



16TH INTERNATIONAL CONFERENCE ON SMALL- ANGLE SCATTERING

13th – 18th September 2015, Berlin
Conference Programme
www.sas2015.org

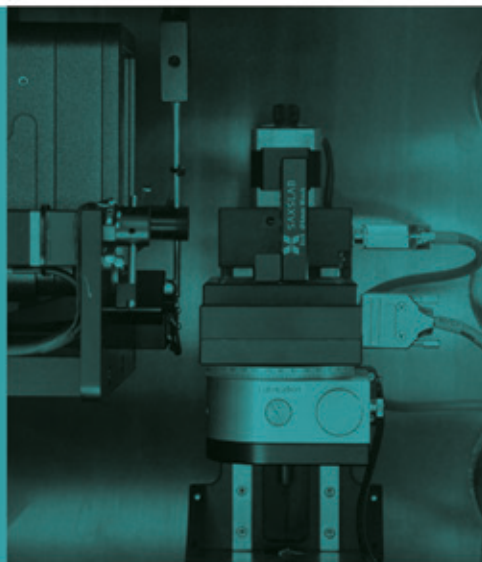


Partners:



INNOVATION THAT MATTERS

- Standard-free absolute intensity
- Proprietary cosmic background reduction
- In-vacuum moving detector for continuous q
- Quick automated configuration change
- Beamstop-free measurements
- Intelligent sample positioning
- In-line UVVIS for solution scattering



SOFTWARE THAT EMPOWERS

- Easy-to-use GUI for novice and routine use
- Powerful scripting language for advanced experiments
- Real-time data visualization
- Single-click data reduction in SAXSGUI
- Automated processing of solution data in RAW

SAS 2015 – CONFERENCE PROGRAMME

**16th International Conference on Small-Angle
Scattering: 13th – 18th September 2015, Berlin**

TOPICS IDENTIFICATION

The letters below indicate the topics of the sessions, oral presentations, flash talks and posters:

- A:** Data Analysis, Data Formats and Software
- C:** Colloids and Complex Fluids
- D:** Dynamics
- F:** Functional and Hierarchical Materials
- H:** Hybrid and Biomaterials
- I:** Interfaces and Surfaces
- L:** Dimensional Metrology by SAS
- M:** Magnetism and Material Science
- O:** Other
- P:** Polymers
- S:** Structural Biology
- T:** Instruments and Techniques

COLOR CODES

The color codes below guide through the week:

-  **MONDAY**
-  **TUESDAY**
-  **WEDNESDAY**
-  **THURSDAY**
-  **FRIDAY**

LINK

The abstracts are available at www.sas2015.org



Sunday, 13 th Sept		Monday, 14 th Sept	Tuesday, 15 th Sept
8:00	ccp-SAS Working Group Meeting Room H1035		
9:00		OPENING SESSION Auditorium H0104 PLENARY SESSION 1 Alison Paul Auditorium H0104	PLENARY SESSION 3 Norman J. Wagner Auditorium H0104
10:00		Poster Hanging Lichthof / Atrium Coffee Break Exhibition Area	Coffee Break Exhibition Area
11:00		Mon-C1 Room H0110 Mon-H1 Audit. H0104 Mon-L1/O1 Room H1058	Tue-C3 Room H0110 Tue-H3/P1 Auditorium H0104 Tue-S2 Room H1058 Tue-T2 Room H1012
12:00		Lunch Break Exhibition Area canSAS Forum R: H0110 CCP-SAS Demonstrat. Room H1058	Lunch Break Exhibition Area Xenocs-Saxs in the Lab Audit. H0104
13:00			PLENARY SESSION 4 Oskar Paris Auditorium H0104
14:00	SAS Tutorial TU Berlin EW201	PLENARY SESSION 2 Bridget Ingham Auditorium H0104 Break	Break SAS Commission Meeting Auditorium H0104
15:00		Mon-C2 R: H0110 Mon-H2 Room H0104 Mon-S1 R: H1058 Mon-T1 R: H1012	
16:00		Coffee Break Exhibition Area	Site Visits HZB Wannsee (Neutrons)/ HZB Adlershof (X-rays)
17:00		Mon-C2 R: H0110 Mon-H2 Room H0104 Mon-S1 R: H1058 Mon-T1 R: H1012 Break	or Free Time
18:00	Welcome Reception Lichthof	Mon-F-C1 / F-L1 / F-I1 R: H0110 Mon-F-H1 / F-D1 Audit. H0104 Mon-F-S1 R: H1058 Mon-F-T1 R: H1012	
19:00		Poster Session and Refreshments Lichthof / Atrium	

Wednesday, 16 th Sept	Thursday, 17 th Sept	Friday, 18 th Sept	
			8:00
PLENARY SESSION 5 Otto Glatter Auditorium H0104	PLENARY SESSION 7 Uri Raviv Auditorium H0104	PLENARY SESSION 9 Hyunjung Kim Auditorium H0104	9:00
Coffee Break Exhibition Area	Coffee Break Exhibition Area	Coffee Break Exhibition Area	10:00
Wed-P2 Room H0110 Wed-F1 Auditorium H0104 Wed-M1 Room H1058 Wed-T3 Room H1012	Thu-C4 Room H0110 Thu-F3 Auditorium H0104 Thu-S3 Room H1058 Thu-T4 Room H1012	Fri-D1 Room H0110 Fri-S4 Auditorium H0104 Fri-I1 Room H1058	11:00
Lunch Break Exhibition Area Attracting Industry Room H0110	Lunch Break Exhibition Area Xenocs - Adv. Data Processing Auditorium H0104	Lunch Break Exhibition Area	12:00
PLENARY SESSION 6 Alexander Hexemer Auditorium H0104	PLENARY SESSION 8 Guinier Prize Kratky Prize Auditorium H0104	PLENARY SESSION 10 Anne-Laure Fameau Auditorium H0104	14:00
Break Wed-P3 R. H0110 Wed-F2 Audit. H0104 Wed-M2 R. H1058 Wed-A2 R. H1012		Closing Ceremony Auditorium H0104	
Coffee Break Exhibition Area	Coffee Break Exhibition Area		15:00
Wed-P3 R. H0110 Wed-F2 Audit. H0104 Wed-M2 R. H1058 Wed-A2 R. H1012	History of SAS Presentation SAS 2018 Auditorium H0104		16:00
Wed-F-P1 R. H0110 Wed-F-F1 Audit. H0104 Wed-F-M1 R. H1058 Wed-F-A1 R. H1012	Free Time		17:00
Poster Session and Refreshments Lichthof / Atrium			18:00
			19:00
	Conference Dinner TIPI am Kanzleramt		19:00

WELCOME

Dear Friends and Colleagues,

It is a great pleasure to welcome you to the 16th Conference on Small Angle Scattering, SAS 2015 in Berlin. The SAS 2015 Conference is a triennial forum for the discussion of the most recent advances in the field of small angle scattering and assembles scientists from all around the world. The conference has a long tradition and the 16th edition in Berlin is taking place 50 years after the first meeting of this series in Syracuse, New York State, U.S.A.

The programme reflects recent progress in instrumentation and data analysis and addresses the broad range of applications of this methodology, from biology to materials science and from colloids to polymers. The program consists of ten plenary lectures delivered by international leaders in the field, as well as of an oral and a poster programme based on more than 500 submitted abstracts. In addition to classical poster sessions, the poster contributions will be exhibited all the time during the conference and a selected number of them will be highlighted by flash talks before the poster sessions.

One of the plenary lectures, on Thursday afternoon, will be delivered by the recipient of the Guinier award, the most prestigious prize in small-angle scattering, which is presented by the International Union of Crystallography. Some of the award session on Thursday afternoon will also be devoted to commemorating the history of the SAS conferences.

From left:
Michael Gradzielski,
Matthias Ballauff,
Peter Fratzl



(Foto Fratzl:
© MPI für Kolloid-
und Grenzflächen-
forschung / Anne
Heinlein)

The SAS 2015 Conference is an excellent opportunity to meet colleagues and discuss new important developments in SAS research. The conference also presents a unique opportunity for early career researchers to learn about the dynamic developments in this vibrant field. We are delighted that you have joined us for this exciting event. We warmly welcome you to Berlin and wish you a very pleasant, stimulating and successful Conference.

Michael Gradzielski, Conference Chair
Matthias Ballauff, Conference Chair
Peter Fratzl, Programme Chair

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CONFERENCE PROCEEDINGS

Special Issue of the Journal of Applied Crystallography

Sponsored by:



A selection of research papers from the SAS 2015 Conference will be published in a special issue of Journal of Applied Crystallography (<http://journals.iucr.org/j>). The special issue will consist of a maximum of 25 papers presenting new, original and high-impact research.

All articles will be subject to a peer review process. Accepted articles will be published across a number of standard journal issues and then collected together into a virtual special issue.

Authors contributing to the special issue will be eligible for a 50% discount on the standard open-access fee for their article. In addition all Conference participants will be offered a 20% discount on the open-access publication of one article in any IUCr journal.

In order to be considered for the special issue, articles must be submitted via the SAS2015 submission page at http://submission.iucr.org/submit/?Qconf=sas_2015

Articles submitted through the journal's normal submission system will not be treated as part of the special issue.

The provisional closing date for submissions is 30th November 2015, with publication expected in spring /summer 2016.

COMMITTEES



Scientific Programme Committee

Matthias Ballauff, *HZB Berlin, Germany*
Franziska Emmerling, *BAM Berlin, Germany*
Peter Fratzl, *MPI Potsdam, Germany* – **Chair**
Peter Müller-Buschbaum, *TU München, Germany*
Oskar Paris, *Montanuniv. Leoben, Austria*
Anton Plech, *KIT Karlsruhe, Germany*
Dieter Richter, *FZ Jülich and Univ. Münster, Germany*
Peter Schurtenberger, *Lund University, Sweden*
Dmitri Svergun, *EMBL Hamburg, Germany*
Regine Willumeit, *HZG Hamburg, Germany*

Organising Committee

Peter Fratzl, *MPI Potsdam, Germany* – **Chair**
Michael Gradzielski, *TU Berlin, Germany* – **Co-Chair**
Matthias Ballauff, *HU Berlin, HZB Berlin, Germany* – **Co-Chair**
Daniel Clemens, *HZB Berlin, Germany*
Sophie Spangenberg, *HZB Berlin, Germany*
Ina Helms, *HZB Berlin, Germany*
Armin Hoell, *HZB Berlin, Germany*
Michael Krumrey, *PTB, Germany*
Stephan Roth, *DESY, Germany*
Roland Steitz, *HZB Berlin, Germany*
Andreas Thünemann, *BAM, Germany*

GENERAL INFORMATION

Venue

Technische Universität Berlin
Straße des 17. Juni 135
10623 Berlin
Germany
www.tu-berlin.de



Opening Hours

Registration Counter

Sunday, 13 th September 2015	17:00 – 20:00
Monday , 14 th September 2015	08:00 – 18:30
Tuesday , 15 th September 2015	08:00 – 15:00
Wednesday , 16 th September 2015	08:00 – 18:30
Thursday , 17 th September 2015	08:30 – 17:00
Friday , 18 th September 2015	08:30 – 14:30

Speakers' Center, Room H1036

Sunday, 13 th September	15:00 – 18:00
Monday, 14 th September	07:30 – 17:00
Tuesday, 15 th September	07:30 – 16:00
Wednesday, 16 th September	07:30 – 17:00
Thursday, 17 th September	07:30 – 17:00
Friday, 18 th September	07:30 – 13:00

Exhibition

Monday, 14 th September 2015	09:30 – 18:30
Tuesday, 15 th September 2015	09:30 – 14:30
Wednesday, 16 th September 2015	09:30 – 18:30
Thursday, 17 th September 2015	09:30 – 14:00
Friday, 18 th September 2015	09:30 – 14:00

Guideline for Oral Presentations

Speaker's Center

The facilities in the Speakers' Preview Room will provide the possibility of:

- Reviewing your PowerPoint presentation
- Last minute alterations of your PowerPoint presentation
- Support by technical staff.

To enable the staff to handle the technical aspects in an efficient way, all presentations should be prepared according to the guidelines below. It is essential that:

- The correct format is used
- The presentation be handed in on time at the Speaker's Center: at least three hours before your presentation time.

The Speakers' Preview Room is located in Room H1036 (1st Floor).

Poster Exhibition and Poster Sessions

Poster Exhibition

All accepted posters will be displayed during the Conference in the Lichthof and in the Atrium.

Posters are listed under Topics and poster number.

Poster Area 1 (Lichthof) Topics:

A: Data Analysis, Data Formats and Software

I: Interfaces and Surfaces

M: Magnetism and Material Sciences

P: Polymers

S: Structural Biology

O: Other

Poster Area 2 (Atrium) Topics

C: Colloids and Complex Fluids

F: Functional and Hierarchical Materials

D: Dynamic

L: Dimensional Metrology by SAS

H: Hybrid and Biomaterials

T: Instruments and Techniques

Set-Up and Dismantling

Fixing materials will be available in the Poster areas.

Posters may be set-up beginning **Monday**, 14th September 09:50.

Posters should be removed on **Friday**, 18th September between 12:00 and 13:30. Any Posters not removed by 13:30 will be discarded.

Poster Sessions

Poster Sessions will take place as follows:

- Posters with even numbers and Flash Talk Posters of the day will be presented on **Monday**, 14th September from 18:10 to 19:30
- Posters with odd numbers and Flash Talk Posters of the day will be presented on **Wednesday**, 16th September from 17:10 to 18:30

SOCIAL PROGRAMME & HZB TOURS



Foto: © TU Berlin

Welcome Reception

Venue: Lichthof of the TU Berlin
Cost: Included in the registration fees

Date: Sunday, 13th September 2015 –
17:30-18:30

HZB Tours

The HZB developed, operates and improves two separate large – scale research facilities – the neutron source BER II in Berlin Wannsee and the synchrotron radiation source BESSY II in Berlin Adlershof used by some 3,000 guest scientists from all around the World every year. At both facilities, unique instruments are available. We are looking forward to welcoming you at HZB! The tours are available only upon prior registration. An entrance ticket will be delivered with your name badge if you have booked this option.

Bus transfers start in front of the TU main building at the following times:

TU Berlin – HZB Wannsee – TU Berlin

Start: 16:00 & 16:30 – Back at approx. 19:00 & 19:30

TU Berlin – HZB Adlershof – TU Berlin

Start: 16:00 – Back at approx. 19:30

Tuesday, 15th September – 16:00



Tipi am Kanzleramt,
Foto: © David Marschalsky

Conference Dinner

Venue: TIPI am Kanzleramt, Große Querallee, 10557 Berlin
(between Kanzleramt and Haus der Kulturen der Welt)

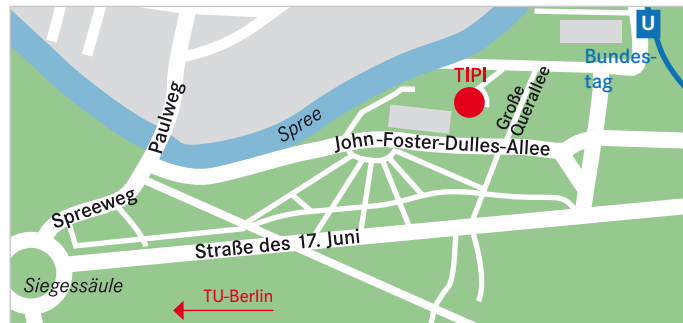
Right next to the Chancellor's office, only a stone's throw away from Berlin's political circus, there is a tent, the operators of which have made it their job to do everything in their power to amuse and amaze their audience. The TIPI AM KANZLERAMT, a marquee theatre with its impressive four supporting masts, is regarded as one of Berlin's most exceptional event locations.

An entrance ticket will be delivered with your name badge if you have booked this option.

Date: Thursday, 17th September 2015 – 19:30-23:00

Public Transport:

Bus 100 "Platz der Republik", S-Bahn: Hauptbahnhof, Brandenburger Tor, Subway: U55, Bundestag, Shipping Pier: Kanzleramt



AWARDS



Guinier Prize

Sponsored by:



The organizing Committee of SAS2015 is pleased to announce that the 2015 Guinier Prize winner is Prof. Sow-Hsin Chen from the Department of Nuclear Science & Engineering of the Massachusetts Institute of Technology (MIT), U.S.A. The Guinier Prize, sponsored by the International Union of Crystallography (IUcR), recognizes lifetime achievement, a major breakthrough or an outstanding contribution to the field of small-angle scattering. Over his 50-year career, **Professor Sow-Hsin Chen** has made numerous original and novel contributions employing small-angle scattering in fundamental studies of soft condensed matter physics.

He is one of the premier scientists and experts in the international scattering community. Hallmarks of his distinguished career include the development of new methods for data analysis, together with pioneering experiments on the structure and mutual interactions of self-assembled systems such as micelles, microemulsions and protein-surfactant complexes in solution.



Professor
Sow-Hsin Chen

He has trained a significant portion of the next generation of researchers in the field, including 45 PhD students. In addition, he has written a comprehensive text book on scattering methods in complex fluids. Professor Chen will receive his prize and present a plenary lecture at the SAS2015, the 16th International conference on Small-Angle Scattering in Berlin, 13th – 18th September, 2015.

Thursday, 17th September – 13:30, Auditorium H0104

Kratky Prize

Sponsored by:



Following a long tradition Anton-Paar kindly sponsors the Otto-Kratky Award for young scientists in the field of SAXS. To be eligible, you must be a fully registered attendee to SAS2015, be author or co-author on an abstract utilising SAXS and should be either less than 35 years of age or have fewer than five years since the date of PhD graduation. The prize winner will be announced during SAS2015 and will be awarded 750 Euro.

Thursday, 17th September – 14:30, Auditorium H0104



Siegessäule (victory column), Straße des 17. Juni – near the conference venue
Foto: Fotolia@babelsberger

SPECIAL LECTURES

SAS-Tutorial

Organised by:



Renowned experts will introduce the basics and the exciting facets of Small Angle Scattering in four individual lectures. The tutorial is primarily aimed at advanced students, early stage researchers e.g. PhD students and postdocs, but certainly is also beneficial to other conference delegates, who are all warmly welcome.

