>Topic</b>	<b>Course</b>	<b>University</b>	<b>Hrs/week</b>
SE2	Fischer, C.; Lauermann, I.	Instrumentelle Analytik, Analytik anorganischer Dünnschichtsysteme	lab course	FU-Berlin	2
SE2	Lux-Steiner, M.C.; der Abteilung SE2, u.w.M.	Lehrseminar B "Erneuerbare Energien"	seminar	FU-Berlin	2
SE2	Siebentritt, S.	Halbleiterphysik	lecture	FU-Berlin	4
SE2	Siebentritt, S.	Übungen Halbleiterphysik	tutorial	FU-Berlin	2
SE3	Scheer, R.	Physik photovoltaischer Solarzellen	lecture	Universität Potsdam	2
SE5	Fiechter, S.	Thermochemische Charakterisierung von Übergangsmetallchalkogeniden	lab course	TU-Berlin	1
SE5	Fiechter, S.	Grundlagen der Materialpräparation und Charakterisierung sulfidischer Halbleiter	lecture	TU-Berlin	2
SE5	Lewerenz, H.J.; Jungblut, H.; Wilhelm, T.	Photovoltaische Solarzellen	lecture	TU-Berlin	2
SE5	Lewerenz, H.J.	Introduction to Materials Science and Engineering	lecture	North Carolina State University, USA	3
SE5	Tomm, Y.	Herstellung von Übergangsmetallchalkogeniden	lab course	FU-Berlin	4
SE5	Tributsch, H.	Phys. Chem. II für Studierende der Biochemie	lecture	FU-Berlin	2
I	Nielsen, U.	Rechnergeführte elektronische Prozessleittechnik	lecture	TU-Berlin	2

## Exams

Dep.	Author	Title	University	Date
------	--------	-------	------------	------

<b>Habilitation</b>				
SF4	Schumacher, G.	Crystallization in Thin Amorphous Foils and Films	TU-Berlin	03/04
SE5	Fiechter, S.	Halbleitende Metallsulfide mit Pyrit-, Molybdänit- und Chalkopyritstruktur: Materialentwicklung und Aspekte einer Nutzung in Photovoltaik und Elektrokatalyse	TU-Berlin	06/04

<b>Ph. D.</b>				
SF1	Russina, O.	Die Untersuchung der mikroskopischen Dynamik beim Glasübergang	TU-Berlin	02/04
SF2	Liu, Y.	Polarized Neutron Reflectometry Study on thin Fe Films prepared on V(100)	TU-Berlin	04/04
SF3	Davydov, E.	Entmischungs- und Kristallisationsverhalten des metallischen Massivglases Pd40Cu30Ni10P20	TU-Berlin	11/04
SF3	Kammel, M.	Untersuchung von Nanostrukturen magnetischer Kolloide mit Kleinwinkelstreuung	TU-Berlin	11/04
SF4	Petrov, A.	Principles of Production of New Devices for Micro- and Nanoelectronics on the Base of Materials with Ion Tracks	FernUniversität Hagen	10/04
SF4	Staufenbiel, F.	Elektronentemperatur im Zentrum von Ionenspuren in Metallen	TU-Berlin	06/04
SF5	Hallatschek, O.	Dynamik fluktuierender Fadenmoleküle	FU-Berlin	12/04
SF5	Thul, R.	Analysis of intracellular reaction diffusion systems: The stochastic medium Calcium	FU-Berlin	11/04
SF6	Kühbacher, M.	Untersuchungen zur Identifizierung und Lokalisierung von metall- und metalloidhaltigen Proteinen im zentralen Nervensystem und männlichen Reproduktionssystem	FU-Berlin	09/04
SE2	Dylla, T.	Electron Spin Resonance and Transient Photocurrent Measurements on Microcrystalline Silicon	FU-Berlin	10/04
SE2	Rega, N.	Photolumineszenz von epitaktischen Cu(In,Ga)Se <sub>2</sub> -Schichten	FU-Berlin	02/04

SE3	Pietzker, C.	In-Situ Wachstumsuntersuchungen beim reaktiven Anlassen von Cu, In Schichten in elementarem Schwefel	Universität Potsdam	01/04
SE3	Rudigier, E.	Phase Transformations and Crystalline Quality of CuInS <sub>2</sub> Thin Films	Philipps-Universität Marburg	11/04
SE4	Ernstorfer, R.	Spectroscopic investigation of photo-induced heterogeneous electron transfer	FU-Berlin	07/04
SE4	Neges, M.	Der Beitrag nicht-thermalisierter Ladungsträger zum Photostrom am InP:Zn/SnO <sub>2</sub> :F-Heterokontakt	FU-Berlin	02/04
SE5	Barkschat, A.	Bildgebende elektrochemische Untersuchungen an Grenzflächen mit metallzentrierten Elektronenübertragungen	FU-Berlin	04/04
SE5	Rauscher, S.	Dynamische Modifizierung von Siliziumelektrolyt-Grenzflächen und deren oberflächenphysikalische Eigenschaften	BTU Cottbus	01/04
SE5	Schweizer, S.	Dynamisches Verhalten von Silizium-Elektroden in Fluor-haltigen Elektrolyten	BTU Cottbus	01/04
SE6	Meier, U.	Grenzflächenverhalten und Morphologie des ZnO/Si Heterokontaktes: Eine Photoemissionsstudie	BTU Cottbus	06/04

<b>Diploma</b>				
SF3	Bütow, A.	Strukturuntersuchungen an Metallschäumen in verschiedenen Entwicklungsstadien	TU-Berlin	06/04
SF3	Mechler, S.	Kristallisation des metallischen Massivglases ZnTiNiCuBe	TU-Berlin	01/04
SF4	Kott, P.	Weiterentwicklung von Modulatorräder für die Protonentherapie von Augentumoren	FH Giessen-Friedberg	09/04
SF5	Fischer, S.	Aeolian sand transport and dune formation	FU-Berlin	12/04
SF5	Wagner, F.	Polymers in Confined Geometry	FU-Berlin	12/04
SF5	van Teeffelen, S.	Theorie effektiver Potentiale semiflexibler Polymer-Lösungen	FU-Berlin	07/04
SE1	Clemens, P.	Einfluss der Substratpräparation auf das epitaktische Wachstum von Silizium mit	FH Zweibrücken	05/04
SE1	Friedrich, F.	Dynamik der Ladungsträgerrekombination an Pb-Defekten der c-Si/SiO <sub>2</sub> -Grenzfläche	HU-Berlin	01/04
SE1	Hübener, K.	Untersuchungen zur metallinduzierten Kristallisation von amorphem Silizium	HU-Berlin	07/04

SE1	Hübner, S.	Aluminum-induced solid phase crystallization of amorphous silicon	FHTW Berlin	04/04
SE1	Knipper, U.	Elektrische Eigenschaften von epitaktischen Silizium Schichten für Dünnschichtsolarzellen	HU-Berlin	02/04
SE1	Zimmermann, O.	Realisierung einer Steuerungssoftware für einen Messplatz zur Bestimmung der Diffusionslänge im kristallinem Silizium	FH Stralsund	09/04
SE2	Pistor, P.	Quantitative Analysis of soft X-ray emission spectra applied to chalcopyrite solar cell materials	FU-Berlin	12/04
SE2	Schönmann, A.	Entwicklung einer low-cost-Depositionsmethode für Schichtkomponenten von Chalkopyrit-Solarzellen	FHTW	11/04
SE2	Wanzel, J.	Aufbau einer Prozesskontrolle mittels Laser-Licht-Streuung bei der Herstellung von Chalkopyrit-Halbleiterschichten	FU-Berlin	06/04
SE3	Körber, P.	Minimierung von Kurzschlussströmen in flexiblen (Cu, In, Ga) Se2 Dünnschichtsolarzellen	TFH-Berlin	02/04
SE3	Lauche, J.	Konstruktion und Aufbau eines Verkapselungsgerätes für Solarkleinmodule	TFH-Berlin	04/04
SE6	Andres, S.	Elektronische Struktur und Morphologie der InSe-terminierten Si(111) Oberfläche	TU Freiberg	08/04
HAD	Bollack, F.	Programm für die automatische Kalibration von Dichtemessungen mit Gammastrahlung	Berufsakademie in der FHW Berlin	08/04
HAD	Kirste, S.	Entwicklung einer 64-bit-Software zur Separation morphologischer Strukturen in dreidimensionalen Bildern	Berufsakademie in der FHW Berlin	08/04
HAD	Kriegel, M.	Optimierung eines mehrdimensionalen parametrisierten Simulationsmodells durch Vergleich mit gemessenen Daten in der Solarenergie-Forschung	Berufsakademie in der FHW Berlin	08/04
HAD	Lindner, S.	Auswertung von Bohrkernaufnahmen aus dem smartcube smatscanner	Berufsakademie in der FHW Berlin	08/04
HAD	Tege, P.	Konzeption zur Entwicklung einer Datenbank zur Bereitstellung komplexer Probenumgebungsparameter (Temperatur und Magnetfeld) für Neutronenstreuexperimente am Forschungsreaktor BER-II	Berufsakademie in der FHW Berlin	08/04