Sunday, 13th September – 14:00, Room EW 201

History of SAS

Prof. Heinrich Stuhmann, *IBS, Grenoble, France, and HZG Geesthacht, Germany* (Guinier Prize Awardee 2006)

Thursday, 17th September – 15:30, Auditorium H0104

Presentation SAS 2018

SAS2018: ENERGY, ENVIRONMENT AND HEALTH

Randall Winans, *Argonne National Laboratory, U.S.A*

Thursday, 17th September – 16:30, Auditorium H0104

SPECIAL SESSIONS

canSAS Forum

canSAS: Progress & Discussion for Collaboration

Pete Jemian, *Argonne National Laboratory, U.S.A*

Monday, 14th September – 12:45-13:45, Room H0110

CCP-SAS Demonstration

Demonstration of CCP-SAS Software for Atomistic SAS Modeling

Joseph Curtis, *National Institute of Standards and Technology, Gaithersburg, U.S.A*

Monday, 14th September – 12:45-13:45, Room H 1058

IUCr SAS Commission Meeting

Update and open discussion on Commission activities including:

- publication guidelines for structural biology – Jill Trewhella
- developments of the extended sasCIF for easy data Structural Biology data exchange – Dmitri Svergun
- canSAS – U-Ser Jeng
- NIST SAXS intensity standard – Andrew Allen
- IUCr SAS web site development – Jill Trewhella
- SAS2021 and encouraging bids

Tuesday, 15th September – 14:30-15:40, Auditorium H0104

Attracting Industry

Stimulating Industrial Interactions: Challenges, Barriers and Opportunities for Application of Small-angle scattering to Industry

Chairs: Elliot Gilbert, U-Ser Jeng

- 1) Lise Arleth (X-ray and Neutron Science, *Niels Bohr Institute, University of Copenhagen, Denmark*): NXUS – Neutron and X-ray User Support to strengthen industrial use of small-angle scattering techniques
- 2) Ron Jones (The nSoft Consortium at *NIST, Gaithersburg, MD, U.S.A*): Expertise Transfer on how to use neutrons for problems in soft materials
- 3) Toshiji Kanaya (*KEK and Kyoto University, Japan*): Industry Academy Alliance Project in Spring-8

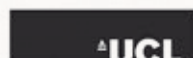
Wednesday, 16th September 2015 – 12:15-13:15, Room H0110

Advert



Leaders in small-angle x-ray scattering

We want to take this opportunity to thank our customers and collaborators for their relentless effort to extend the boundaries of human knowledge.



COMPANY PRESENTATIONS

Xenocs – SAXS in the Lab

Frédéric Bossan, *Xenocs, France*

“Introductory words”

Olivier Diat, *ICSM, France*

“Mo-SAXS bench: a nice tool in a physical-chemistry lab”

Youli Li, MRL, *Santa Barbara University, U.S.A*

“Laboratory SAXS-WAXS: first-hand experiences in a multiuser research facility”

Thomas Hellweg, *University of Bielefeld, Germany*

“Characterization of the 3H3 Antibody Fragment by Scattering Methods”

Tuesday, 15th September – 12:15-13:15, Auditorium H0104

Xenocs – Advanced Data Processing

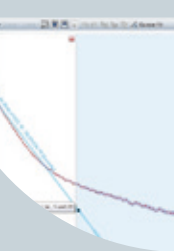
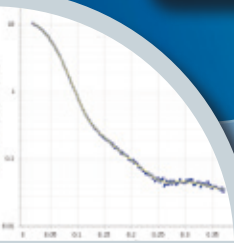
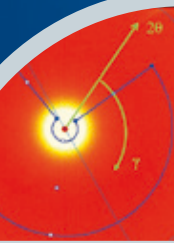
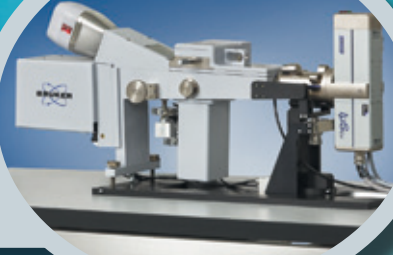
Confirmed invited speaker: J. Perez, Principal beamline Scientist, Beamline SWING, *Synchrotron SOLEIL, France*

Thursday, 17th September – 12:15-13:15, Auditorium H0104

Advanced SAXS Solutions

MICRO

High Performance
Bio-Structure Analysis



q [Å ⁻¹]	I [a.u.]	ΔI [a.u.]	ΔI/I [%]	ΔI/ΔI _{max} [%]	ΔI/ΔI _{max} [dB]
0.000	10000	0	0	0	0
0.005	9500	500	5	5	10
0.010	9000	1000	10	10	20
0.015	8500	1500	15	15	30
0.020	8000	2000	20	20	40
0.025	7500	2500	25	25	50
0.030	7000	3000	30	30	60
0.035	6500	3500	35	35	70
0.040	6000	4000	40	40	80
0.045	5500	4500	45	45	90
0.050	5000	5000	50	50	100
0.055	4500	5500	55	55	110
0.060	4000	6000	60	60	120
0.065	3500	6500	65	65	130
0.070	3000	7000	70	70	140
0.075	2500	7500	75	75	150
0.080	2000	8000	80	80	160
0.085	1500	8500	85	85	170
0.090	1000	9000	90	90	180
0.095	500	9500	95	95	190
0.100	0	10000	100	100	200

DIFFRAC.SAXS

The Comprehensive Data
Analysis Suite

N8 HORIZON

Materials Research
made easy



NANOSTAR

Highest Brilliance and Modular
Design for Top-of-Class Results



Visit us at booth 20, or at www.bruker.com

PROGRAMME

13TH – 18TH SEPTEMBER 2015

SUNDAY, 13TH SEPTEMBER 2015

Exhibition Set-up: 13:00 – 19:00
Speaker Preview Room Open: 15:00 – 18:00
Registration Counter Open: 17:00 – 20:00

14:00 – 17:30	SAS Tutorial <i>TU Berlin, Room EW 201</i>
17:30 – 18:30	Welcome Reception Lichthof

↘ All plenary session's abstracts can be found on page 54

LINK

The abstracts are available at www.sas2015.org



MONDAY, 14TH SEPTEMBER 2015

09:30–09:45	OPENING SESSION Anke Kaysser-Pyzalla, <i>HZB Berlin</i> – Angela Ittel, <i>TU Berlin</i> Auditorium H0104	
09:50–10:40	PLENARY SESSION 1 “WHERE COLLOID SCIENCE MEETS DRUG DELIVERY; SAS AND BEYOND” Allison Paul, <i>University Cardiff, School of Chemistry, UK</i> Chair: Matthias Ballauff / Auditorium H0104	
10:40–11:10	Poster Hanging Lichthof / Atrium	
10:40–11:10	Coffee Break Exhibition Area	
11:10–12:30	ORAL PRESENTATIONS Mon-C1: Colloids and Complex Fluids Chair: Allison Paul / Room: H0110	ORAL PRESENTATIONS Mon-H1: Hybrid and Biomaterials Chair: Ian Hamley / Room H0104
11:10	“MAPPING OF FLOW-INDUCED NANO-STRUCTURES IN COMPLEX FLUIDS BY COMBINING MICROFLUIDICS AND SCANNING-SAXS” Viviane Lutz-Bueno, <i>ETH Zurich Switzerland</i>	“SELF-ASSEMBLY OF PEPTIDE-POLYMER CONJUGATES IN SOLUTION: STRUCTURE & CHAIN CONFORMATIONS” Reidar Lund, <i>University of Oslo, Norway</i>
11:30	“SAXS AND SANS STUDIES OF THE STRUCTURE OF CONCENTRATED HARD SPHERE SUSPENSIONS” Gary Bryant, <i>RMIT University, Australia</i>	“TUNABLE PEPTIDE-PHOSPHOLIPID SYSTEMS SELF-ASSEMBLY INTO BILAYERS THAT STABILISE MEMBRANE PROTEINS” Andreas Nørgård Larsen, <i>University of Copenhagen, Denmark</i>
11:50	“PROTEIN INCORPORATION INTO THE NANOSTRUCTURE OF BICONTINUOUS MICROEMULSIONS” Volker Urban, <i>Oak Ridge National Laboratory, United States</i>	“CYTOCHROME C ADSORPTION ONTO CORE-SHELL MICROGELS ANALYSED BY ANOMALOUS SMALL-ANGLE X-RAY SCATTERING (ASAXS)” Albrecht Petzold, <i>Helmholtz-Zentrum Berlin, Germany</i>
12:10	“TARGET NANOPARTICLES: SANS, ASAXS, DLS OF MODULAR DRUG CARRIERS” Thomas Nawroth, <i>Gutenberg University, Germany</i>	“PROTEIN ADSORPTION ON NANO-STRUCTURED SURFACES: ACCESSING THE NANO-BIO INTERACTION BY SMALL ANGLE SCATTERING” Jens Meissner, <i>TU Berlin, Germany</i>
12:30–14:00	Lunch Break Exhibition Area	
12:45–13:45	Lunch Session 1: canSAS Forum Room H0110	
14:00–14:50	PLENARY SESSION 2 SAXS, ANOMALOUS SAXS, AND RESONANT SOFT X-RAY SCATTERING STUDIES OF NATIVE AND IRON-FORTIFIED LIQUID MILK Bridget Ingham, <i>The Mac Diarmid Institute for Advanced Materials and Nanotechnology, NZ</i> Chair: Jill Trehwella / Auditorium H0104	

Exhibition Open: 09:30 – 18:30
 Registration Desk Open: 08:00 – 18:30
 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 10:20 – 18:30

9:30 – 14:50

09:30 – 09:45

09:50 – 10:40

10:40 – 11:10

10:40 – 11:10

ORAL PRESENTATIONS

Mon-L1/O1: Dimensional Metrology and Other

Chair: Karen Edler / Room H1058

11:10 – 12:30

“DIMENSIONAL METROLOGY OF NANOPATTERNS WITH SMALL ANGLE X-RAY SCATTERING FOR THE SEMICONDUCTOR INDUSTRY”

R. Joseph Kline, *National Institute of Standards and Technology, U.S.A*

11:10

“LIMITS OF SMALL ANGLE SCATTERING: CALCULATION OF SCATTERING PATTERN INCLUDING PHASE SHIFT BY PARTICLE AND PARTIAL COHERENT ILLUMINATION”

Wolfgang Treimer, *Helmholtz-Zentrum Berlin, Germany*

11:30

“SCANNING SAXS IN THE CONTEXT OF OTHER IMAGING TECHNIQUES”

Oliver Bunk, *Paul Scherrer Institut, Switzerland*

11:50

12:10

12:30 – 14:00

Lunch Session 2: CCP-SAS Demonstration Room H1058

12:45 – 13:45

14:00 – 14:50

MONDAY, 14TH SEPTEMBER 2015

14:50 – 15:00	Break	
15:00 – 16:00	ORAL PRESENTATIONS Mon-C2: Colloids and Complex Fluids Chair: Andrew Jackson / Room: H0110	ORAL PRESENTATIONS Mon-H2: Hybrid and Biomaterials Chair: Wim Bras / Room: H0104
15:00	“ORIENTATIONAL ORDER IN COLLOIDAL THIN FILMS AND CRYSTALS STUDIED BY X-RAY CROSS-CORRELATION ANALYSIS” Martin Schroer, <i>DESY, Germany</i>	“SAS STUDIES OF SELF-ASSEMBLING LIPOPEPTIDES” Ian Hamley, <i>University of Reading, United Kingdom</i>
15:20	“ULTRATHIN GOLD NANOWIRES: GROWTH MECHANISM AND SELF-ASSEMBLY” Marianne Impéror-Clerc, <i>CNRS / Université Paris-Sud, France</i>	“CHARACTERIZING SELF-ASSEMBLED NANOPARTICLES EMPLOYED IN DRUG DELIVERY: ADVANTAGE OF ANOMALOUS SAXS” Kazuo Sakurai, <i>University of Kitakyushu, Japan</i>
15:40	“SPACE AND CONFORMATION DESIGN ON CORE-SHELL STRUCTURED NANOCRYSTALLITES: AN IN-SITU SMALL ANGLE X-RAY SCATTERING INSPECT” Tsan-Yao Chen, <i>National Tsing Hua University, Taiwan, R.O.C.</i>	“TOWARDS TRACEABLE SIZE DETERMINATION OF BIOLOGICAL NANOPARTICLES USING SAXS” Zoltan Varga, <i>Research Centre for Natural Sciences, Hungary</i>
16:00 – 16:30	Coffe Break Exhibition Area	
16:30	“DOES A LOW-Q UPTURN IN ULTRA-SMALL-ANGLE SCATTERING REFLECT MATERIAL'S STRUCTURE?” Yuya Shinohara, <i>The University of Tokyo, Japan</i>	“VARIOUS NANOCELLULOSE CRYSTALS – A SHAPE AND STABILITY INVESTIGATION” Martin Uhlig, <i>Technische Universität Berlin, Germany</i>
16:50	“SHAPE INDUCED PHASE TRANSITIONS IN CRYSTALS OF COLLOIDAL CUBES” Janne-Mieke Meijer, <i>Utrecht University, Netherlands</i>	“IN SITU SMALL ANGLE STUDIES OF ROLL-TO-ROLL COATED PEROVSKITE SOLAR CELLS” Lea Hildebrandt Rossander, <i>Technical University of Denmark, Denmark</i>
17:10 – 17:20	Break	
17:20 – 18:10	FLASH POSTER TALKS Mon-F-C1: Colloids and Complex Fluids Posters P-C-07, P-C-20, P-C-30, P-C-56 Mon-F-L1: Dimensional Metrology Posters P-L-01, P-L-03, P-L-04 Mon-F-I1: Interfaces and Surfaces Posters P-I-14, P-I-18, P-I-20 Chair: Armin Hoell / Room: H0110	FLASH POSTER TALKS Mon-F-H1: Hybrid and Biomaterials Posters P-H-04, P-H-10, P-H-11, P-H-12, P-H-22, P-H-23 Mon-D-F1: Dynamics Posters P-D-01, P-D-05 Chair: Daniel Clemens / Room: H0104
18:10 – 19:30	Poster Session (Posters with even number & Flash Talk Posters of the day) and Refreshments Lichthof / Atrium	

Exhibition Open: 09:30 – 18:30
 Registration Desk Open: 08:00 – 18:30
 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 10:20 – 18:30

14:50 – 19:30

		14:50 – 15:00
ORAL PRESENTATIONS Mon-S1: Structural Biology Chair: Tom Weiss / Room: H1058	ORAL PRESENTATIONS Mon-T1: Instruments and Techniques Chair: Bridget Ingham / Room: H1012	15:00 – 16:00
“SANS: A POWERFUL AND UNIQUE TOOL TO PROVIDE STRUCTURAL INSIGHT INTO LARGE PROTEIN-PROTEIN AND PROTEIN-RNA COMPLEXES” Frank Gabel, Institut de Biologie Structurale, France	“SAXS, GISAXS AND ASAXS IN THE TENDER X-RAY RANGE” Michael Krumrey, <i>Physikalisch-Technische Bundesanstalt, Germany</i>	15:00
“STRUCTURAL, DYNAMICAL AND FUNCTIONAL STUDY OF THE PROTEASOME ACTIVATING COMPLEX (PAN)” Ziad Ibrahim, <i>Institut de Biologie Structurale / Institut Laue-Langevin, France</i>	“OPPORTUNITIES AND CHALLENGES WITH HIGH-ENERGY COHERENT X-RAYS AT THE ESRF BEAMLINE ID10” Federico Zontone, <i>European Synchrotron Radiation Facility, France</i>	15:20
“STRUCTURE AND DYNAMICS OF THE INTRINSICALLY DISORDERED MYELIN BASIC PROTEIN” Andreas Stadler, <i>Forschungszentrum Jülich GmbH, Germany</i>	“LABORATORY HI-RESOLUTION GISAXS APPARATUS FOR ADVANCED NANO-STRUCTURES” Peter Siffalovic, <i>Slovak Academy of Sciences, Slovakia</i>	15:40
		16:00 – 16:30
“SMALL-ANGLE SCATTERING STUDIES OF LARGE LIPIDIC MOLECULAR MACHINES: THE A-ATPASE ASSEMBLY” Haydyn Mertens, <i>European Molecular Biology Laboratory, Germany</i>	“HIGH-FLUX SAXS INSTRUMENT WITH LIQUID METAL JET SOURCE WITH AUTOMATED SAMPLE HANDLER AND STOPPED-FLOW APPARATUS” Jan S. Pedersen, <i>Aarhus University, Denmark</i>	16:30
“INVESTIGATING MEMBRANE PROTEINS USING NOVEL MATCH-OUT DEUTERATED DETERGENTS AND SANS” Søren Roi Midtgaard, <i>University of Copenhagen, Denmark</i>	“NEW OPPORTUNITIES FOR TIME-RESOLVED ULTRA SMALL-ANGLE X-RAY SCATTERING AT THE ESRF” Theyencheri Narayanan, <i>European Synchrotron Radiation Facility, France</i>	16:50
		17:10 – 17:20
FLASH POSTER TALKS Mon-F-S1: Structural Biology Posters P-S-31, P-S-32, P-S-39, P-S-48, P-S-47, P-S-50, P-S-59, P-S-62 Chair: Emanuel Schneck / Room: H1058	FLASH POSTER TALKS Mon-F-T1: Instruments and Techniques Posters P-T-09, P-T-11, P-T-15, P-T-16, P-T-26, P-T-39, P-T-46, P-T-50, P-T-51, P-T-60 Chair: Annegret Günther / Room: H1012	17:20 – 18:10
		18:10 – 19:30

TUESDAY, 15TH SEPTEMBER 2015

09:00 – 09:50

PLENARY SESSION 3

“UNDERSTANDING THE RHEOLOGY OF COMPLEX FLUIDS THROUGH FLOW AND RHEO-SANS”

Norman J. Wagner, *University Delaware, U.S.A*

Chair: Jan-Skov Pedersen / Auditorium H0104

09:50 – 10:20

Coffee Break Exhibition Area

10:20 – 12:00

ORAL PRESENTATIONS

Tue-C3: Colloids and Complex Fluids

Chair: Norman J. Wagner / Room: H0110

ORAL PRESENTATIONS

Tue-H3: Hybrid and Biomaterials /

Tue-P1: Polymers

Chair: Pavel Strunz / Room: H0104

10:20

“SHAPE PERSISTENCE MICELLES HAVING THE SAME AGGREGATION NUMBERS WITH THE PLATONIC SOLIDS”

Kazuo Sakurai, *University of Kitakyushu, Japan*

“SAXS STUDY OF PEPTIDE SELF-ASSEMBLY IN SOLUTION”

Valeria Castelletto, *University of Reading, UK*

10:40

“COEXISTING CRYSTAL AND MELT STRUCTURES IN COLLOIDAL BINARY MIXTURES”

Adrian Rennie, *Uppsala University, Sweden*

“SMALL ANGLE X-RAY SCATTERING AS A VERSATILE TOOL TO EXPLORE MINERALIZATION PATTERNS IN HEALTHY AND DISEASED BONE”

Wolfgang Wagermaier, *Max Planck Institute of Colloids and Interfaces, Germany*

11:00

“BULK NANOSTRUCTURE OF THE SOLVATE IONIC LIQUID [Li(G4)]TFSI AND CONFORMATION OF DISSOLVED POLY-ETHYLENE OXIDE”

Rob Atkin, *University of Newcastle, Australia*

“QUANTIFYING TIE-CHAIN CONTENT IN SEMICRYSTALLINE POLYOLEFINS WITH VAPOR-FLOW SMALL-ANGLE NEUTRON SCATTERING”

Amanda McDermott, *National Institute of Standards and Technology, U.S.A*

11:20

“NEUTRON SCATTERING STUDIES OF SELF-ASSEMBLY IN AMPHIPHILIC IONIC LIQUIDS”

Gregory Warr, *The University of Sydney, Australia*

“CONONSOLVENCY OF WATER/METHANOL MIXTURES FOR PNIPAM AND PS-B-PNIPAM: PATHWAY OF AGGREGATE FORMATION INVESTIGATED USING TIME-RESOLVED SANS”

Christine M. Papadakis, *Technische Universität München, Germany*

11:40

“PHASE BEHAVIOR OF DENSE LYSOZYME SOLUTIONS”