<b>Master Thesis</b>				
SE2	Cao, X.	CdS buffer layers in Cu(I,Ga)(S,Se)2 solar cells - synchrotron-based spectroscopic investigations	FU-Berlin	06/04

<b>Studienarbeit</b>				
SF3	Backhaus, P.	Benutzeroberfläche für die Synchrotron томография	Berufsakademie Berlin	12/04

## **Summer students etc.**

The 17<sup>th</sup> HMI Summer Program for undergraduate students took place from August 8 to September 9, 2004. 24 students, including 8 from abroad, joined in actual research projects and participated in a series of seminars informing about the activities of the HMI.

Beyond the Summer Program, 40 student trainees and 56 high school trainees visited the HMI for individual training projects.

# Faculty appointments and Awards

## Faculty appointments

Dep.	Name	Position	Date
SF5	Kroy, K.	C3-position Universität Leipzig	accepted 12/04
SF5	Frey, E.	C4-position Ludwig-Maximilians-Universität (LMU) München	accepted 12/04

## Awards

Dep.	Name	Award
SF1	Strobl, M.	Outstanding Student Research Award Finalist, 07.06.2004
SF3	Babcsán, N.	Science award of the Hungarian Academy of Sciences, 15.11.2004
SF6	Bukalis, K.	Posterpreis Macro and Trace Elements, 25.09.2004
SF6	Dalla Puppa, L.	Posterpreis der Gemeinsamen Herbsttagung 2004, 26.11.2004
SE1	Böhme, C.	Wissenschaftspris IHK Nordhessen, 17.06.2004
SE1	Böhme, C.	HMI-Kommunikationspreis 2004, 09.07.2004
SE1	Friedrich, F.	Lindauer Nobelpreisträgertreffen 2004, 01.07.2004
SE2	Dittrich, T.	Innovationspreis Berlin-Brandenburg 2004, 10.12.2004
SE2	Klenk, R.	Technologie-Transfer-Preis, 29.11.2004
SE2	Lux-Steiner, M.C.	Technologie-Transfer-Preis des HMI, 29.11.2004
SE2	Meyer, N.	Technologie-Transfer-Preis, 29.11.2004
SE2	Rega, N.	Graduate Student Award of the EMRS Spring Meeting 2004, 28.05.2004
SE4	Ernstorfer, R.	Feodor Lynen Award, 01.10.2004