Julian Schulze, *TU Dortmund University, Germany*

“SAXS STUDY ON THE HIERARCHICALLY STRUCTURED NANOPARTICLES-CELLULOSE COMPOSITES: STRUCTURE AND INTERACTIONS”

Christopher Garvey, *ANSTO, Australia*

Exhibition Open: 09:30 – 14:30
 Registration Desk Open: 08:00 – 15:00
 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 09:00 – 18:30

9:00 – 12:00 UHR

09:00 – 09:50

09:50 – 10:20

ORAL PRESENTATIONS Tue-S2: Structural Biology Chair: Anne-Laure Fameau / Room: H1058	ORAL PRESENTATIONS Tue-T2: Instruments and Techniques Chair: Ralf Schweins / Room: H1012	10:20 – 12:00
<p>“THE ASYMMETRIC SOLUTION STRUCTURES OF NATIVE AND PATIENT MONOMERIC HUMAN IGA1 REVEAL NEW INSIGHTS ON IGA NEPHROPATHY” Stephen Perkins, <i>University College London, United Kingdom</i></p>	<p>“COMBINING SCANNING SAXS WITH TENSOR TOMOGRAPHY: ORIENTATION ANALYSIS OF NANOSTRUCTURES IN 3D” Marianne Liebi, <i>Paul Scherrer Institut, Switzerland</i></p>	<p>10:20</p>
<p>“DECODING THE UNFOLDING INTERMEDIATES OF BOVINE SERUM ALBUMIN USING SCANNING HPLC/SAXS/UV-VIS SYSTEM” Yi-Qi Yeh, <i>National Synchrotron Radiation Research Center, Taiwan, R.O.C.</i></p>	<p>“ESRF ID01: A NEW BEAMLINE FOR NANOSTRUCTURE RESEARCH” Peter Boesecke, <i>European Synchrotron Radiation Facility, France</i></p>	<p>10:40</p>
<p>“STRUCTURAL CHARACTERIZATION OF MAGNESIUM TRANSPORTER CORA BY SMALL-ANGLE X-RAY SCATTERING USING THE NANODISC” Pie Huda, <i>University of Copenhagen, Denmark</i></p>	<p>“SAXS AND FREE JET MICROMIXER TO STUDY THE SUB-MILLISECOND / MILLISECOND INTERACTION OF SILICA NANOPARTICLES WITH PROTEINS” Benedetta Marmiroli, <i>Graz University of Technology, Austria</i></p>	<p>11:00</p>
<p>“THE COUNTERION DISTRIBUTION AROUND DNA STUDIED BY ASAXS” Gudrun Lotze, <i>ESRF, France</i></p>	<p>“OBSERVATION OF TWINNING IN GOLD NANO-PARTICLES USING CORRELATED X-RAY SCATTERING (CXS)” Derek Mendez, <i>Stanford University, United States</i></p>	<p>11:20</p>
<p>“AMBIGUITY ASSESSMENT OF SMALL-ANGLE SCATTERING CURVES FROM MONODISPERSE SYSTEMS” Maxim Petoukhov, <i>European Molecular Biology Laboratory, Germany</i></p>	<p>“POLARIZATION ANALYSIS IN NEUTRON SMALL ANGLE SCATTERING WITH A NOVEL TRIPLET DNP SPIN FILTER” Joachim Kohlbrecher, <i>Paul Scherrer Institut, Switzerland</i></p>	<p>11:40</p>

Table cont'd

TUESDAY, 15TH SEPTEMBER 2015

12:00 – 13:30	Lunch Break Exhibition Area
12:15 – 13:15	Lunch Session 3: SAXS IN THE LAB, Xenocs Auditorium H0104
13:30 – 14:20	PLENARY SESSION 4 “WHEN SPACE BECOMES TIGHT: FLUID-SOLID INTERACTIONS IN NANOCONFINEMENT PROBED BY SMALL-ANGLE SCATTERING” Oskar Paris, <i>Institut für Physik, Montanuniversität Leoben, Austria</i> Chair: Anton Plech / Auditorium H0104
14:20 – 14:30	Break
14:30 – 15:40	SAS Commission Meeting Auditorium H0104
16:00 – 19:00	Site Visits HZB Wannsee (Neutrons) / HZB Adlershof (X-rays) or Free Time (Please refer to page 14)

- The plenary session’s abstracts can be found on page 54.
All abstracts are available at www.sas2015.org

HZB Wannsee
Foto: © HZB, A. Kubatzki



Exhibition Open: 09:30 – 14:30
Registration Desk Open: 08:00 – 15:00
Speaker Preview Room Open: 08:00 – 18:30
Poster Exhibition Open: 09:00 – 18:30

12:00 – 19:00 UHR

12:00 – 13:30

12:15 – 13:15

13:30 – 14:20

14:20 – 14:30

14:30 – 15:40

16:00 – 19:00

HZB Adlershof
Foto: © HZB, Volker Mai



WEDNESDAY, 16TH SEPTEMBER 2015

09:00 – 09:50	PLENARY SESSION 5 “FROM CONCENTRATED, INTERACTING SYSTEMS TO HIERARCHICALLY ORGANIZED MATERIALS – THE POWER OF SAS IN SOFT MATTER SCIENCE” Otto Glatter, <i>University Graz, Austria</i> (Guinier Prize Awardee 2012) Chair: Oskar Paris / Auditorium H0104	
09:50 – 10:20	Coffee Break Exhibition Area	
10:20 – 12:00	ORAL PRESENTATIONS Wed-P2: Polymers Chair: Oskar Paris / Room: H0110	ORAL PRESENTATIONS Wed-F1: Functional and Hierarchical Materials Chair: Otto Glatter / Room: H0104
10:20	“STRUCTURE OF AMPHIPHILIC CO-NETWORK GELS” Mitsuhiro Shibayama, <i>The University of Tokyo, Japan</i>	“CONTROLLING THE SELF-ASSEMBLY OF DENDRIMERS AND DYES: THE ROLE OF THERMODYNAMICS” Ralf Schweins, <i>Institut Laue-Langevin, France</i>
10:40	“FDDD PHASE IN DIBLOCK COPOLYMER MELTS” Mikihiro Takenaka, <i>Kyoto University, Japan</i>	“BIO-INSPIRED MINERALIZATION OF MAGNETITE NANOPARTICLES IN GELATIN HYDROGEL: A SMALL ANGLE SCATTERING INVESTIGATION” Vitaliy Pipich, <i>Forschungszentrum Jülich, Germany</i>
11:00	“HAND-CAST AND MACHINE-PROCESSED THERMOPLASTIC POLYURETHANES. MORPHOLOGY EVOLUTION MECHANISMS UNDER STRAIN” Almut Stribeck, <i>Universität Hamburg, Germany</i>	“PTYCHOGRAPHY AND SCANNING SAXS WITH MICRO- AND NANO-BEAMS ON BONE SECTIONS” Britta Weinhausen, <i>ESRF – The European Synchrotron, France</i>
11:20	“ENTANGLED POLYMER MELTS IN EXTENSIONAL FLOW?” Kell Mortensen, <i>University of Copenhagen, Denmark</i>	“OUTSET OF THE MORPHOLOGY OF NANOSTRUCTURED SILICA PARTICLES DURING NUCLEATION FOLLOWED BY USAXS” Julien Schmitt, <i>Lund University, Sweden</i>
11:40	“CHAIN SIGNAL IN NANOLATEX BASED NANOCOMPOSITES” Amelie Banc, <i>Université de Montpellier, Germany</i>	“TIME RESOLVED SANS STUDY OF WOOD DISINTEGRATION IN IONIC LIQUID” Noemi Szekely, <i>Forschungszentrum Jülich, Germany</i>
12:00 – 13:30	Lunch Break Exhibition Area	
12:15 – 13:15	Lunch Session 4: Attracting Industry, Room H0110	

Exhibition Open: 09:30 – 18:30
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 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 09:00 – 18:30

9:00 – 13:15

09:00 – 09:50

09:50 – 10:20

ORAL PRESENTATIONS

Wed-M1: Magnetism and Material Science

Chair: Aldo Craievitch / Room: H1058

ORAL PRESENTATIONS

Wed-T3: Instruments and Techniques

Chair: Heinz Amenitsch / Room: H1012

10:20 – 12:00

“MAGNETIC SMALL-ANGLE NEUTRON SCATTERING OF SOFT-MAGNETIC NANOCOMPOSITES”

Dirk Honecker, *Institut Laue-Langevin, France*

“THE FIRST EXPERIMENT OF SPIN CONTRAST VARIATION AT J-PARC BL15 TAIKANW

Yohei Noda, *Japan Atomic Energy Agency, Japan*

10:20

“STRUCTURAL DEFECTS IN COLLOIDAL GOLD NANOPARTICLES”

Blaise Fleury, *CEA Saclay, France*

“LOKI – A SANS INSTRUMENT FOR SOFT MATTER, MATERIALS AND LIFE SCIENCE AT THE ESS”

Andrew Jackson, *European Spallation Source, Sweden*

10:40

“ANISOTROPIC MAGNETIC CORRELATIONS IN NANOCOMPOSITES”

Andreas Michels, *University of Luxembourg, Luxembourg*

“Simultaneous SANS and Differential Scanning Calorimetry of Microphase Separated Alkane Blends”

Elliot Gilbert, *ANSTO, Australia*

11:00

“DIRECTING THE ORIENTATIONAL ALIGNMENT OF ANISOTROPIC MAGNETIC NANOPARTICLES USING DYNAMIC MAGNETIC FIELDS”

Sabrina Disch, *Universität zu Köln, Germany*

“SKADI – Small-K Advanced Diffractometer at the ESS”

Sebastian Jaksch, *Forschungszentrum Jülich, Germany*

11:20

“CHARACTERISATION OF ION TRACKS USING SAS”

Patrick Kluth, *Australian National University, Australia*

“SPIN-ECHO MODULATED SMALL ANGLE NEUTRON SCATTERING IN TIME-OF-FLIGHT MODE”

Markus Strobl, *University of Copenhagen, Denmark*

11:40

12:00 – 13:30

12:15 – 13:15

Table cont'd

WEDNESDAY, 16TH SEPTEMBER 2015

13:30 – 14:20 PLENARY SESSION 6

“ADDRESSING THE DATA CHALLENGE IN SMALL ANGLE SCATTERING”

Alexander Hexemer, Lawrence Berkeley National Laboratory, U.S.A

Chair: Regine Willumeit / Auditorium H0104

14:20 – 14:30 Break

14:30 – 16:20 ORAL PRESENTATIONS

Wed-P3: Polymers

Chair: Peter Lindner / Room: H0110

ORAL PRESENTATIONS

Wed-F2: Functional and Hierarchical Materials

Chair: Peter Boesecke / Room: H0104

14:30 “STRUCTURAL STUDY ON SYNDIOTACTIC POLYSTYRENE COCRYSTALS BY A SIMULTANEOUS TIME RESOLVEDSANS / FTIR MEASURING SYSTEM
Fumitoshi Kaneko, *Osaka University, Japan*

“STRUCTURAL IMPACT OF TRANSITION METAL HALIDES ON THE REACTIVE HYDRIDE COMPOSITES FOR SOLID-STATE HYDROGEN STORAGE”
P. Klaus Pranzas, *Helmholtz-Zentrum Geesthacht, Germany*

14:50 “TOPOGRAPHIC MEASUREMENTS OF BURIED THIN FILM INTERFACES BY GRAZING INCIDENCE SOFT X-RAY SCATTERING
Eliot Gann, *Monash University, Australia*

“ANOMALOUS SMALL ANGLE X-RAY SCATTERING OPERANDO ON A LITHIUM BATTERY AND CERAMIC FUEL CELL ASSEMBLIES”
Artur Braun, *EMPA, Switzerland*

15:10 – 15:30 Coffee Break Exhibition Area

15:30 “OUT-OF-EQUILIBRIUM STUDIES USING SIMULTANEOUS SAXS / WAXS INVESTIGATION”
Pierre Panine, *Xenocs SA, France*

“SORPTION-INDUCED DEFORMATION OF HIERARCHICAL POROUS SILICA”
Roland Morak, *Montanuniversität Leoben, Austria*

15:50

“ABSORPTION-CONTRAST SAXS OF THIN-FILM PHOTOVOLTAIC CHALCOPYRITE COATINGS”
Rudolf Winter, *Aberystwyth University, United Kingdom*

16:20 – 17:10 FLASH POSTER TALKS

Wed-F-P1: Polymers

Chair: Roland Steitz / Room: H0110
Posters P-P-06, P-P-08, P-P-09, P-P-16, P-P-18, P-P-19, P-P-20, P-P-22

FLASH POSTER TALKS

Wed-F-F1: Functional and Hierarchical Materials

Chair: Klaus Habicht / Room: H0104
P-F-01, P-F-07, P-F-09, P-F-15, P-F-19, P-F-20, P-F-22, P-F-24, P-F-25, P-F-27

17:10 – 17:20 Break

17:20 – 18:30 Poster Session (Posters with odd number & Flash Talk Posters of the day) and Refreshments
Lichthof / Atrium

- The plenary session’s abstracts can be found on page 54.
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Exhibition Open: 09:30 – 18:30
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 Poster Exhibition Open: 09:00 – 18:30

13:30 – 18:30

13:30 – 14:20

14:20 – 14:30

ORAL PRESENTATIONS

Wed-M2: Magnetism and Material Science

Chair: Andrew Allen / Room: H 1058

ORAL PRESENTATIONS

Wed-A2: Data Analysis, Data Formats and Softwares

Chair: Alexander Hexemer / Room: H 1012

14:30 – 16:20

“PRECIPITATION KINETICS IN AN AL-MG-ZN ALLOY UNDER FRICTION STIR WELDING THERMAL CYCLES STUDIED BY HIGH-ENERGY SAXS”
 Peter Staron, *Helmholtz-Zentrum Geesthacht, Germany*

“CCP-SAS – A COMMUNITY CONSORTIUM FOR THE ATOMISTIC MODELLING OF SCATTERING DATAE”
 Joseph E. Curtis, *NIST, United States*

14:30

“STABILITY AND GROWTH OF TAC PRECIPITATES IN CO-RE SUPERALLOYS FOR ULTRA HIGH TEMPERATURE APPLICATIONS STUDIED BY SANS”
 Lukas Karge, *Technische Universität München, Germany*

“QUANTITATIVE ASSESMENT OF THE USEFUL ANGULAR RANGE FOR SMALL-ANGLE SCATTERING DATA FROM SOLUTIONS”
 Petr Konarev, *Institute of Crystallography RAS, Russian Federation*

14:50

15:10 – 15:30

“SHIGH TEMPERATURE STUDIES OF GAMMA PRIME PRECIPITATION IN A W-RICH NICKEL-BASE SUPERALLOY USING SANS AND SAXS”
 Ralph Gilles, *TU Munich, Germany*

“X+: A COMPREHENSIVE STRUCTURE ANALYSIS TOOL FOR SOLUTION X-RAY SCATTERING FROM SUPRAMOLECULAR SELF-ASSEMBLIES”
 Uri Raviv, *The Hebrew University, Israel*

15:30

“TEMPORAL EVOLUTION OF MESOSCOPIC STRUCTURE DURING HYDRATION OF CEMENT”
 Subhasish Mazumder, *Bhabha Atomic Research Centre, India*

“TACKLING HIGH DATA RATES IN SAXS AND GISAXS”
 Stephan Roth, *DESY, Germany*

15:50

FLASH POSTER TALKS

Wed-F-M 1: Magnetism and Material Science

Chair: Randall Winans / Room: H 1058
 Posters P-M-01, P-M-03, P-M-04, P-M-10, P-M-19, P-M-20, P-M-22, P-M-24, P-M-27

FLASH POSTER TALKS

Wed-F-A 1: Data Analysis, Data Formats and Softwares

Chair: Michael Krumrey / Room: H 1012
 Posters P-A-02, P-A-03, P-A-08, P-A-18, P-A-24, P-A-28

16:20 – 17:10

17:10 – 17:20

17:20 – 18:30

THURSDAY, 17TH SEPTEMBER 2015

09:00 – 09:50

PLENARY SESSION 7

“HI-RESOLUTION, STRUCTURE, DYNAMICS, AND INTERACTIONS OF SUPRAMOLECULAR SELF-ASSEMBLIES”

Uri Raviv, *The Hebrew University of Jerusalem, Israel*

Chair: Dmitri Svergun / Auditorium H0104

09:50 – 10:20

Coffee Break Exhibition Area

10:20 – 12:00

ORAL PRESENTATIONS

Thu-C4: Colloids and Complex Fluids

Chair: Andrei Petukhov /

Room: H0110

ORAL PRESENTATIONS

Thu-F3: Functional and Hierarchical Materials

Chair: Joachim Kohlbrecher /

Room: H0104

10:20

“STRUCTURAL INVESTIGATIONS OF DETONATION NANODIAMONDS BY SMALL-ANGLE NEUTRON SCATTERING”

Oleksandr Tomchuk, *Joint Institute for Nuclear Research, Russian Federation*

“HIERARCHICAL SOFT MATTER SYSTEMS: STRIPED VESICLES, CUBOSOMES AND HEXOSOMES”

Liliana de Campo, *ANSTO, Australia*

10:40

“ANALYSIS OF THE CRITICAL CASIMIR EFFECT IN BINARY LIQUID MIXTURES BY VERY SMALL ANGLE NEUTRON SCATTERING (V-SANS)”

Guenter Goerigk, *Helmholtz-Zentrum Berlin, Germany*

“MEASUREMENT OF THE BURIED STRUCTURE OF BLOCK COPOLYMER LITHOGRAPHY PATTERNS USING RESONANT X-RAY SCATTERING”

R. Joseph Kline, *National Institute of Standards and Technology, United States*

11:00

“NANOMETER-SIZE POLYOXOMETALATES ANIONS ADSORB STRONGLY ON NEUTRAL SOFT SURFACES”

Olivier Diat, *ICSM, France*

“IN-SITU GISAXS INVESTIGATION OF ALUMINUM THIN FILM GROWTH ON NANOSTRUCTURED DIBLOCK POLYMER SUBSTRATES”

Björn Beyersdorff, *DESY, Germany*

11:20

“SOME GLOBULAR PROTEINS UNFOLDES BY SDS CAN BE REFOLDED BY ADDITION ON NONIONIC SURFACTANTS: A SAXS STUDY”

Jan Skov Pedersen, *Aarhus University, Denmark*

“IN-SITU SAXS AND X-RAY TRANSMISSION AS COMPLEMENTARY TOOLS TO STUDY ION ELECTROSORPTION IN CHARGED NANOCONFINEMENT”

Christian Prehal, *Montanuniversität Leoben, Austria*

11:40

“SURFACTANT-FREE MICROEMULSIONS AS INTERFACELESS DICHOTOMIC SOLVENTS”

Olivier Diat, *ICSM, France*

“ENTROPY DRIVEN TWO-DIMENSIONAL BINARY SUPERLATTICE OF A SWNT/ CYLINDRICAL-MICELLAR SYSTEM”

Sung-Min Choi, *KAIST, Republic of Korea*

12:00 – 13:30

Lunch Break Exhibition Area

Exhibition Open: 09:30 – 14:00
 Registration Desk Open: 08:00 – 18:00
 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 08:00 – 17:30

9:00 – 13:30 UHR

09:00 – 09:50

09:50 – 10:20

ORAL PRESENTATIONS

Thu-S3: Structural Biology

Chair: Uri Raviv /
 Room: H1058

ORAL PRESENTATIONS

Thu-T4: Instruments and Techniques

Chair: Elliot Gilbert /
 Room: H1012

10:20 – 12:00

“CORRELATION MAP: KNOWING THE DIFFERENCE”

Daniel Franke, *EMBL, Germany*

“COHERENT X-RAY DIFFRACTION IMAGING AT THE ESRF BEAMLINE ID10: POSSIBILITIES AND CHALLENGES”

Yuriy Chushkin, *European Synchrotron Radiation Facility, France*

10:20

“SAXS INVESTIGATION OF VIMENTIN ASSEMBLY AND BUNDLING: CONTINUOUS AND SEGMENTED MICROFLUIDICS APPROACH”

Oliva Saldanha, *Georg-August-University Göttingen, Germany*

“NEW METHODS FOR OPTIMISED HIGH THROUGHPUT AND HIGH QUALITY DATA ACQUISITION AT THE ESRF BIOSAXS BEAMLINE BM29”

Martha Brennich, *European Synchrotron Radiation Facility, France*

10:40

“MECHANISM OF FATTY ACID COMPLEXATION WITH PROTEINS STUDIED BY SMALL ANGLE X-RAY SCATTERING”

Henrik Vinther Sørensen, *Aarhus University, Denmark*

“MC SIMULATION OF X-RAY TRANSPORT TO STUDY IN VIVO PROTEIN-PROTEIN INTERACTION FRACTIONS USING EMPIRICALLY-BASED CROSS SECTION DATA”

Mina Choi, *University of Maryland College Park, United States*

11:00

“INTERPRETATION OF SWAXS DATA BY EXPLICIT-SOLVENT MOLECULAR H-DYNAMICS”

Jochen S. Hub, *Georg-August-University Göttingen, Germany*

“A NEW WORKING PLATFORM COMBINING RAMAN, X-RAY SCATTERING, X-RAY FLUORESCENCE AT BESSY II μ SPOT BEAMLINE FOR BIOLOGICAL MATERIALS”

Admir Masic, *Max Planck Institute of Colloids and Interfaces, Germany*

11:20

“AN APPROACH TO ESTIMATE RESOLUTION OF SAXS-BASED AB INITIO MODELS OF BIOLOGICAL MACROMOLECULES”

Anne Tuukkanen, *EMBL, Germany*

“COMBINING SAXS AND CRYSTALLOGRAPHY TO BUILD INTUITION IN INTERACTION NETWORKS AND MACROMOLECULAR ENGINEERING”

Greg Hura, *Lawrence Berkeley National Lab, U.S.A*

11:40

12:00 – 13:30

Table cont'd

THURSDAY, 17TH SEPTEMBER 2015

12:15 – 13:15	Lunch Session 5: Xenocs, ADVANCED DATA PROCESSING Auditorium H0104
13:30 – 15:00	PLENARY SESSION 8 Chair: Michael Gradzielski / Auditorium H0104 GUINIER PRIZE: LAUDATION (Jill Trehwella – <i>IUCr</i>) & LECTURE (Sow-Hsin Chen – <i>M.I.T.</i>) KRATKY PRIZE AWARD
15:00 – 15:30	Coffee Break Exhibition Area
15:30 – 17:00	HISTORY OF SAS: INTRODUCTION (A. Hoell – <i>HZB, Germany</i>) & LECTURE (Heinrich Stuhrmann) PRESENTATION SAS 2018 (Randal E. Winans, Jan Ilavsky & Pete Jemian – <i>Argonne National Laboratory, U.S.A</i>) Auditorium H0104
17:00 – 19:00	Free Time
19:00 – 23:00	Conference Dinner <i>TIPI am Kanzleramt</i> (Please refer to page 15)

- The plenary session's abstracts can be found on page 54.
All abstracts are available at www.sas2015.org

The TIPI is located in the vicinity of the Bundestag (Foto)
as well as other government buildings, e.g. Kanzleramt
Foto: Fotolia@daskleineatelier



THURSDAY

Exhibition Open: 09:30 – 14:00
Registration Desk Open: 08:00 – 18:00
Speaker Preview Room Open: 08:00 – 18:30
Poster Exhibition Open: 08:00 – 17:30

12:15 – 23:00 UHR

12:15 – 13:15

13:30 – 15:00

14:20 – 14:30

15:30 – 17:00

17:00 – 19:00

19:00 – 23:00

FRIDAY, 18TH SEPTEMBER 2015

09:00 – 09:50

PLENARY SESSION 9

“DYNAMICS OF POLYMERIC GLASSES”

Hyunjung Kim, *Sogang University, Seoul, Korea*

Chair: Franziska Emmerling / Auditorium H0104

09:50 – 10:20

Coffee Break Exhibition Area

10:20 – 12:00

ORAL PRESENTATIONS

Fri-D1: Dynamics

Chair: Hyunjung Kim / Room H0110

ORAL PRESENTATIONS

Fri-S4: Structural Biology

Chair: Lise Arleth / Room: H0104

10:20

“SINGLE SHOT COHERENCE PROPERTIES AND X-RAY PHOTON CORRELATION SPECTROSCOPY AT THE FREE-ELECTRON LASER SACLA”

Felix Lehmkuhler, *DESY, Germany*

“X-RAY IMAGING AND ANALYSIS OF KERATIN INTERMEDIATE FILAMENTS”

Clément Hémonnot, *University of Göttingen, Germany*

10:40

“NANOPARTICLE EMISSION AND STRUCTURE EVOLUTION DURING PULSED-LASER ABLATION IN LIQUID (PLAL)”

Anton Plech, *Karlsruhe Institute of Technology, Germany*

“COMBINED SAXS, HDX-MS AND RAMAN STUDY OF A LARGE INTRINSICALLY DISORDERED PROTEIN WHICH FOLDS UPON LIGAND BINDING”

Patrice Vachette, *CNRS, France*

11:00

“WATCHING QUANTUM DOTS GROW IN REAL-TIME USING TIME-RESOLVED SYNCHROTRON SAXS/WAXS”

Benjamin Abécassis, *CNRS / Université Paris Sud, France*

“THE DIMENSIONS OF INTRINSICALLY DISORDERED PROTEINS: A COMBINED SAXS AND SINGLE-MOLECULE FRET STUDY”

Gustavo Fierres, *EMBL, Germany*

11:20

“FOLLOWING NANOPARTICLE SELF-ASSEMBLY BY SAXS OF LEVITATING COLLOIDAL DROPLETS”

Michael Agthe, *Stockholm University, Sweden*

“A SWITCH CONTROLLING DNA NETWORKS, COMPACTION, AND BACTERIAL PATHOGENICITY”

Michal Hammel, *Lawrence Berkeley National Laboratory, United States*

11:40

“MS-TIME RESOLVED SAXS FROM FREE METAL CLUSTERS IN A SUPERSONIC MOLECULAR BEAM”

Heinz Amenitsch, *Graz University of Technology, Austria*

“SELF-ASSEMBLY OF MATRIX PROTEIN M1: pH DEPENDENCES REVEALED BY SAXS AND AFM”

Eleonora Shtykova, *A.V.Shubnikov Institute of Crystallography, Russian Federation*

12:00 – 13:30

Lunch Break Exhibition Area

12:00 – 13:00

Poster Dismantling

Exhibition Open: 09:30 – 14:00
 Registration Desk Open: 08:00 – 14:30
 Speaker Preview Room Open: 08:00 – 18:30
 Poster Exhibition Open: 09:00 – 12:00

9:00 – 13:30

09:00 – 09:50

09:50 – 10:20

ORAL PRESENTATIONS

Fri-1: Interface and Surfaces

Chair: Sung-Min Choi / Room: H1058

10:20 – 12:00

“TAILORING DIRECTIONAL HIERARCHICAL METAL-POLYMER NANOSTRUCTURES”

Stephan Roth, *DESY, Germany*

10:20

“A COMBINED NEUTRON REFLECTOMETRY AND ATR-FTIR STUDY ON THE EFFECTS OF SHEAR ON LIPID MEMBRANES”

Marcus Trapp, *Helmholtz-Zentrum Berlin, Germany*

10:40

“CONSTRAINT SURFACE DYNAMICS OF POLYSTYRENE THIN FILMS BY FUNCTIONALIZATION OF A SILSESQUIOXANE CAGE STUDIED BY XPCS”

Taiki Hoshino, *RIKEN, Japan*

11:00

“TRACING SELF-ASSEMBLY OF A SILICATROPIC TEMPLATE AND THE SUBSEQUENT FORMATION OF MESO-STRUCTURED ARRAYS OF GOLD NANOPARTICLES”

U-Ser Jeng, *National Synchrotron Radiation Research Center, Taiwan, R.O.C.*

11:20

“EXCIMER PACKING IN LANGMUIR-BLODGETT FILMS OF HEMICYANINE BASED AMPHIPHILIC CHROMO-IONOPHORES”

Maxim Shcherbina, *Enikolopov Institute of Synthetic Polymer Materials, Russia*

11:40

12:00 – 13:30

12:00 – 13:00

Table cont'd

Over 25 Years of Experience with Neutron Chopper Systems and Neutron Velocity Selectors (formerly Astrium)

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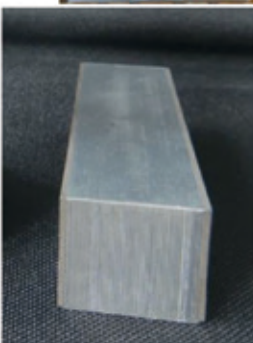
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contact:
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INVITED SPEAKERS



Roy Beck-Barkai

Homegrown at
Tel-Aviv University

Dr. Beck-Barkai completed his B.Sc. degree in physics and computer science and PhD in low-temperature solid-state physics. Seeking a way to combine physics with biology and medicine, he completed four years

post-graduate fellowship in biophysics at the University of California, Santa Barbara. At 2010, Dr. Beck-Barkai was recruited back to Tel-Aviv University to open an experimental interdisciplinary laboratory for biophysics. His research is focused on the biophysical understanding of the forces and interactions governing the self-assembly of biomolecules to functional nanoscopic structures including the organization principles of cytoskeleton proteins within the neuronal system, intrinsically disordered proteins, membranes and nano-complexes of lipids and proteins. The research combine various biochemical techniques to isolate and express desired products and advance microscopic and biophysical techniques such as small angle X-ray scattering to characterize the structures and their governing intermolecular forces.

↘ Abstract page 66

Wednesday, 16th September – 09:00



Anne-Laure Fameau

received her Ph.D. in Physical Chemistry from the *University of Nantes* in 2011. During her Ph.D, she developed responsive foams and interfaces based on fatty acid assemblies and worked at the Laboratory *Léon Brillouin* at *CEA Saclay* as well as the *French National Institute of Agricultural Research (INRA)* in Nantes. At the end of 2011, she obtained a permanent staff position at *INRA* in Nantes. In 2013, she stayed 6 months as visiting scientist in the group of Prof. Orlin Velev at *North Carolina State University* in the U.S.A. In 2014, she was awarded an Agreenskills Fellowship from the European Union to stay 6 months as visiting scientist in the group of Prof. Regine von Klitzing at *Technische Universität Berlin* in Germany.

✂ Abstract page 72

Friday, 18th September – 13:30



Otto Glatter

Otto Glatter is a retired Professor of Physical Chemistry at the *Karl-Franzens-University* in Graz, Austria and is now guest researcher at the *University of Technology* in Graz. He did his Ph.D. thesis in the group of Otto Kratky and his field of research in the 1970ies was small-angle X-ray scattering, theory and evaluation, following the traces

of Günther Porod. During this time he developed new numerical methods for the evaluation of scattering data, best known under the name *Indirect Fourier Transformation*. Direct calculation of scattering length density profiles became possible by a deconvolution technique of the pair distance distribution function for symmetrical structures. Later he broadened his interest in scattering

methods to neutron small-angle scattering, static and dynamic light scattering. Scattering data from interacting, concentrated systems can now be analyzed simultaneously in terms of intra- and inter-particle scattering contributions with the *Generalized Indirect Fourier Transformation method*.

In terms of applications he always focused on soft matter research, especially in self-assembly of amphiphilic molecules and finally on hierarchically organized and dense systems. He was awarded the Guinier prize 2012 at the SAS conference in Sydney and he was winner of the *Overbeek Gold Medal* 2013 of the *European Colloid and Interface Society ECIS*.

↘ Abstract page 64

Wednesday, 16th September – 09:00



Alexander Hexemer

holds B.S. and M.S. degrees in Physics from *Mainz University*. His Masters thesis was in collaboration with the *Max-Planck Institute for Polymer Science*. He earned his PhD in Materials Science under the guidance of Prof. Ed Kramer at the *University of California Santa Barbara*. Dr. Hexemer joined the Advanced Light Source at LBNL as a PostDoc to

develop a Small and Wide Angle X-ray Scattering beamline. He was awarded an outstanding performance award by the lab in the following year for the beamline and became a beamline scientist in 2007. He has authored over 95 peer-reviewed articles on topics ranging from copolymer ordering to the development of high performance computing algorithms on super computers. In 2013 he received a DOE Early Career Award for his proposal for a Light Source Toolkit. ↘ Abstract page 65

Wednesday, 16th September – 13:30

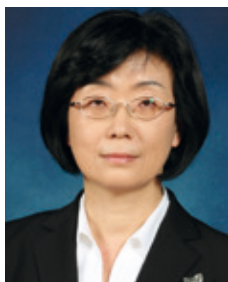


Bridget Ingham

is a Senior Research Scientist at *Callaghan Innovation* (formerly Industrial Research Ltd.). Following her PhD (Physics, VUW, 2005) she spent two years as a post-doc at Imperial College London and the Stanford Synchrotron Radiation Lightsource, where she developed her current expertise in the use of synchrotron techniques for investigating nanomaterials, particularly X-ray diffraction, small-angle X-ray scattering, and X-ray absorption spectroscopy.

She has used these techniques to study a wide variety of systems, including in situ observation of nanoparticle synthesis, oxidation, and coalescence; in situ observation of nanopore size and strain development during dealloying of bimetallic foils; in situ electrochemical deposition of ZnO, and CO₂ corrosion of steel; atomic structure of superconductors; atomic structure of dopant atoms in ZnO; transient crystalline phases that occur during the synthesis of conducting polymers; particle size distributions in sunscreen, paint, and milk. She has served as chair of the Proposal Advisory Committee for the small-angle X-ray scattering beamline at the Australian Synchrotron. [↘ Abstract page 57](#)

Monday, 14th September – 14:00



Hyunjung Kim

is Professor of Department of Physics at *Sogang University, Seoul, Korea* since 2002. She served as Chair of the Department from 2007 – 2009.

She has led an active research group with focus on coherent x-ray scattering to study dynamics and nanostructures, namely by X-ray Photon Correlation

Spectroscopy and Coherent X-ray Diffraction Imaging using synchrotrons and XFEL. Her research area includes general X-ray scattering on polymeric materials, energy-related materials, organic semiconductors, and nano-porous Zeolite materials.

Prof. Kim earned her Bachelor's and Master's degree from Sogang and Ph. D. from *Purdue University* in U.S.A. She was a Postdoctoral Fellow in Advanced Photon Source, *Argonne National Laboratory* and *University of California*, San Diego in U.S.A prior to joining the *Sogang University*. She received a Simke award for excellent achievement in Synchrotron science by Pohang Accelerator Laboratory in Korea. She has served as an International Advisory Committee member of Pohang Accelerator Laboratory and proposal review panels for several synchrotron and neutron scattering facilities, e.g., PETRA III, Pohang Light Source, and NIST. She has been a member of *Korean Synchrotron User Association Committee*, Korea since 2004.

She is elected as a chair for the “X-ray Science” of *Gordon Conference* in 2017 and will serve as a vice-chair in 2015.

Her research interests are in the field of responsive soft materials based on biomolecules with a particular emphasis on foams and interfaces. Her research is focused on the development of these systems and their detailed structural characterization using scattering techniques such as SAXS and SANS. ↘ Abstract page 71

Friday, 18th September – 09:00



Peter Müller-Buschbaum

is professor at *Technische Universität München*, heading the chair of Functional Materials in replacement of Professor Winfried Petry, since 2006. He is heading the keylab 'TUM.solar', which focuses on research of solar energy conversion and storage based on nanomaterials and acting head of the 'Network for Renewable Energies'

(NRG) of the 'Munich School of Engineering' (MSE) at *Technische Universität München*. He is the German representative at the 'European Polymer Federation' (EPF) for polymer physics and member and German representative of the 'European Synchrotron User Organization' (EUSO). He is elected chairman of the 'Hamburg User Committee' (HUC) at the synchrotron radiation laboratory *DESY* in Hamburg and Associate Editor of journal "ACS Applied Materials & Interfaces" of the *American Chemical Society*. His research focus is on polymer and hybrid nanostructures with special emphasis on advanced scattering experiments. [↘ Abstract page 62](#)

Tuesday, 15th September – 13.30



Dr. Alison Paul

*School of Chemistry,
Cardiff University, UK*

Interdisciplinary research in colloid science and drug-delivery.

Following a PhD (Bristol, 2001) designing novel surfactants for use with supercritical fluids I undertook post-doctoral positions in Bristol, Cardiff, and at *the Royal Institute of Technology (KTH)* in Stockholm, working on various surfactant, polymer and colloidal systems, with an emphasis on physico-

chemical characterisation techniques. After a year based in the *Welsh School of Pharmacy* as Senior Research Fellow and Project Manager of an EPSRC Platform Grant in Nanomedicines, I was appointed to the academic staff of the School of Chemistry in 2006, where I now run the Cardiff Soft Matter Research Group.

Small-angle scattering have underpins a large proportion of our research into drug delivery systems. We focus primarily on understanding the physical chemistry that underpins the therapeutic activity. To this end we work with a wide range of scientists in chemistry and other disciplines, from engineers, physicists and materials scientists to pharmacists, biologists and clinicians. A recent development has been in the exploration of computational methods for the study of soft matter in solution, and the interrelation with physical characterisation by SANS. [↘ Abstract page 54](#)

Monday, 14th September – 09:50



Heinrich Stuhrmann

is a retired Professor of Physical Chemistry. His mainly research-driven professional career led him from the home University Mainz to the Institute Laue-Langevin, Grenoble (1971-1973). Then in 1976 he accepted the position of the Head of the EMBL Outstation at DESY Hamburg. In 1986 he joined the Institute of Materials Research at GKSS

Geesthacht, where he led the Macromolecular Structures group. With the Umhabilitation for Experimental Physics in 1988, he joined the University of Hamburg. From 1997 till 2007 he was a visiting professor at the Institut de Biologie Structurale Jean-Pierre Ebel, Grenoble. His research focus has been and still is on methods of contrast variation in X-ray und neutron scattering. His life-long work was awarded by the Guinier Prize in 2006. [↘ Abstract page 68](#)

Thursday, 17th September – 15:30



Norman J. Wagner

is the Robert L. Pigford Chaired Professor of Chemical & Biomolecular Engineering at the *University of Delaware*.