## Participation in external scientific bodies and committees

Dep.	Name	Committee / Board / Scientific body
SF	Steitz, R.	ILL Scientific Panel: Sub-Committee 9
SF1	Hilscher, D.	Isolde Neutron Time-of-Flight Committee, CERN
SF1	Krist, T.	International Conference on Polarized Neutrons PNCMI 2004
SF1	Krist, T.	International Conference on Neutron Optics NOP 2004
SF1	Krist, T.	Chairman COST Action P7
SF1	Mezei, F.	Journal of Neutron Research
SF1	Mezei, F.	Experimental Facilities Advisory Oversight Committee of the SNS Project, Oakridge (USA)
SF1	Mezei, F.	International Advisory Committee of IPN 2003 Conference
SF1	Mezei, F.	International Advisory Committee of Conference on Polarized Neutrons in Condensed Matter Investigations (PNCMI 2003)
SF1	Mezei, F.	European Neutron Scattering Association (ENSA), Switzerland
SF1	Mezei, F.	International Advisory Council of the Budapest Neutron Center (BNC), Budapest, Hungary
SF1	Mezei, F.	Scientific Council Laboratoire Leon Brillouin (LLB), Saclay, France
SF1	Peters, J.	Mitglied im Vorstand der Akademischen Versammlung der TFH
SF1	Treimer, W.	Fachgruppe Physikalische Technik/Medizinphysik
SF1	Treimer, W.	SINQ Scientific Advisory Committee for non-destructive applications
SF1	Treimer, W.	Berufungskommission Physikalische Technik/Medizinphysik
SF1	Treimer, W.	Forschung an Fachhochschulen für Berlin
SF1	Treimer, W.	Gutachter für Tschechische Akademie der Wissenschaften
SF2	Graf, H.	Komitee für Forschung mit Neutronen
SF2	Graf, H.	BMBF Gutachterausschuss Erforschung kondensierter Materie an Großgeräten
SF2	Graf, H.	Scientific Council of the ILL
SF2	Graf, H.	Instrumentierungsausschuss FRM-II
SF2	Holub-Krappe, E.	Wissenschaftliches Komitee zur Vorbereitung der 4th School on Magnetism and Synchrotron Radiation
SF2	Holub-Krappe, E.	Executive Committee of the International X-Ray Society
SF3	Abromeit, C.	Int. Advisory Committee of the XVI. Int. Conf. on Physics of Radiation Phenomena and Radiation Materials Science
SF3	Abromeit, C.	Int. Advisory Committee of the 5th Ural Seminar in Snezinsk 2005
SF3	Banhart, J.	Organisation DFG-Symposium
SF3	Banhart, J.	Commission for Editor of Materials Transactions
SF3	Wanderka, N.	International Steering Field Emission Society
SF3	Wanderka, N.	THERMEC 2006/Topic(Metallic Glasses)-Coordinator
SF3	Wiedenmann, A.	Experiment Selection Panel, Laboratoire Leon Brillouin (France)
SF3	Wiedenmann, A.	PNCMI2004
SF3	Wiedenmann, A.	Instrumentation advisory board ANSTO/Australia
SF3	Wiedenmann, A.	8th ICCMSP-Marrakech-Morocco
SF3	Wiedenmann, A.	ILL Subcommittee College 7
SF3	Wiedenmann, A.	Advisory committee Instrumentation KAERI
SF3	Wiedenmann, A.	Scientific committee, Paul-Scherrer-Institut (Switzerland)
SF3	Wiedenmann, A.	ESS Instrumentation committee
SF4	Biersack, J.	Radiation Effects and Defects in Solids
SF4	Denker, A.	IGAS-Beirat
SF4	Denker, A.	Advisory Committee of the International Conference on Particle Induced X-ray Emission