He served as Chair of the Department from 2007 – 2012, and also the director of the *Center for Neutron Science* (www.cns.che.udel.edu). He leads an active research group with focus on the

rheology of complex fluids, neutron scattering, colloid and polymer science, applied statistical mechanics, nanotechnology and particle technology. His research areas include the effects of applied flow on the microstructure and material properties of colloidal suspensions, polymers, self-assembled surfactant solutions, and combinations thereof. Prof. He earned his Bachelors degree from Carnegie Mellon and Doctorate from *Princeton University*, was an NSF/NATO Postdoctoral Fellow in Germany, and a Director's Postdoctoral Fellow at *Los Alamos National Lab* prior to joining the University of Delaware in 1991. He was named a Senior Fulbright Scholar (Konstanz, Germany) and served as a guest Professor at the *ETH, Zurich* (1997) and the *University of Rome* (2004). His awards include the *Bingham Medal of the Society of Rheology* (2014) and the *AIChE PTF Thomas Baron Award* (2013). He is a fellow of the *Neutron Scattering Society of America*. He was awarded the Siple Award in 2002 by the US Army for his development of shear thickening fluids for novel energy absorbing materials (www.ccm.udel.edu/STF/). Prof. Wagner has authored or coauthored over 200 scientific publications and patents and has served on the editorial boards of six international journals. He has co-authored a textbook (2008) on Mass and Heat Transfer for the Chemical Engineering series of Cambridge University Press, as well as *Colloidal Suspension Rheology* (2011), also Cambridge University Press. He has developed commercial rheo-optic instruments as well as novel rheo-SANS instruments for investigating nanoscale and microscale structure in flowing systems. More about Professor Wagner and his research can be found at: www.cbe.udel.edu/wagner. ↘ Abstract page 59

Tuesday, 15th September – 09:00

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PLENARY SESSIONS' ABSTRACTS



All Session Abstracts can be found on the conference website at: sas2015.org

Plenary Session 1

Alison Paul, *Soft Matter Research Group, Cardiff University, Cardiff, Wales, UK*

“MOLECULAR HIDE AND SEEK IN AN HD WORLD”

Advances in small angle scattering instrumentation, facilities and data analysis methods allow an ever increasing level of detail on the structure of scattering entities to be extracted from small-angle scattering data. In this presentation case studies will be used to highlight the benefits and importance of complimentary data in building detailed structural knowledge of soft-matter systems. Examples will focus in particular on the construction and refinement of suitable models for well-hydrated polymers, using our work on polymeric systems designed as drug-delivery vectors. These polymer-drug conjugates (PDCs) have particular potential as anti-tumoral therapeutics, where the use of a biocompatible, water-soluble polymer carrier linked to a powerful chemotherapeutic molecule affords increased solubility of a hydrophobic drug, enhanced circulation times in the body and concentration of the active molecule to tumour sites where it is selectively released, thereby reducing toxicity and side-effects.

There is increasing recognition that the conformation adopted by these conjugates during transport and delivery processes can

significantly influence therapeutic performance,¹ but understanding the interplay between polymer, linker, drug and conformation is a challenge.^{2,3} To accelerate development of conjugates with potential clinical use^{4,5}, small-angle neutron scattering methods have been used to understand, predict and ultimately control the conformation adopted by model conjugates to provide target conformations.

Recently, we have developed molecular modelling techniques in an attempt to accurately simulate the solution behaviour of polymer-drug conjugates, with the intention of providing a fast-throughput screening mechanism as an alternative to synthesising large libraries of materials. This entails progressing from quantum chemistry calculations carried out in the gas phase, and with simple reaction field solvent models, to molecular dynamics simulations to investigate larger oligomers and eventually polymers up to ~35000 Da using reaction field, distance and explicit solvent models determine the correct solvent model and explore computational limits. Distance-distribution analyses from the centre of mass allow us to determine the distribution of different atom types throughout the structure, and in ongoing work, these protocols are being developed to provide a less computationally expensive methodology that will allow inclusion of explicit solvent molecules and study of larger and more complex conjugate molecules. Significant development work is required, but the methods have the possibility to provide atomic level information on conjugate structures adopted in solution.

Monday, 14th September – 09:50

-
- 1 K. Ulbrich, C. Konak, Z. Tuzar and J. Kopecek, *Makromol.Chem.*, 1987, 188, 1261.
 - 2 A Paul, M. J. Vicent and R. Duncan, *Biomacromolecules*, 2007, 8, 1573
 - 3 A. Paul, C. James, R. K. Heenan and R. Schweins, *Biomacromolecules*, 2010, 11, 1978; G Meleshko, J Kulhavy, A Paul, D J Willock, J A Platts, *RSC Advances*, 2014, 4, 7003
 - 4 I Conejos-Sanchez, I Cardoso, M Oteo-Vives, E Romero-Sanz, A Paul, A Ruiz Sauri, MA. Morcillo, M J. Saraiva, M-J. Vicent, *Journal of Controlled Release* 2015, 198, 80-9
 - 5 V Giménez, C James, A Armiñán, R Schweins, A Paul, M-J. Vicent, *J. Cont. Rel.*, 2012, 159(2), 290-301

DESY.

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DESY is one of the world's leading accelerator centres. DESY develops, builds and operates large accelerator facilities, which are used to investigate the structure of matter. The combination of photon science, particle physics and other disciplines on the campus is unique in Europe.

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Contact

If you are interested in performing experiments at FLASH or PETRA III please contact us: door@desy.de and visit our webpage: photon-science.desy.de.

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Plenary Session 2

Bridget Ingham, *The Mac Diarmid Institute for Advanced Materials and Nanotechnology, NZ*

“SAXS, ANOMALOUS SAXS, AND RESONANT SOFT X-RAY SCATTERING STUDIES OF NATIVE AND iron-FORTIFIED LIQUID MILK”

B. Ingham^{a,b} G. D. Erlangga^c, A. Smialowska^c, N. M. Kirby^d,
C. Wang^e and A. J. Carr^c

^a Callaghan Innovation, 69 Gracefield Road, Lower Hutt, New Zealand

^b The MacDiarmid Institute for Advanced Materials and Nanotechnology,
Victoria University of Wellington, Kelburn Parade, Wellington, New Zealand

^c School of Food and Nutrition, Massey University, Palmerston North, New Zealand

^d Australian Synchrotron, 800 Blackburn Road, Clayton, VIC 3168, Australia

^e Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley CA 94720, U.S.A

Most of the dietary calcium in milk is contained within casein micelles as so-called ‘colloidal calcium phosphate’ (CCP) nano-clusters around 2 – 3 nm in size. Various casein micelle models have been proposed, including the submicelle,¹ nano-cluster,² dual-binding³ and interlocking lattice models.⁴ Small-angle X-ray and neutron scattering (SAXS and SANS) have been used for several decades to study the internal structure of bovine casein micelles, but there is lingering controversy over the interpretation of the scattering data.² In SANS,⁵ and SAXS of dried powders but not of solutions,⁶ a feature at $q = 0.035 \text{ \AA}^{-1}$ is observed, which has previously been attributed to the submicelle size, interaction

1 C. W. Slattery and R. Evard, *Biochim. Biophys. Acta* 317 (1973) 529.

2 D. G. Dalgleish, *Soft Matter* 7 (2011) 2265.

3 D. S. Horne, *Colloids Surf. A* 213 (2003) 255.

4 D. J. McMahon and B. S. Oommen, *J. Dairy Sci.* 91 (2008) 1709.

5 P. H. Stothart, *J. Mol. Biol.* 208 (1989) 635.

6 J. P. Mata, P. Udabage and E. P. Gilbert, *Soft Matter* 7 (2011) 3837.

distance,⁵ or spacing of CCP particles.^{6,7} Finally, in SAXS, a feature at $q \sim 0.08\text{--}0.1 \text{ \AA}^{-1}$ is commonly attributed to the CCP form factor.⁵ de Kruijff et al. postulated that this may instead be due to protein inhomogeneities on a 1–3 nm length scale, since calculations of the CCP scattering from the size, density and number indicate that its contribution should be much lower than what is observed.⁷

To resolve this controversy, we conducted resonant soft X-ray scattering of bovine milk at the Ca $L^{2,3}$ -edges using beamline 11.0.1.2 at the *Advanced Light Source, Lawrence Berkeley National Laboratory*. This technique utilizes the wavelength tuneability of synchrotron radiation to obtain element-specific information about the scattering objects that are present. We observed a prominent resonant feature at $q = 0.035 \text{ \AA}^{-1}$ at the Ca $L^{2,3}$ edges.⁸ In contrast, no significant differences were observed at $q \sim 0.08\text{--}0.1 \text{ \AA}^{-1}$, supporting the hypothesis of de Kruijff et al. that this feature is primarily due to protein inhomogeneities, not to CCP particles.⁷

In addition, we have conducted a number of anomalous SAXS measurements and time-resolved SAXS experiments in the hard X-ray region using the SAXS/WAXS beamline at the Australian Synchrotron. The anomalous SAXS experiments were performed on iron-fortified milk at the Fe K-edge and show intensity differences in the vicinity of $q \sim 0.035 \text{ \AA}^{-1}$. The time-resolved measurements shed additional light on the internal micelle structure through an understanding of the chemical changes that occur.

Monday, 14th September – 14:00

7 C. G. de Kruijff et al., *Adv. Colloid Interface Sci.* 171 (2012) 36.

8 B. Ingham et al., *Soft Matter* 11 (2015) 2723–2725.

Plenary Session 3

Norman J. Wagner, *University Delaware, U.S.A*

“UNDERSTANDING THE RHEOLOGY OF COMPLEX FLUIDS THROUGH FLOW AND RHEO-SANS”

Norman J. Wagner

Robert L. Pigford Chaired Professor of Chemical & Biomolecular Engineering

Director, Center for Neutron Science

University of Delaware, Newark, DE 19711 U.S.A

Rheology with Morphology summarizes our goal for understanding the flow of complex fluids and soft matter, which is critical for understanding rheology as well the rational formulation of consumer products. I will present results obtained on new small angle neutron scattering sample environment instruments^{1,2} developed in collaborations with ILL, NIST, and TA Instruments that provide access to the microstructure governing the bulk rheological behavior of polymer-like micelles (PLMs, also known as worm-like micelles) that exhibit shear banding and shear-induced phase transitions,^{3,4} self-assembled block copolymer micelles that crystallize and shear melt,⁵ MLV formation from lamellar

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- 1 Gurnon, A. K.; Godfrin, P. D.; Wagner, N. J.; Eberle, A. P. R.; Butler, P.; Porcar, L., Measuring Material Microstructure under Flow Using 1–2 plane flow-Small Angle Neutron Scattering. *Journal of Visualized Experiments* 2014, e51068.
 - 2 Eberle, A. P. R.; Porcar, L., Flow-SANS and Rheo-SANS applied to soft matter. *Current Opinion in Colloid & Interface Science* 2012, 17, (1), 33–43.
 - 3 Gurnon, A. K.; Lopez-Barron, C. R.; Eberle, A. P. R.; Porcar, L.; Wagner, N. J., Spatiotemporal stress and structure evolution in dynamically sheared polymer-like micellar solutions. *Soft Matter* 2014, 10, (16), 2889–2898.
 - 4 Lopez-Barron, C. R.; Gurnon, A. K.; Eberle, A. P. R.; Porcar, L.; Wagner, N. J., Microstructural evolution of a model, shear-banding micellar solution during shear startup and cessation. *Physical Review E* 2014, 89, (4).
 - 5 Lopez-Baron, C. R.; Wagner, N. J.; Porcar, L., Layering, melting, and recrystallization of a close-packed micellar crystal under steady and large-amplitude oscillatory shear flows. *Journal of Rheology* 2015, 59, (3), 793 – 820.

surfactant solutions,⁶ colloidal gels,⁷ and shear thickening colloidal dispersions.⁸ Small angle neutron scattering under flow with spatiotemporal resolution enables developing nonequilibrium state diagrams connecting the nonequilibrium rheological properties to the underlying equilibrium phase behavior and influence of flow on that the self-assembled microstructure. It will be demonstrated how the combination of rheology, flow kinematics, and SANS measurements of flow-induced microstructure locally in the flow field can be used to critically evaluate theories for constitutive relationships. I will also discuss new methods for spatiotemporally resolved microstructure measurements under oscillatory and start-up flows. These experiments provide a quantitative understanding of the nonlinear rheological response of complex fluids and soft matter. These new instruments and analysis methods provide opportunities to rationally formulate complex fluids to meet specific performance requirements as well as new tools for fundamental scientific investigations.

Tuesday, 15th September – 09:00

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- 6 Gentile, L.; Behrens, M. A.; Porcar, L.; Butler, P.; Wagner, N. J.; Olsson, U., Multi-lamellar Vesicle Formation from a Planar Lamellar Phase under Shear Flow. *Langmuir* 2014, 30, (28), 8316-8325.
 - 7 Eberle, A. P. R.; Martys, N.; Porcar, L.; Kline, S. R.; George, W. L.; Kim, J. M.; Butler, P. D.; Wagner, N. J., Shear viscosity and structural scalings in model adhesive hard-sphere gels. *Physical Review E* 2014, 89, (5).
 - 8 Gurnon, A. K.; Wagner, N., Microstructure and rheology relationships for shear thickening colloidal dispersions. *Journal of fluid mechanics* 2015, 769 242- 276.

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Plenary Session 4

Oskar, Paris, *Institut für Physik, Montanuniversität Leoben, Austria*

“When space becomes tight: Fluid-solid interactions in Nanoconfinement probed by Small-Angle Scattering”

Advanced functional materials for sensing, actuation, catalysis, or energy storage are often based on highly porous solids with large surface area. They are typically organized at several length scales and their functionality critically depends on the structural details at all levels of hierarchy. Assessing the structure and mechanical properties of such systems at different length scales is still a considerable challenge. Moreover, the monitoring of structural changes due to the interaction of the internal solid surface with guest atoms, molecules, or ions calls for non-destructive, bulk-sensitive in-situ techniques. Small-Angle scattering belongs to the most important experimental methods in this respect.

We use nanoporous model materials based on silica or carbon to assess the behaviour of small molecular guests (e.g. water or pentane) in spatial confinement. Particularly for systems with highly monodisperse mesopores, in-situ SAS has become a powerful tool to study structural details of fluid sorption induced phenomena such as liquid film formation and capillary condensation, or freezing and melting transitions in confinement. SAXS and SANS can be uniquely combined, for instance, to shine new light on the peculiar phase behaviour of water in strong confinement at low temperatures¹.

On the other hand, the interaction of a fluid guest phase with the solid pore walls leads to a fluid-pressure dependent, non-monotonous deformation of the solid host material. Using tailor made materials with cylindrical mesopores on a highly ordered hexagonal pore lattice, this deformation can easily be monitored via the pore lattice strain from in-situ SAXS. The basic mechanisms of the adsorption induced deformation can be understood by combining fundamental principles of fluid thermodynamics with solid mechanics^{2,3}. The quantitative understanding of the macro-

scopic mechanical response becomes however challenging for complex systems such as mesoporous thin films on non-porous substrates⁴, or for macroscopic monoliths with hierarchical porosity⁵, which are both promising model systems for actuation devices.

Very recently, we have extended our studies to aqueous electrolytes in (disordered) microporous carbons as a function of an applied electrical potential. First results demonstrate that in-situ SAXS is an excellent tool to obtain a deeper understanding of the complex behaviour of ions within the micropores of such model supercapacitors [6].

Tuesday, 15th September – 13:30

-
- 1 M. Erko, D. Wallacher, A. Hoell, T. Hauss, I. Zizak, and O. Paris, *PCCP* 14, 3852 (2012).
 - 2 J. Prass, D. Mueter, P. Fratzl, and O. Paris, *Appl Phys Lett* 95, 083121 (2009).
 - 3 G. Y. Gor, O. Paris, J. Prass, P. A. Russo, M. L. Ribeiro Carrot, and A. V. Neimark, *Langmuir* 29, 8601 (2013).
 - 4 P. Sharifi, B. Marmioli, B. Sartori, F. Cacho-Nerin, J. Keckes, H. Amenitsch, and O. Paris, *Bioinspir Biomim Nan* 3, 183 (2014).
 - 5 C. Balzer, R. Morak, M. Erko, C. Triantafillidis, N. Husing, G. Reichenauer, and O. Paris, *Z Phys Chem* 229, 1189 (2015).
 - 6 C. Prehal, D. Weingarth, E. Perre, R. T. Lechner, H. Amenitsch, O. Paris, and V. Presser, *Energ Environ Sci* 8, 1725 (2015).

Plenary Session 5

Otto Glatter, *University Graz, Austria*

“FROM DILUTE SOLUTIONS TO HIERARCHICALLY ORGANIZED DENSE SYSTEMS – EVALUATION OF SCATTERING DATA FROM SOFT MATTER SAMPLES”

Scattering techniques like small-angle X-ray and neutron scattering (SAXS & SANS) complemented by static and dynamic light scattering (SLS and DLS) are widely used to study colloids and self-assembled amphiphilic systems. I will start off with diluted systems in order to establish the idea of model free data evaluation. The possibility to transform the scattering data from reciprocal space (scattering curve) back to real space (pair distance distribution function PDDF) with the Indirect Fourier Transformation (IFT) technique opened new ways of data interpretation, i.e. shape determination of monodisperse colloids. The deconvolution of the PDDF to the radial electron density distribution allowed the determination of the internal density profiles of micelles, lamellae and micro-emulsions. An important progress was possible with the incorporation of particle interactions in the evaluation technique (Generalized Indirect Fourier Transformation GIFT). This made it possible to study concentrated systems directly without dilution. It is well known that self-assembled systems can show structural changes with concentration. When studying hierarchically organized systems one wants to determine structural details in a wide size regime. That's where the combination of SAXS & SANS with SLS and DLS becomes important. While SLS is useful to study the static structure for systems up to several micrometers in size, DLS can help to get further information about diffusion dynamics of the sample studied, including the determination of the sol – gel transition. With modern instruments such studies can be time-resolved when studying material transfer in non-equilibrium systems. These experiments can also be performed in turbid samples. Typical results for the different systems discussed above with special emphasis to unexpected results will be presented.

Wednesday, 16th September – 09:00

Plenary Session 6

Alexander Hexemer, *Lawrence Berkeley National Lab, U.S.A*

“ADDRESSING THE DATA CHALLENGE IN SMALL ANGLE SCATTERING”

The advent of high brightness sources, fast detectors and the increasing need of time-resolved experiments in small angle scattering has created an unprecedented data deluge and the needs for combining X-ray science with computer science. Over the last few years we have worked closely with our computational research and supercomputer division to enable the use of supercomputers at scattering beamlines. The dream of such a superfacility would be immediate feedback for scientist during experiments. Such Real-time feedback to scientists during beamtimes is a capability critically needed, however, this dream has not been realized yet. Scattering methods like SAXS and GISAXS (Grazing Incidence Small Angle X-Ray Scattering) generates reciprocal space data that cannot be directly analysed for the underlying material structure. Rather, reverse Monte Carlo and other fitting methods are employed to reverse engineer the sample material. HipGISAXS (High Performance GISAXS) has been developed to run scattering simulations on massively parallel platforms such as the Oak Ridge Supercomputer Titan (OLCF), scalable to thousands of GPUs. Further, with inverse modelling algorithms available in HipGISAXS, such as particle swarm optimization, it can handle a large number of simulations simultaneously during the structure fitting process. In September of 2014 HipGISAXS was used in a real time demonstration that married the SAXS / WAXS beamline at the ALS with the data handling and processing capabilities at NERSC, and simulation capabilities of running at-scale simulations on Titan at OLCF. To accomplish the goal of real time data analysis, we fed the data management and workflow SPOT Suite infrastructure running at NERSC directly with data taken at the beamline. The data was reduced automatically and pushed into CADES at ORN using the high-performance data transfer capabilities of Globus Online. The demo involved the printing of organic photovoltaics using a slot-die printer installed at the SAXS / WAXS beamline. Over the

span of 3 days many different organic photovoltaics were printed at the beamline and the crystal structure evolution during drying was recorded using GIWAXS. The entire progress of data collection, movement and fitting was monitored on a web dashboard.

Wednesday, 16th September – 13:30

Plenary Session 7

Uri Raviv, Institute of Chemistry,
The Hebrew University of Jerusalem

“HI-RESOLUTION, STRUCTURE, DYNAMICS, AND INTERACTIONS OF SUPRAMOLECULAR SELF-ASSEMBLIES”

Using time-resolved solution x-ray scattering and advanced analysis tools, developed in our lab, we are investigating the high-resolution structure of tubulin, microtubule, and viruses. In combination with Monte Carlo simulations, we resolved at nearly atomic resolution, the exact manner by which wtSV40 packages its 5.2kb circular DNA about 20 histone octamers in the virus capsid. This structure, known as a mini-chromosome, is highly dynamic and could not be resolved by any microscopy methods¹. Using time-resolved solution SAXS, stopped-flow, and flow-through setups the assembly process of VP1, the major capsid protein of the SV40 virus, with RNA or DNA to form virus-like particles (VLPs) was studied in msec temporal resolution. By mixing the nucleotides and the capsid protein, virus-like particles formed within 35 msec, in the case of RNA that formed T=1 particles, and within 15 seconds in the case of DNA that formed T=7 particles, similar to wt SV40. The structural changes leading to the particle formation were followed in detail².

1 G. Saper et al. NAR, 41, 1569, 2013.

2 S. Kler et al. J. Am. Chem. Soc. 134, 8823, 2012.

Thursday, 17th September – 09:00

Plenary Session 8

GUINIER PRIZE LECTURE

Sponsored by:

Sow-Hsin Chen, *M.I.T.* Sow-Hsin Chen, *M.I.T.*



“FASCINATING AND SUSTAINED APPLICATIONS OF SMALL ANGLE SCATTERING METHODS TO ADDRESS CURRENT TOPICS IN SOFT MATTER SCIENCE”

This talk has time only to present brief recollection of very selective few successful applications of SAS method in solving important problems in the area of soft matter science. Limited time permits me to highlight only two aspects of research work in the last decades:

- 1) To examine a phase behavior predicted by mode-coupling theory (MCT) for a colloidal system with short-range attractive interaction. Especially to verify predictions of occurrence of phenomena such as the reentrant glass-to-glass transition and the presence of so-called A3 singularity in the phase diagram^{1,2,3}.
- 2) To confirm the existence of so-called Liquid-Liquid Phase Transition (LLPT) scenario in supercooled water and also the consequent existence of a second Liquid-Liquid Critical Point (LLPT) in a confined supercooled water through a series of density measurements of water confined in the silica pores of

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- 1 Chen, Wei-Ren, Sow-Hsin Chen, and Francesco Mallamace, “Small-angle neutron scattering study of the temperature-dependent attractive interaction in dense L64 copolymer micellar solutions and its relation to kinetic glass transition”, *Phys. Rev. E.* 66 (2), 021403-12 (2002).
 - 2 Chen, Wei-Ren, Francesco Mallamace, Charles J. Glinka, Emiliano Fratini, and Sow-Hsin Chen, “Neutron- and light-scattering studies of the liquid-to-glass and glass-to-glass transitions in dense copolymer micellar solutions,” *Phys. Rev. E.* 68, 041402 (2003).
 - 3 Chen, S.H., Wei-Ren Chen, and Francesco Mallamace, “The glass-to-glass transition and its end point in a copolymer micellar system,” *Science*, 300, 619-622 (2003).

MCM-41 over a range of high pressures and low temperatures leading to the determination of its phase diagram ^{4,5}.

HISTORY OF SAS

Heinrich Stuhmann, *IBS, Grenoble, France,*
and HZG Geesthacht, Germany

Small-angle scattering, as we understand it today, started with the introduction of the radius of gyration by A. Guinier in 1938. For a about two decades X-ray small angle scattering appeared to be the method of choice for structural studies for all kinds of materials. With the statistical approach of G. Porod small-angle scattering had reached a certain maturity. Things changed with the determination of the structure of myoglobin and hemoglobin from single crystal X-ray diffraction, at least for biological structure research. The role of SAS needed to be redefined. Fortunately, very soon thereafter, the advent of powerful neutron sources and brilliant synchrotron radiation opened new horizons, also for SAS. It is this period which will be presented.

Thursday, 17th September – 15:30

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- 4 Wang, Zhe, Kanae Ito, Juscelino B. Leão, Leland Harriger, Yun Liu, and Sow-Hsin Chen, "Liquid-liquid phase transition and its phase diagram in deeply-cooled heavy water confined in a nanoporous silica matrix," *J. Phys. Chem. Lett.* 6, 2009-2014 (2015).
 - 5 Zhang, Y., A. Faraone, W.A. Kamitakahara, K.H. Liu, C.Y. Mou, J.B. Leao, S. Chang, and S.H. Chen, "Density hysteresis of heavy water confined in a nanoporous silica matrix", *PNAS*, 108 (30), 12206 – 12211 (2011).

INTRODUCTION TO SAS 2018

Randall E. Winans, Jan Ilavsky and Pete R. Jemian

“ENERGY, ENVIRONMENT AND HEALTH”

Advanced Photon Source, Argonne National Laboratory,
9700 S. Cass Ave., Argonne, IL 60439 U.S.A

SAS2018 will be hosted by the Advanced Photon Source at the Grand Traverse Resort in Traverse City, Michigan, U.S.A on October 7 - 12, 2018. The conference will be centered on three themes addressing the critical needs of society in energy, environment and health. Sessions under energy can include: energy storage and production, renewable energy and catalysis. There will be environmental area sessions on transport in porous media, surface properties and nanogeoscience. Complex nucleoproteins, soft-matter self-assembly and cellular machines are included in the health theme. There are a number of areas to be covered which are important in all of the themes such as: combined in situ techniques, dynamics, kinetics, time resolved and advances in modeling and data analysis. Educating the community especially for SAS teachers is a common goal. The organizing committee will entertain suggestions for addition topics.

SAS2018 will serve to showcase the progress of small-angle scattering research in North America, including the many instruments at user facilities across the continent and the rich variety of research taking place. We expect that high-level researchers from around the world involved in all aspects of small-angle scattering research will attend and draw even greater participation in this conference by US researchers. The conference will also help to raise the visibility of the importance of small-angle scattering investigations in research and industry. We chose this venue to promote strong interactions among the conference participants and to return this conference to a more intimate setting, in the style of a Gordon Research Conference (GRC).

The Grand Traverse Resort facilities feature private boardrooms,

ballrooms, expansive conference centers, and outdoor function areas and is situated in the northwest corner of Michigan's lower peninsula along the shores of Lake Michigan's East Grand Traverse Bay (Figure 1). Direct flights are offered from major US international airports. At the time of the conference, weather will feature pleasant temperatures (typically high: 20 oC, low: 10 oC, low precipitation). Autumn colors will be on display. Several attractions are within an hour's drive of the resort including Sleeping Bear Sand Dunes National Lakeshore, Old Mission Peninsula, wine tasting, Interlochen Center for the Arts, Northwestern Michigan College Dennis Museum, Fish town of Leland, Music House Museum, Leelanau Sands Casino and Turtle Creek Casino. The majestic Mackinac Bridge and picturesque Mackinac Island are within a two-hour drive.

Thursday, 17th September – 16:30

Plenary Session 9

Hyunjung Kim, *Sogang University, Seoul, Korea*

“X-RAY FREE ELECTRON LASER STUDIES OF DYNAMICS OF POLYMERIC GLASSES”

The recent advent of hard x-ray free electron lasers (XFELs) opens new areas of science due to their exceptional brightness, coherence, and time structure. In principle, such sources enable studies of dynamics of condensed matter systems over times ranging from femtoseconds to seconds. However, the studies of “slow” dynamics in polymeric materials still remain in question due to the characteristics of the XFEL beam and concerns about sample damage. Recently we demonstrated the feasibility of measuring the relaxation dynamics of gold nanoparticles suspended in polymer melts using X-ray photon correlation spectroscopy (XPCS), while also monitoring eventual X-ray induced damage. In spite of inherently large pulse-to-pulse intensity and position variations of the XFEL beam, measurements can be realized at slow time scales. The X-ray induced damage and heating are less than initially expected for soft matter materials.

In this talk I will also review the studies of dynamics of polymers by XPCS with the third generation synchrotron source and discuss perspective on XFEL experiments.

This research was supported by the National Research Foundation of Korea funded by the Ministry of Science, ICT & Future Planning of Korea (No. R15-2008-006-01001-0 and 2014R1A2A1A10052454). Portions of this research were carried out at the Linac Coherent Light Source (LCLS) at the SLAC National Accelerator Laboratory. LCLS is an Office of Science User Facility operated for the U.S. Department of Energy Office of Science by Stanford University.

Friday, 18th September – 09:00

Plenary Session 10

Anne-Laure Fameau, *Biopolymères Interactions Assemblages*,
INRA Nantes, France

“MULTI-STIMULI RESPONSIVE FOAMS BASED ON LIPID MATERIALS”

Soft materials, such as foam and emulsion systems, which respond to external stimuli, are on the leading edge of materials research and have recently been of interest to many scientists. The macroscopic responsivity relies on the ability to react at microscopic or mesoscopic scales. Stimuli-responsive surfactants that can change their structure in response to a trigger such as pH, temperature or light have attracted great attention due to their versatile applications in various fields. A change in the molecular structure of the surfactant activated by stimuli can affect the self-assembled structure in water and the interfacial activity, which can in turn tune the properties at the macroscopic scale such as emulsion and foam stability. Responsive foams correspond to foams for which stability can be reversibly tuned between ultrahigh stability and immediate destabilization under stimuli ¹.

Fatty acids are anionic surfactants of particular interest since they can be extracted from agricultural resources and are available in large amount in nature. These biomolecules can be qualified as green surfactant with both biodegradability and low toxicity. Fatty acid molecules can self-assemble under various shapes in aqueous solution ². These self-assembled structures can respond to stimuli such as pH and temperature due to changes occurring at the molecular level ³. These specificities make them green surfactants of special interest to tune the foam stability.

Our approach to produce responsive foams from fatty acid self-assemblies is to use the links between the microscopic, mesoscopic and macroscopic scales. The prerequisite to produce these smart foams is a perfect understanding of the mechanisms leading to changes of self-assembled structures both in bulk and

at the air / water interface under stimuli. These structural changes are determined by neutron scattering. We will illustrate how both SANS and neutron reflectivity are fundamental techniques to obtain the key information to produce thermoresponsive foams (Fig.1a and 1.b)⁴. We will also discuss how these systems can be made to be photo – as well as magneto responsive (Fig. 1.c)^{5,6}. Systems, such as those presented here, could find application in a wide range of industrial and environmental processes that require controlled, non-contact and on-demand defoaming.

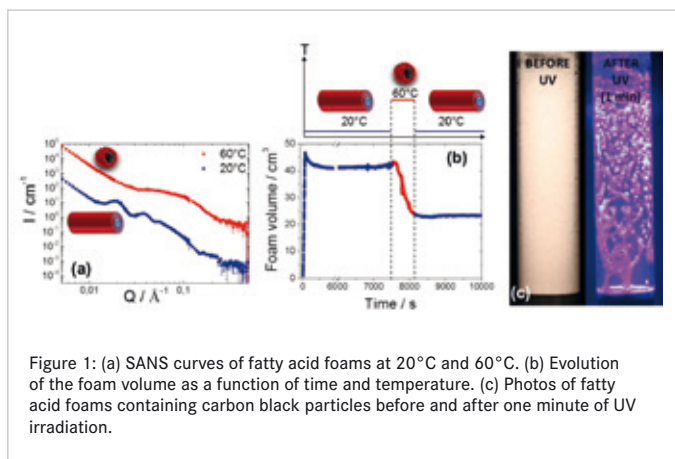


Figure 1: (a) SANS curves of fatty acid foams at 20°C and 60°C. (b) Evolution of the foam volume as a function of time and temperature. (c) Photos of fatty acid foams containing carbon black particles before and after one minute of UV irradiation.

Friday, 18th September – 13:30

- 1 Fameau et al., ChemPhysChem, 2015, 16, 66–75.
- 2 Fameau et al., Advances in Colloid and Interface Science, 2014, 207, 43–64.
- 3 Fameau et al., Current Opinion in Colloid and Interface Science, 2014, 19, 471–479.
- 4 Fameau, et al, Angewandte Chemie International Edition, 2011, 50, 8264 – 8269.
- 5 Fameau et al, Chemical Science, 2013, 10, 3874 –3881.
- 6 Fameau et al, Chemical Communications, 2015, 51, 2907–2910.

ORAL PRESENTATION SPEAKERS

SPEAKER	TITLE	SESSION
Benjamin Abécassis <i>CNRS, Université Paris Sud, France</i>	WATCHING QUANTUM DOTS GROW IN REAL-TIME USING TIME-RESOLVED SYNCHROTRON SAXS / WAXS	Fri-D1
Michael Agthe <i>Stockholm University, Sweden</i>	FOLLOWING NANOPARTICLE SELF-ASSEMBLY BY SAXS OF LEVITATING COLLOIDAL DROPLETS	Fri-D1
Heinz Amenitsch <i>Graz University of Technology, Austria</i>	MS-TIME RESOLVED SAXS FROM FREE METAL CLUSTERS IN A SUPERSONIC MOLECULAR BEAM	Fri-D1
Rob Atkin <i>University of Newcastle, Australia</i>	BULK NANOSTRUCTURE OF THE SOLVATE IONIC LIQUID [Li(G4)]TFSI AND CONFORMATION OF DISSOLVED POLYETHYLENE OXIDE	Tue-C3
Amelie Blanc <i>Université de Montpellier, France</i>	CHAIN SIGNAL IN NANOLATEX BASED NANOCOMPOSITES	Wed-P2
Björn Beyersdorff <i>DESY, Germany</i>	IN-SITU GISAXS INVESTIGATION OF ALUMINUM THIN FILM GROWTH ON NANOSTRUCTURED DIBLOCK POLYMER SUBSTRATES	Thu-F3
Peter Boesecke <i>European Synchrotron Radiation Facility, France</i>	ESRF ID01: A NEW BEAMLINE FOR NANOSTRUCTURE RESEARCH	Tue-T2
Martha Brennich <i>European Synchrotron Radiation Facility, France</i>	NEW METHODS FOR OPTIMISED HIGH THROUGHPUT AND HIGH QUALITY DATA ACQUISITION AT THE ESRF BIOSAXS BEAMLINE BM29	Thu-T4
Gary Bryant <i>RMIT University, Australia</i>	SAXS AND SANS STUDIES OF THE STRUCTRE OF CONCENTRATED HARD SPHERE SUSPENSIONS	Mon-C1
Oliver Bunk <i>Paul Scherrer Institut, Switzerland</i>	SCANNING SAXS IN THE CONTEXT OF OTHER IMAGING TECHNIQUES	Mon-L1/ O1
Gary Bryant <i>RMIT University, Australia</i>	SAXS AND SANS STUDIES OF THE STRUCTRE OF CONCENTRATED HARD SPHERE SUSPENSIONS	Mon-C2

Table cont'd

SPEAKER	TITLE	SESSION
Tsan-Yao Chen <i>National Tsing Hua University, Taiwan, R.O.C.</i>	SPACE AND CONFORMATION DESIGN ON CORE-SHELL STRUCTURED NANOCRYSTALLITES: AN IN-SITU SMALL ANGLE X-RAY SCATTERING INSPECT	Mon-C2
Sung-Min Choi <i>KAIST, Republic of Korea</i>	ENTROPY DRIVEN TWO-DIMENSIONAL BINARY SUPERLATTICE OF A SWNT/CYLINDRICAL-MICELLAR SYSTEM	Thu-F3
Mina Choi <i>University of Maryland College Park, United States</i>	MC SIMULATION OF X-RAY TRANSPORT TO STUDY IN VIVO PROTEIN-PROTEIN INTERACTION FRACTIONS USING EMPIRICALLY-BASED CROSS SECTION DATA	Thu-T4
Yuriy Chushkin <i>European Synchrotron Radiation Facility, France</i>	COHERENT X-RAY DIFFRACTION IMAGING AT THE ESRF BEAMLINE ID10: POSSIBILITIES AND CHALLENGES	Thu-T4
Joseph E. Curtis <i>NIST, United States</i>	CCP-SAS – A COMMUNITY CONSORTIUM FOR THE ATOMISTIC MODELLING OF SCATTERING DATA	Wed-A1
Olivier Diat <i>ICSM, France</i>	NANOMETER-SIZE POLYOXOMETALATES ANIONS ADSORB STRONGLY ON NEUTRAL SOFT SURFACES	Thu-C4
Olivier Diat <i>ICSM, France</i>	SURFACTANT-FREE MICROEMULSIONS AS INTERFACELESS DICHOTOMIC SOVENTS	Thu-C4
Sabrina Disch <i>Universität zu Köln, Germany</i>	DIRECTING THE ORIENTATIONAL ALIGNMENT OF ANISOTROPIC MAGNETIC NANOPARTICLES USING DYNAMIC MAGNETIC FIELDS	Wed-M1
Blaise Fleury <i>CEA Saclay, France</i>	STRUCTURAL DEFECTS IN COLLOIDAL GOLD NANOPARTICLES	Wed-M1
Daniel Franke <i>EMBL, Germany</i>	CORRELATION MAP: KNOWING THE DIFFERENCE	Thu-S3
Gustavo Fuertes <i>EMBL, Germany</i>	THE DIMENSIONS OF INTRINSICALLY DISORDERED PROTEINS: A COMBINED SAXS AND SINGLE-MOLECULE FRET STUDY	Fri-S4
Frank Gabel <i>Institut de Biologie Structurale, France</i>	SANS: A POWERFUL AND UNIQUE TOOL TO PROVIDE STRUCTURAL INSIGHT INTO LARGE PROTEIN-PROTEIN AND PROTEIN-RNA COMPLEXES	Mon-S1