<b>Dep.</b>	<b>Name</b>	<b>Committee / Board / Scientific body</b>
SF4	Denker, A.	COST G8 (Non-destructive Testing of Museum Objects)
SF4	Denker, A.	Centre Européen d'Archaeometrie Liège
SF4	Fink, D.	PAC (Program Advisory Committee), Sao Paulo
SF4	Fink, D.	Radiation Effects and Defects in Solids
SF4	Homeyer, H.	International Advisory Committee on the TESLA Cyclotron Installation at VINCA, Belgrade
SF4	Homeyer, H.	International Organizing Committee of the International Conference on Cyclotrons and their Application
SF4	Schiwietz, G.	ICACS
SF4	Schiwietz, G.	SHIM
SF4	Schiwietz, G.	Topical Issue "Tracks03"
SF4	Schiwietz, G.	Editorial Board "Nuclear Instruments and Methods"
SF5	Frey, E.	Sonderforschungsbereich Uni Bielefeld
SF5	Frey, E.	Berufungskommission Universität Leipzig
SF5	Frey, E.	SFB Begutachtung Uni Bielefeld
SF5	Frey, E.	Heraeus Workshop zum Thema "Molekulare Motoren"
SF5	Frey, E.	Vorsitzender des Arbeitskreises Biologische Physik, Deutsche Physikalische Gesellschaft
SF6	Behne, D.	Scientific Committee of the Conference Series "Nuclear Analytical Methods in the Life Sciences" (NAMLS)
SF6	Behne, D.	International Scientific Committee of the "8th International Symposium on Metal Ions in Biology and Medicine"
SF6	Behne, D.	Parent Committee of the Conference Series "Trace Elements in Man and Animals" (TEMA)
SF6	Kyriakopoulos, A.	Lenkungsausschuss des HGF-Programms "Environmental Health"
SF6	Kyriakopoulos, A.	GMS
SF6	Kyriakopoulos, A.	Deutsche Gesellschaft für Protein Forschung
SF6	Kyriakopoulos, A.	international scientific committee of the 8th International Symposium on Metal Ions in Biologie and Medicine
SF6	Richarz, A.	Journal of Trace Elements in Medicine and Biology
SF7	von Oertzen, W.	Lise Meitner Prize committee of EPS
SF7	von Oertzen, W.	Conseil Scientifique du Departement (CSD), Physique nucléaire et corpusculaire, CNRS (F), Mitglied
SE1	Fuhs, W.	Wissenschaftl. Beirat Forschungsallianz Kristalline Silizium Solarzellen Technologie (FACT)
SE1	Fuhs, W.	Wiss. Beirat ISFH Emmerthal
SE1	Fuhs, W.	Internat. Advisory Committee - Internat. Conf. on Amorphous and Microcrystalline Semiconductors (ICAMS)
SE1	Nickel, N.H.	Gasteditor bei physica status solidi (Festschrift Verabschiedung Prof. Fuhs)
SE1	Nickel, N.H.	NATO Advanced Research Workshop Zinc Oxide as a Material for Micro- and Optoelectronic Applications
SE1	Nickel, N.H.	Materials Research Society Spring Meeting; Symposium H
SE1	Nickel, N.H.	Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004
SE2	Ennaoui, A.	International Steering Committee in World Renewable Energy Congress VIII
SE2	Ennaoui, A.	Pôle de compétence Matière condensée Université Mohamed V
SE2	Ennaoui, A.	Editorial Board in Solar Energy Materials and Solar Cells
SE2	Ennaoui, A.	Editorial Board in Moroccan Journal of Condensed Matter
SE2	Ennaoui, A.	Program Committee for 8th International Conference on Condensed Matter and Statistical Physics
SE2	Fischer, C.	BESSY-Nutzerausschuss
SE2	Lux-Steiner, M.C.	Jury des Innovationspreises Berlin/Brandenburg

<b>Dep.</b>	<b>Name</b>	<b>Committee / Board / Scientific body</b>
SE2	Lux-Steiner, M.C.	EUREC Agency
SE2	Lux-Steiner, M.C.	Hochschulrat der Universität Oldenburg
SE2	Lux-Steiner, M.C.	Wissenschaftlicher Beirat der Sulfurcell Solartechnik GmbH
SE2	Lux-Steiner, M.C.	Eidgenössische Energieforschungskommission CORE in der Schweiz
SE2	Lux-Steiner, M.C.	Wissenschaftlicher Beirat des Berliner Instituts für Kristallzüchtung (IKZ) in der Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz
SE2	Lux-Steiner, M.C.	Jury-Mitglied Erwin-Schrödinger-Preis der HGF
SE2	Lux-Steiner, M.C.	Beirat Energie des Forschungszentrums Jülich
SE2	Lux-Steiner, M.C.	WTA-Aufsichtsrat im Forschungszentrum Jülich (FZJ)(HGF) und Mitglied des Wissenschaftlichen Beirats für Energieforschungsarbeiten im Programm Energie (FZJ)
SE2	Lux-Steiner, M.C.	Direktorium des nationalen Forschungsverbundes Sonnenenergie FVS (Verbund von außeruniversitären Forschungseinrichtungen auf dem Gebiet der regenerativen Energien)
SE2	Siebentritt, S.	Organizer of the Symposium F "Thin-Film Compound Semiconductor Photovoltaics" at the MRS Spring Meeting 2005, San Francisco
SE2	Siebentritt, S.	HMI-Photovoltaik Colloquium
SE3	Scheer, R.	Steering Committee IP6 Project ATHLET-PV
SE5	Ellmer, K.	Verbundprojekt transparente Verbindungshalbleiter
SE5	Ellmer, K.	AiF-projektes Reaktives Magnetronputtern von CuInS <sub>2</sub> -Solarzellen
SE5	Tributsch, H.	Associated Member of IUPAC
I	Nielsen, U.	Innovationsförderprogramm der Investitionsbank Berlin
I	Nielsen, U.	Ständige Kommission des Verwaltungsrates des Konrad-Zuse-Zentrums für Informationstechnik Berlin
I	Nielsen, U.	Beirat des Fachbereichs Informatik der TFH Berlin
I	Nielsen, U.	Fachkommission Technik der Dualen Kommission des Fachbereichs Berufsakademie an der FH für Wirtschaft Berlin
I	Nielsen, U.	Prüfungsausschuss der Fachrichtung Technik der Berufsakademie Berlin
I	Nielsen, U.	Collaboration Board TESLA des DESY Hamburg
I	Nielsen, U.	Mitgliederversammlung des DFN Vereins
DN	Grzanna, J.	Applied Optics
DN	Heinzel, I.	NT-PC-Arbeitskreis der HGF
DN	Prigge, G.	HGF-Ausschuss Kommunikations- und Informationsverarbeitung in der Verwaltung (KIV)
DN	Schwarz, B.	NT-PC-Arbeitskreis
DN	Ziem, P.	Koordinierungsausschuss Datenverarbeitung (KODA) der HGF
DS	Sauer, O.	Prüfungsausschuss der Fachrichtung Informatik der Berufsakademie Berlin
DS	Wulf, F.	Koordinierungsausschuss für Elektronik und Prozessdatenverarbeitung der HGF
DS	Wulf, F.	Committee for European Studies on Norms for Electronics (ESONE), XT/TCC
DS	Wulf, F.	Studiengruppe für Elektronische Instrumentierung (SEI)
WGF	Steiner, M.	Steering Committee, Institut Laue-Langevin (ILL), Grenoble, France
WGF	Steiner, M.	Aufsichtsrat, BESSY GmbH Berlin
WGF	Steiner, M.	Commission on Neutron Scattering of the International Union of Crystallography, USA

<b>Dep.</b>	<b>Name</b>	<b>Committee / Board / Scientific body</b>
WGF	Steiner, M.	DAAD
WGF	Steiner, M.	Innovationsrat des Ministeriums für Wirtschaft und Arbeit des Landes Sachsen-Anhalt

## Organization of Scientific Conferences and Meetings

Dep.	Title	Type	Date
SF	Arbeitskreis der TEM-Präparatoren Berlin/Brandenburg Vorstellung der am HMI entwickelten TEM Präparationstechniken, P.Schubert-Bischoff	Gründungsworkshop	28.01.04
SF1	Workshop on EXED	Workshop	10.05.04 - 11.05.04
SF5	Heraeus Workshop zum Thema "Molekulare Motoren"	Conference	18.04.04 - 22.04.04
SF6	Gemeinsame Herbsttagung "Metalloproteine und Metalloidproteine" Kyriakopoulos, A.; Graebert, A.; Alber, D.; Behne, D.	wissenschaftliche Tagung	25.11.04 - 26.11.04
SF7	1st DETNI ASIC Submission Readiness Review Meeting B.Gebauer	Workshop	04.09.04
SF7	1st Joint DETNI-MILAND Workshop B.Gebauer, B. Guerard	Workshop	27.02.04
SF7	2nd DETNI ASIC Meeting B.Gebauer	Workshop	03.04.04
SF7	2nd Joint DETNI-MILAND Workshop B.Gebauer	Workshop	23.10.04
SF7	3rd DETNI ASIC Meeting B.Gebauer	Workshop	19.06.04
SF7	5th DETNI ASIC Meeting B.Gebauer	Workshop	27.10.04
SF7	Workshop: Ion-Matter-Interaction W.von Oertzen	Workshop	05.10.04 - 06.10.04
SE1	Intern. Conf. on Polycrystalline Semiconductors POLYSE 2004, Potsdam, Germany PD Dr. N. H. Nickel	Conference	05.09.04 - 10.09.04
SE1	NATO Advanced Research Workshop Zinc Oxide as a Material for Micro- and Optoelectronic Applications, St. Petersburg, Russia PD Dr. N. H. Nickel	Workshop	23.06.04 - 25.06.04
SE1	Silizium - Photovoltaik Dr. Gall, SE1; Dr. Finger, IPV Jülich	Workshop	19.09.04 - 24.09.04
SE2	Workshop on $N@C_60$ -based Quantum Computing Dr. Wolfgang Harneit	Workshop	14.12.04
DS	Studiengruppe für Elektronische Instrumentierung, Frühjahrstagung 2004 Dr. Friedrich Wulf	Conference	29.03.04 - 31.03.04
DS	Studiengruppe für Elektronische Instrumentierung, Herbsttagung 2004 Dr. Friedrich Wulf	Conference	27.09.04 - 29.09.04