Table cont'd

SPEAKER	TITLE	SESSION
Eliot Gann <i>Monash University, Australia</i>	TOPOGRAPHIC MEASUREMENTS OF BURIED THIN FILM INTERFACES BY GRAZING INCIDENCE SOFT X-RAY SCATTERING	Wed-P3
Christopher Garvey <i>ANSTO, Australia</i>	SAXS STUDY ON THE HIERARCHICALLY STRUCTURED NANOPARTICLES-CELLULOSE COMPOSITES: STRUCTURE AND INTERACTIONS	Tue-H3 / P1
Elliot Gilbert <i>ANSTO, Australia</i>	SIMULTANEOUS SANS AND DIFFERENTIAL SCANNING CALORIMETRY OF MICROPHASE SEPARATED ALKANE BLENDS	Wed-T3
Guenter Johannes Goerigk <i>Helmholtz-Zentrum Berlin, Germany</i>	ANALYSIS OF THE CRITICAL CASIMIR EFFECT IN BINARY LIQUID MIXTURES BY VERY SMALL ANGLE NEUTRON SCATTERING (V-SANS)	Thu-C4
Ian Hamley <i>University of Reading, United Kingdom</i>	SAS STUDIES OF SELF-ASSEMBLING LIPOPEPTIDES	Mon-H2
Michal Hammel <i>Lawrence Berkeley National Laboratory, United States</i>	A SWITCH CONTROLLING DNA NETWORKS, COMPACTION, AND BACTERIAL PATHOGENICITY	Fri-S4
Clément Hémonnot <i>University of Göttingen, Germany</i>	X-RAY IMAGING AND ANALYSIS OF KERATIN INTERMEDIATE FILAMENTS	Fri-S4
Dirk Honecker <i>Institut Laue-Langevin, France</i>	MAGNETIC SMALL-ANGLE NEUTRON SCATTERING OF SOFT-MAGNETIC NANOCOMPOSITES	Wed-M1
Taiki Hoshino <i>RIKEN, Japan</i>	CONSTRAINT SURFACE DYNAMIC OF POLYSTYRENE THIN FILMS BY FUNCTIONALIZATION OF A SILSESQUOXANE CAGE STUDIED BY XPCS	Fri-I1
Jochen S Hub <i>Georg-August-University Göttingen, Germany</i>	INTERPRETATION OF SWAXS DATA BY EXPLICIT-SOLVENT MOLECULAR DYNAMICS	Thu-S3
Pie Huda <i>University of Copenhagen, Denmark</i>	STRUCTURAL CHARACTERIZATION OF MAGNESIUM TRANSPORTER CORA BY SMALL-ANGLE X-RAY SCATTERING USING THE NANODISC	Tue-S2

Table cont'd

SPEAKER	TITLE	SESSION
Greg Hura, <i>Lawrence Berkeley National Lab, U.S.A</i>	COMBINING SAXS AND CRYSTALLOGRAPHY TO BUILD INTUITION IN INTERACTION NETWORKS AND MACROMOLECULAR ENGINEERING	Thu-T4
Ziad Ibrahim <i>Institut de Biologie Structural / Institut Laue Langevin, France</i>	STRUCTURAL, DYNAMICAL AND FUNCTIONAL STUDY OF THE PROTEASOME ACTIVATING COMPLEX (PAN)	Mon-S1
Marianne Impéror-Clerc <i>CNRS – Université Paris-Sud, France</i>	ULTRATHIN GOLD NANOWIRES: GROWTH MECHANISM AND SELF-ASSEMBLY	Mon-C2
Andrew Jackson <i>European Spallation Source, Sweden</i>	LOKI - A SANS INSTRUMENT FOR SOFT MATTER, MATERIALS AND LIFE SCIENCE AT THE ESS	Wed-T3
Sebastian Jaksch <i>Forschungszentrum Jülich, Germany</i>	SKADI – SMALL-K ADVANCED DIFFRACTOMETER AT THE ESS	Wed-T3
Pete R Jemian <i>Argonne National Laboratory, U.S.A</i>	ANOMALOUS SMALL ANGLE X-RAY SCATTERING OPERANDO ON A LITHIUM BATTERY AND CERAMIC FUEL CELL ASSEMBLIES	Wed-F2
U-Ser Jeng <i>National Synchrotron Radiation Research Center, Taiwan, R.O.C.</i>	TRACING SELF-ASSEMBLY OF A SILICATROPIC TEMPLATE AND THE SUBSEQUENT FORMATION OF MESOSTRUCTURED ARRAYS OF GOLD NANOPARTICLES	Fri-I1
Fumitoshi Kaneko <i>Osaka University, Japan</i>	STRUCTURAL STUDY ON SYNDIOTACTIC POLYSTYRENE COCRYSTALS BY A SIMULTANEOUS TIME RESOLVEDSANS / FTIR MEASURING SYSTEM	Wed-P3
Lukas Karge <i>Technische Universität München, Germany</i>	STABILITY AND GROWTH OF TAC PRECIPITATES IN CO-RE SUPERALLOYS FOR ULTRA HIGH TEMPERATURE APPLICATIONS STUDIED BY SANS	Wed-M2
R. Joseph Kline <i>National Institute of Standards and Technology, United States</i>	DIMENSIONAL METROLOGY OF NANOPATTERNS WITH SMALL ANGLE X-RAY SCATTERING FOR THE SEMICONDUCTOR INDUSTRY	Mon-L1 / O1
R. Joseph Kline <i>National Institute of Standards and Technology, United States</i>	MEASUREMENT OF THE BURIED STRUCTURE OF BLOCK COPOLYMER LITHOGRAPHY PATTERNS USING RESONANT X-RAY SCATTERING	Thu-F3

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Joachim Kohlbrecher <i>Paul Scherrer Institut, Switzerland</i>	POLARIZATION ANALYSIS IN NEUTRON SMALL ANGLE SCATTERING WITH A NOVEL TRIPLET DNP SPIN FILTER	Tue-T2
Petr Konarev <i>Institute of Crystallography RAS, Russian Federation</i>	QUANTITATIVE ASSESSMENT OF THE USEFUL ANGULAR RANGE FOR SMALL-ANGLE SCATTERING DATA FROM SOLUTIONS	Wed-A1
Michael Krumrey <i>Physikalisch-Technische Bundesanstalt, Germany</i>	SAXS, GISAXS AND ASAXS IN THE TENDER X-RAY RANGE	Mon-T1
Andreas Nørgård Larsen <i>University of Copenhagen, Denmark</i>	TUNABLE PEPTIDE-PHOSPHOLIPID SYSTEMS SELF-ASSEMBLY INTO BILAYERS THAT STABILISE MEMBRANE PROTEINS	Mon-H1
Felix Lehmkuhler <i>Deutsches Elektronen-Synchrotron DESY, Germany</i>	SINGLE SHOT COHERENCE PROPERTIES AND X-RAY PHOTON CORRELATION SPECTROSCOPY AT THE FREE-ELECTRON LASER SACLA	Fri-D1
Marianne Liebi Paul Scherrer Institut, Switzerland	COMBINING SCANNING SAXS WITH TENSOR TOMOGRAPHY: ORIENTATION ANALYSIS OF NANOSTRUCTURES IN 3D	Tue-T2
Liliana de Campo <i>ANSTO, Australia</i>	HIERARCHICAL SOFT MATTER SYSTEMS: STRIPED VESICLES, CUBOSOMES AND HEXOSOMES	Thu-F3
Gudrun Lotze <i>ESRF, France</i>	THE COUNTERION DISTRIBUTION AROUND DNA STUDIED BY ASAXS	Tue-S2
Reidar Lund <i>University of Oslo, Norway</i>	SELF-ASSEMBLY OF PEPTIDE-POLYMER CONJUGATES IN SOLUTION: STRUCTURE & CHAIN CONFORMATIONS	Mon-H1
Viviane Lutz-Bueno <i>ETH ZURICH, Switzerland</i>	MAPPING OF FLOW-INDUCED NANOSTRUCTURES IN COMPLEX FLUIDS BY COMBINING MICROFLUIDICS AND SCANNING-SAXS	Mon-C1
Benedetta Marmiroli <i>Graz University of Technology, Austria</i>	SAXS AND FREE JET MICROMIXER TO STUDY THE SUB MILLISECOND / MILLISECOND INTERACTION OF SILICA NANOPARTICLES WITH PROTEINS	Tue-T2

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SPEAKER	TITLE	SESSION
Admir Masic <i>Max Planck Institute of Colloids and Interfaces, Germany</i>	A NEW WORKING PLATFORM COMBINING RAMAN, X-RAY SCATTERING, X-RAY FLUORESCENCE AT BESSY II μ SPOT BEAMLINE FOR BIOLOGICAL MATERIALS	Thu-T4
Subhasish Mazumder <i>Bhabha Atomic Research Centre, India</i>	TEMPORAL EVOLUTION OF MESOSCOPIC STRUCTURE DURING HYDRATION OF CEMENT	Wed-M2
Amanda McDermott <i>National Institute of Standards and Technology, United States</i>	QUANTIFYING TIE-CHAIN CONTENT IN SEMICRYSTALLINE POLYOLEFINS WITH VAPOR-FLOW SMALL-ANGLE NEUTRON SCATTERING	Tue-H3 / P1
Janne-Mieke Meijer <i>Utrecht University, Netherlands</i>	SHAPE INDUCED PHASE TRANSITIONS IN CRYSTALS OF COLLOIDAL CUBES	Mon-C2
Jens Meissner <i>TU Berlin, Germany</i>	PROTEIN ADSORPTION ON NANOSTRUCTURED SURFACES: ACCESSING THE NANO-BIO INTERACTION BY SMALL ANGLE SCATTERING	Mon-H1
Derek Mendez <i>Stanford University, United States</i>	OBSERVATION OF TWINNING IN GOLD NANO-PARTICLES USING CORRELATED X-RAY SCATTERING (CXs)	Tue-T2
Haydyn Mertens <i>European Molecular Biology Laboratory, Germany</i>	SMALL-ANGLE SCATTERING STUDIES OF LARGE LIPIDIC MOLECULAR MACHINES: THE A-ATPASE ASSEMBLY	Mon-S1
Andreas Michels, <i>University of Luxembourg, Luxembourg</i>	ANISOTROPIC MAGNETIC CORRELATIONS IN NANOCOMPOSITES	Wed-M1
Søren Roi Midtgaard <i>University of Copenhagen, Denmark</i>	INVESTIGATING MEMBRANE PROTEINS USING NOVEL MATCH-OUT DEUTERATED DETERGENTS AND SANS	Mon-S1
Roland Morak <i>Montanuniversitaet Leoben, Austria</i>	SORPTION-INDUCED DEFORMATION OF HIERARCHICAL POROUS SILICA	Wed-F2
Kell Mortensen <i>University of Copenhagen, Denmark</i>	ENTANGLED POLYMER MELTS IN EXTENSIONAL FLOW	Wed-P2
Theyencheri Narayanan <i>European Synchrotron Radiation Facility, France</i>	NEW OPPORTUNITIES FOR TIME-RESOLVED ULTRA SMALL-ANGLE X-RAY SCATTERING AT THE ESRF	Mon-T1

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Yohei Noda <i>Japan Atomic Energy Agency, Japan</i>	THE FIRST EXPERIMENT OF SPIN CONTRAST VARIATION AT J-PARC BL15 TAIKAN	Wed-T3
Pierre Panine <i>Xenocs SA, France</i>	OUT-OF-EQUILIBRIUM STUDIES USING SIMULTANEOUS SAXS/WAXS INVESTIGATION	Wed-P3
Christine M. Papadakis <i>Technische Universität München, Germany</i>	CONONSOLVENCY OF WATER/METHANOL MIXTURES FOR PNIPAM AND PS-B-PNIPAM: PATHWAY OF AGGREGATE FORMATION INVESTIGATED USING TIME-RESOLVED SANS	Tue-H3 / P1
Jan Skov Pedersen <i>Aarhus University, Denmark</i>	HIGH-FLUX SAXS INSTRUMENT WITH LIQUID METAL JET SOURCE WITH AUTOMATED SAMPLE HANDLER AND STOPPED-FLOW APPARATUS	Mon-T1
Jan Skov Pedersen <i>Aarhus University, Denmark</i>	SOME GLOBULAR PROTEINS UNFOLDES BY SDS CAN BE REFOLDED BY ADDITION ON NONIONIC SURFACTANTS: A SAXS STUDY	Thu-C4
Stephen Perkins <i>University College London, United Kingdom</i>	THE ASYMMETRIC SOLUTION STRUCTURES OF NATIVE AND PATIENT MONOMERIC HUMAN IGA1 REVEAL NEW INSIGHTS ON IGA NEPHROPATHY	Tue-S2
Maxim Petoukhov <i>European Molecular Biology Laboratory, Hamburg Outstation, Germany</i>	AMBIGUITY ASSESSMENT OF SMALL-ANGLE SCATTERING CURVES FROM MONODISPERSE SYSTEMS	Tue-S2
Albrecht Petzold <i>Helmholtz-Zentrum Berlin, Germany</i>	CYTOCHROME C ADSORPTION ONTO CORE- SHELL MICROGELS ANALYSED BY ANOMALOUS SMALL-ANGLE X-RAY SCATTERING (ASAXS)	Mon-H1
Vitaliy Pipich <i>Forschungszentrum Jülich, Germany</i>	BIO-INSPIRED MINERALIZATION OF MAGNETITE NANOPARTICLES IN GELATIN HYDROGEL: A SMALL ANGLE SCATTERING INVESTIGATION	Wed-F1
Anton Plech <i>Karlsruhe Institute of Technology, Germany</i>	NANOPARTICLE EMISSION AND STRUCTURE EVOLUTION DURING PULSED-LASER ABLATION IN LIQUID (PLAL)	Fri-D1

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Christian Prehal <i>Montanuniversität Leoben, Austria</i>	IN-SITU SAXS AND X-RAY TRANSMISSION AS COMPLEMENTARY TOOLS TO STUDY ION ELECTROSORPTION IN CHARGED NANOCONFINEMENT	Thu-F3
Uri Raviv <i>The Hebrew University, Israel</i>	X+: A COMPREHENSIVE STRUCTURE ANALYSIS TOOL FOR SOLUTION X-RAY SCATTERING FROM SUPRAMOLECULAR SELF-ASSEMBLIES	Wed-A1
Adrian Rennie <i>Uppsala University, Sweden</i>	COEXISTING CRYSTAL AND MELT STRUCTURES IN COLLOIDAL BINARY MIXTURES	Tue-C3
Lea Hildebrandt Rossander <i>Technical University of Denmark, Denmark</i>	IN SITU SMALL ANGLE STUDIES OF ROLL-TO-ROLL COATED PEROVSKITE SOLAR CELLS	Mon-H2
Stephan Roth <i>DESY, Germany</i>	TACKLING HIGH DATA RATES IN SAXS AND GISAXS	Wed-A1
Stephan Roth <i>DESY, Germany</i>	TAILORING DIRECTIONAL HIERARCHICAL METAL-POLYMER NANOSTRUCTURES	Fri-I1
Kazuo Sakurai <i>University of Kitakyushu, Japan</i>	CHARACTERIZING SELF-ASSEMBLED NANOPARTICLES EMPLOYED IN DRUG DELIVERY: ADVANTAGE OF ANOMALOUS SAXS	Mon-H2
Kazuo Sakurai <i>University of Kitakyushu, Japan</i>	SHAPE PERSISTENCE MICELLES HAVING THE SAME AGGREGATION NUMBERS WITH THE PLATONIC SOLIDS	Tue-C3
Oliva Saldanha <i>Georg-August-University Göttingen, Germany</i>	SAXS INVESTIGATION OF VIMENTIN ASSEMBLY AND BUNDLING: CONTINUOUS AND SEGMENTED MICROFLUIDICS APPROACH	Thu-S3
Julien Schmitt <i>Lund University, Sweden</i>	OUTSET OF THE MORPHOLOGY OF NANO-STRUCTURED SILICA PARTICLES DURING NUCLEATION FOLLOWED BY USAXS	Wed-F1
Martin Schroer <i>DESY, Germany</i>	ORIENTATIONAL ORDER IN COLLOIDAL THIN FILMS AND CRYSTALS STUDIED BY X-RAY CROSS-CORRELATION ANALYSIS	Mon-C2

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Ralf Schweins <i>Institut Laue - Langevin, France</i>	CONTROLLING THE SELF-ASSEMBLY OF DENDRIMERS AND DYES: THE ROLE OF THERMODYNAMICS	Wed-F1
Maxim Shcherbina <i>Enikolopov Institute of Synthetic Polymer Materials, Russian Federation</i>	EXCIMER PACKING IN LANGMUIR-BLODGETT FILMS OF HEMICYANINE BASED AMPHIPHILIC CHROMOIONOPHORES	Fri-I1
Mitsuhiro Shibayama <i>The University of Tokyo, Japan</i>	STRUCTURE OF AMPHIPHILIC CO-NETWORK GELS	Wed-P2
Yuya Shinohara <i>The University of Tokyo, Japan</i>	DOES A LOW-Q UPTURN IN ULTRA-SMALL-ANGLE SCATTERING REFLECT MATERIAL'S STRUCTURE?	Mon-C2
Eleonora Shtykova <i>A.V.Shubnikov Institute of Crystallography, Russian Academy of Sciences, Russian Federation</i>	SELF-ASSEMBLY OF MATRIX PROTEIN M1: PH DEPENDENCES REVEALED BY SAXS AND AFM	Fri-S4
Peter Siffalovic <i>Slovak Academy of Sciences, Slovakia</i>	LABORATORY HI-RESOLUTION GISAXS APPARATUS FOR ADVANCED NANO-STRUCTURES	Mon-T1
Henrik Vinther Sørensen <i>Aarhus University, Denmark</i>	MECHANISM OF FATTY ACID COMPLEXATION WITH PROTEINS STUDIED BY SMALL ANGLE X-RAY SCATTERING	Thu-S3
Andreas Stadler <i>Forschungszentrum Jülich GmbH, Germany</i>	STRUCTURE AND H-DYNAMICS OF THE INTRINSICALLY DISORDERED MYELIN BASIC PROTEIN	Mon-S1
Peter Staron <i>Helmholtz-Zentrum Geesthacht, Germany</i>	PRECIPITATION KINETICS IN AN AL-MG-ZN ALLOY UNDER FRICTION STIR WELDING THERMAL CYCLES STUDIED BY HIGH-ENERGY SMALL-ANG	Wed-M2
Almut Stribeck <i>Universität Hamburg, Germany</i>	HAND-CAST AND MACHINE-PROCESSED THERMOPLASTIC POLYURETHANES. MORPHOLOGY EVOLUTION MECHANISMS UNDER STRAIN	Wed-P2

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Noemi Szekely <i>Forschungszentrum Jülich, Germany</i>	TIME RESOLVED SANS STUDY OF WOOD DISINTEGRATION IN IONIC LIQUID	Wed-F1
Mikihito Takenaka <i>Kyoto University, Japan</i>	FDDD PHASE IN DIBLOCK COPOLYMER MELTS	Wed-P2
Oleksandr Tomchuk <i>Joint Institute for Nuclear Research, Russian Federation</i>	STRUCTURAL INVESTIGATIONS OF DETONATION NANODIAMONDS BY SMALL- ANGLE NEUTRON SCATTERING	Thu-C4
Marcus Trapp <i>Helmholtz-Zentrum Berlin, Germany</i>	A COMBINED NEUTRON REFLECTOMETRY AND ATR-FTIR STUDY ON THE EFFECTS OF SHEAR ON LIPID MEMBRANES	Fri-I1
Wolfgang Treimer <i>Helmholtz Zentrum Berlin Wannsee, Germany</i>	LIMITS OF SMALL ANGLE SCATTERING: CALCULATION OF SCATTERING PATTERN INCLUDING PHASE SHIFT BY PARTICLE AND PARTIAL COHERENT ILLUMINATION	Mon-L1 / O1
Anne Tuukkanen <i>EMBL, Germany</i>	AN APPROACH TO ESTIMATE RESOLUTION OF SAXS-BASED AB INITIO MODELS OF BIOLOGICAL MACROMOLECULES	Thu-S3
Martin Uhlig <i>Technische Universität Berlin, Germany</i>	VARIOUS NANOCELLULOSE CRYSTALS – A SHAPE AND STABILITY INVESTIGATION	Mon-H2
Volker Urban <i>Oak Ridge National Laboratory, United States</i>	PROTEIN INCORPORATION INTO THE NANO- STRUCTURE OF BICONTINUOUS MICROEMULSIONS	Mon-C1
Patrice Vachette <i>CNRS, France</i>	COMBINED SAXS, HDX-MS AND RAMAN STUDY OF A LARGE INTRINSICALLY DISORDERED PROTEIN WHICH FOLDS UPON LIGAND BINDING	Fri-S4
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Gregory Warr <i>The University of Sydney, Australia</i>	NEUTRON SCATTERING STUDIES OF SELF-ASSEMBLY IN AMPHIPHILIC IONIC LIQUIDS	Tue-C3
Britta Weinhausen <i>ESRF - The European Synchrotron, France</i>	PTYCHOGRAPHY AND SCANNING SAXS WITH MICRO- AND NANO-BEAMS ON BONE SECTIONS	Wed-F1
Rudolf Winter <i>Aberystwyth University, United Kingdom</i>	ABSORPTION-CONTRAST SAXS OF THIN-FILM PHOTOVOLTAIC CHALCOPYRITE COATINGS	Wed-F2
Yi-Qi Yeh <i>National Synchrotron Radiation Research Center, Taiwan, R.O.C.</i>	DECODING THE UNFOLDING INTERMEDIATES OF BOVINE SERUM ALBUMIN USING SCANNING HPLC / SAXS / UV-VIS SYSTEM	Tue-S2
Federico Zontone <i>European Synchrotron Radiation Facility, France</i>	OPPORTUNITIES AND CHALLENGES WITH HIGH-ENERGY COHERENT X-RAYS AT THE ESRF BEAMLINE ID10	Mon-T1

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POSTERS

Colloids and Complex Fluids

NUMBER	NAME	POSTERS: COLLOIDS AND COMPLEX FLUIDS
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P-C-02	Philipp Buchold	VISCOSITY OF HYALURONIC ACID / SURFACTANT COMPLEXES NEW INSIDES TO AN OLD TOPIC
P-C-03	Gabriele Campanella	HOW DEFECTS ON LIPID MEMBRANES CAN BE INVESTIGATED FROM SMALL ANGLE X-RAY SCATTERING (SAXS) DATA
P-C-04	Marcelo Ceolin	SOLVENTE EFFECTS ON THE SUPRAMACROMOLECULAR STRUCTURE OF IONIC SELF ASSEMBLED AMPHIPHILIC MACROMOLECULES
P-C-05	Charlotte Conn	HIGH-THROUGHPUT SYNCHROTRON SMALL-ANGLE SCATTERING STUDIES ON LIPIDIC MESOPHASES FOR PROTEIN ENCAPSULATION
P-C-06	Roman Eremin	MICROSTRUCTURE OF FATTY ACID ORGANIC SOLUTIONS BY SANS COMBINED WITH MOLECULAR DYNAMIC SIMULATIONS
P-C-07	Guillaume Freychet	ANOMALOUS SMALL ANGLE X-RAY SCATTERING (ASAXS) STUDY OF BIMETALLIC CORE/SHELL NANOPARTICLES ➤ Flash Talk: Mon-F-C 1
P-C-08	Christopher Garvey	SHAPE AND VOLUME CHANGES IN OSMOTICALLY AND METABOLICALLY CHANGED HUMAN RED BLOOD CELLS BY USANS
P-C-09	Barbara Bianca Gerbelli	INVESTIGATION OF PHENYLALANINE OLIGOPEPTIDES ACTION ON LIPID BILAYERS ORGANIZATION
P-C-11	Roshan Deen GR	TIME-RESOLVED STUDY OF A NON-IONIC MICROEMULSION UPON TEMPERATURE QUENCH
P-C-12	Michael Gradzielski	COMPLEXES OF CHITOSAN AND OPPOSITELY CHARGED SURFACTANT - RICHNESS IN STRUCTURE AND PROPERTIES

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P-C-14	Armin Hoell	ASAXS INVESTIGATIONS ON BIMETALIC NANOPARTICLES SYNTHESIZED BY MICROWAVE ASSISTED METHOD
P-C-15	Severine Humbert	IMPACT OF THE SYNTHESIS CONDITIONS ON THE AGGREGATION OF BOEHMITE CRYSTALLITES: IN-SITU SAXS CHARACTERISATION
P-C-16	Avni Jain	ALIGNMENT OF SPINDLE-SHAPED PARTICLES IN A LIQUID JET STUDIED BY TIME RESOLVED SAXS EXPERIMENTS
P-C-17	Anke Kabelitz	TIME RESOLVED STUDIES ON THE FORMATION MECHANISM OF IRON OXIDE NANOPARTICLES USING COMBINED FAST-XANES AND SAXS

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POSTERS: COLLOIDS AND COMPLEX FLUIDS		
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P-C-19	Tae-Hwan Kim	SMALL ANGLE STUDY ON VARIOUS NANOSTRUCTURES OF AMPHIPHILIC MOLECULES IN AQUEOUS SOLUTION
P-C-20	Youli Li	LIQUID CRYSTAL REORIENTATION UNDER FLOW AT SOLID AND LIQUID INTERFACES: SAXS STUDIES IN A MICRO-FLUIDIC DEVICE 📌 Flash Talk: Mon-F-C1
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P-C-24	Carlos Lopez	MICROFLUIDIC-SANS: PROCESSING OF COMPLEX FLUID AND HIGH THROUGHPUT CHARACTERISATION
P-C-25	Reidar Lund	KINETIC PHENOMENA OF SURFACTANT MICELLES STUDIED BY TIME-RESOLVED SAXS
P-C-27	Takeshi Morita	AGGREGATION AND DISPERSION PROCESS OF POLYMER-CONJUGATED GOLD NANOPARTICLES USING MODEL-POTENTIAL-FREE METHOD
P-C-28	Henriette Mortensen	STRUCTURE OF PHOSPHOLIPID MIXED MICELLES (BICELLES) INVESTIGATED BY SMALL ANGLE X-RAY SCATTERING
P-C-29	Henriette Mortensen	A STRUCTURAL SAXS STUDY OF MYOGLOBIN AND -LACTALBUMIN IN COMPLEX WITH THE BIOSURFACTANT RHAMNOLIPID
P-C-30	Michihiro Nagao	CHARGE EFFECTS ON SHEAR THICKENING AND UNION FORMATION IN A NONIONIC SURFACTANT SOLUTION 📌 Flash Talk: Mon-F-C1
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P-C-35	Andrei Petukhov	TUNING THE COLLOIDAL CRYSTAL STRUCTURE OF MAGNETIC PARTICLES BY EXTERNAL FIELD
P-C-36	Beatrice Plazzotta	FORMATION, STABILITY AND TIME DEVELOPMENT OF POLYELECTROLYTE ASSEMBLIES
P-C-37	Beatrice Plazzotta	ANISOMERIC NANOASSEMBLIES FORMED BY THE ASSOCIATION OF PDADMAC WITH SDS AND DDM
P-C-38	Beatrice Plazzotta	TEMPERATURE DEPENDENCE IN SURFACTANTS CORE-SHELL MICELLES: CORE FREEZING AND SIZE SEGREGATION
P-C-39	Giuseppe Portale	GISAXS INVESTIGATION OF LARGE AREA GOLD-PNIPAM LINEAR ASSEMBLY
P-C-40	Koichiro Sadakane	SURFACTANT MOLECULES BEHAVING AS SURFACE-INACTIVE AGENTS
P-C-41	Hideki Sakai	MICELLE STRUCTURE IN A PHOTO-RESPONSIVE SURFACTANT FROM SMALL-ANGLE NEUTRON SCATTERING
P-C-42	Tilo Schmutzler	FORMATION OF ANISOTROPIC GOLD NANOPARTICLES WITH DIFFERENT MORPHOLOGIES ANALYSED BY UV-VIS SPECTROSCOPY, SAXS AND TEM
P-C-43	Martin Schroer	HIGH PRESSURE SAXS ON COLLOIDAL CRYSTAL SUSPENSIONS
P-C-44	Dina Sheyfer	LOCAL STRUCTURES IN GLASS-FORMING FLUIDS STUDIED BY HIGHER-ORDER INTENSITY CORRELATIONS
P-C-45	Yang Sun	UNFOLDING AND REFOLDING PATHWAY OF LYSOZYME INDUCED BY SODIUM DODECYL SULFATE
P-C-46	Wojciech Szczerba	METROLOGY OF MAGNETIC IRON OXIDE NANOPARTICLES
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P-C-49	Anja von Lospichl	SELF-ASSEMBLY OF UNILAMELLAR VESICLES: TOWARDS A GENERALIZED UNDERSTANDING OF BILAYER STRUCTURE AND KINETICS

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P-C-53	Po-Wei Yang	NOVEL BICELLS-DNA COMPLEXES
P-C-54	Fabiano Yokaichiya	NANOSTRUCTURED HYBRID DRUG-DELIVERY SYSTEMS FOR ULCERATIVE COLITIS TREATMENT: SMALL ANGLE X-RAY SCATTERING (SAXS) STUDY
P-C-55	Peng Zhang	IN SITU STUDY THE ASSEMBLY OF SPRAY-DEPOSITED GOLD NANOPARTICLES ON POLYMER SUBSTRATES USING GISAXS
P-C-56	Thomas Zinn	CRYSTALLIZATION IN MICELLAR CORES – MELTING POINT DEPRESSION AND INFLUENCE ON EXCHANGE KINETICS AS SEEN BY SMALL ANGLE N ▶ Flash Talk: Mon-F-C 1
P-C-57	Thomas Zinn	RHEO-SANS STUDY OF REVERSIBLE POLYMERIC GELS: SHEAR-INDUCED STRUCTURE FORMATION AND MELTING

Polymers

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P-P-02	Fabio Aquino	SMALL-ANGLE X-RAY SCATTERING INVESTIGATION OF PVDF MICROSTRUCTURE DUE TO EXPOSURE TO SUPERCRITICAL CO ₂
P-P-03	Wei-Taung Chuang	CONTROL OF INTERFACIAL MORPHOLOGIES BY COLUMNAR LIQUID-CRYSTALLINE PHASE IN DENDRON-JACKETED BLOCK COPOLYMERS
P-P-04	Sandra Desvergne-Bleneau	INVESTIGATION OF ANISOTROPIC STRUCTURES IN POLYMER MATERIALS USING USAXS
P-P-05	Aaron Eberle	MICROSTRUCTURAL ORIGINS OF YIELD, STRAIN HARDENING AND HYSTERESIS IN THERMOPLASTIC ELASTOMERS UNDER UNIAXIAL DEFORMATION
P-P-06	Masashi Harada	INSTALLATION FOR IN-SITU X-RAY SCATTERING MEASUREMENTS DURING POLYMER INJECTION MOLDING AT TOYOTA BEAMLINER Flash Talk: Wed-F-P1
P-P-07	Ingo Hoffmann	DIFFERENCES IN MESOSCOPIC STRUCTURE AND MACROSCOPIC FLOW BEHAVIOUR BETWEEN CATIONIC HEC / SDS AND PDADMAC/SDS MIXTURES
P-P-08	Yen-Chih Huang	STRUCTURE OF DNA-DENDRIMER COMPLEXES AND ITS IMPLICATION ON DNA-HISTONE INTERACTION IN NUCLEOSOME Flash Talk: Wed-F-P1
P-P-09	Jaroslav Janicki	NANOSTRUCTURE OF THE POLYMER-GRAPHENE COMPOSITES Flash Talk: Wed-F-P1
P-P-10	Jacques Jestin	SEMI-CRYSTALLINE POLYMER NANOCOMPOSITES: INTERPLAY OF MATRIX CRYSTALLIZATION AND NANOPARTICLE SELF-ASSEMBLY
P-P-11	Kim Johnston	STRUCTURE OF CHAIN-GRAFTED POLYSTYRENE-FULLERENE STAR SYSTEMS INVESTIGATED BY SANS
P-P-12	Farhad Jokari Sheshdeh	THERMOPLASTIC POLYURETHANES WITH VARYING HARD SEGMENT CONTENT. MORPHOLOGY EVOLUTION MECHANISMS UNDER STRAIN

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P-P-15	Kenneth D. Knudsen	THE INTERACTION OF PEO-PPO-PEO TRIBLOCK COPOLYMER WITH BILE SALT
P-P-16	Ivan Krakovský	SURFACTANT EFFECT ON THE STRUCTURE OF HYDROGELS INVESTIGATED BY SANS Flash Talk: Wed-F-P1
P-P-17	Xuke Li	POLYURETHANE MORPHOLOGIES AND THEIR RESPONSE TO STRAIN STUDIED BY SAXS
P-P-18	Sumit Mehan	OBSERVATION OF PROTEIN UNFOLDING AND REFOLDING WITH SELECTIVE SURFACTANTS Flash Talk: Wed-F-P1
P-P-19	Konrad Schneider	INVESTIGATION OF CAVITATION IN RUBBER UNDER HIGHLY CONSTRAINT CONDITIONS Flash Talk: Wed-F-P1
P-P-20	Dietmar Schwahn	IN OPERANDO STUDIES ON REVERSE OSMOSIS DESALINATION WITH Flash Talk: Wed-F-P1
P-P-21	Shigeru Shimizu	SMALL-ANGLE X-RAY SCATTERING FROM POLY(L-GLUTAMIC ACID) IN QUATERNARY AMMONIUM SALT AQUEOUS SOLUTIONS
P-P-22	Karol Vegso	THE FIRST LABORATORY IN-SITU GISAXS AND GIWAXS STUDIES OF THE SOLVENT AND THERMAL ANNEALINGS OF THE BULK HETEROJUNCTION Flash Talk: Wed-F-P1
P-P-24	Yi-Chin Wang	NETWORK STRUCTURES OF TRIBLOCK COPOLYMER BY TWO-STEP PHASE SEPARATION
P-P-25	Fabiano Yokaichiya	POLOXAMER-BASED HYDROGELS AS DRUG-DELIVERY SYSTEMS FOR MIGRAINE TREATMENT: SMALL ANGLE X-RAY SCATTERING (SAXS)
P-P-26	Xiaohan Zhang	SINGLE AND DOUBLE NETWORKS FROM AMPHIPHILIC STAR BLOCK COPOLYMERS

Functional and Hierarchical Materials

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P-F-02	Max Burian	SUPERMOLECULAR SELF-ASSEMBLY DYNAMICS OF PERYLENE BISIMIDES AND OXYGENIC POLYOXOMETALATES
P-F-03	Daniel Clemens	IN-OPERANDO SANS ANALYSIS OF LITHIUM SULFUR CELLS
P-F-04	Ruud den Adel	MESOSCALE STRUCTURES OF HOMOGENISED PLANT FIBERS STUDIED BY SAXS
P-F-05	Anne-Caroline Genix	MULTI-SCALE FILLER STRUCTURE AND DYNAMICS IN SIMPLIFIED INDUSTRIAL NANOCOMPOSITES
P-F-07	Yulia Gorshkova	ANALYSIS OF SMALL ANGLE NEUTRON SCATTERING FROM NANOCRYSTALLINE NIOBIUM CARBIDE POWDERS Flash Talk: Wed-F-F1
P-F-08	Natalia Grigoryeva	THE INTERNAL STRUCTURE OF THE SPHERICAL SILICA PARTICLES
P-F-09	Tilman A. Grünewald	CORE-SHELL NANOPARTICLES – INSIGHTS IN THEIR GROWTH AND DYNAMIC BEHAVIOR BY SMALL-ANGLE X-RAY SCATTERING Flash Talk: Wed-F-F1
P-F-10	Vasyl Haramus	HIGH THROUGHPUT METHOD TO CLASSIFY THE MODE OF ACTION OF NOVEL ANTIMICROBIAL COMPOUNDS
P-F-11	Thomas Hellweg	LINEARLY SWELLING NON-NIPAM BASED MICROGELS: STUDYING ARCHITECTURE BY SMALL ANGLE NEUTRON SCATTERING
P-F-12	Daniel Hermida Merino	CONTROLLED FIBRILLATION OF MONODISPERSE SELF-ASSEMBLED LOW MOLECULAR WEIGHT HYDROGELATORS
P-F-13	Jan Ilavsky	USAXS IN SITU QUANTIFICATION OF VOID NETWORK EVOLUTION DURING ANNEALING OF NANOMETER-SIZED YSZ

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P-F-15	Benedetta Marmiroli	GISAXS/WAXD CHARACTERIZATION OF MATERIALS MESO/MICROPOROSITY TUNED BY DEEP X-RAY LITHOGRAPHY FOR FLUIDICS APPLICATIONS Flash Talk: Wed-F-F1
P-F-16	Marta Martinez-Sanz	SMALL ANGLE SCATTERING TO INVESTIGATE THE INTERACTION MECHANISMS BETWEEN CELLULOSE AND PLANT CELL WALL POLYSACCHARIDES
P-F-17	Roland Johann Morak	STRUCTURAL CHARACTERISATION AND SORPTION-INDUCED DEFORMATION OF HIERARCHICAL SILICA MONOLITHS WITH ANISOTROPIC POROSITY
P-F-19	Christian Notthoff	UV-LASERSINTERING OF TiO ₂ NANOPARTICLES THIN FILMS INVESTIGATED BY GIWAXS AND RAMAN MEASUREMENTS Flash Talk: Wed-F-F1
P-F-20	Ronald Pandolfi	QUANTUM DOT LIQUID CRYSTAL MICRO-SHELL SELF ASSEMBLY Flash Talk: Wed-F-F1
P-F-21	Anton Plech	STRUCTURE FORMATION IN THE BULK LASER-IRRADIATED GLASSES
P-F-22	Ashley Roberts	USE OF IN-SITU SMALL ANGLE SCATTERING TO PROBE THE DYNAMIC STRUCTURE OF GRAPHENE-BASED MEMBRANES Flash Talk: Wed-F-F1
P-F-23	Ilya Roslyakov	CRYSTALLOGRAPHY-AFFECTED LONG-RANGE PORE ORDERING IN ANODIC ALUMINA FILMS
P-F-24	Barbara Sartori	SAXS STUDY OF SILICA MESOSTRUCTURE FORMATION IN THE GAS PHASE: THE EFFECT OF SOLVENTS COMPOSITION Flash Talk: Wed-F-F1
P-F-25	Maria Maddalena Schiavone	MICROSTRUCTURAL CHARACTERIZATION OF PEMs BASED ON SULFONATED S-PS IN THE DELTA CO-CRYSTALLINE PHASE Flash Talk: Wed-F-F1

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P-F-27	Teresa Sibillano	NANOSCALE CHARACTERIZATION AND IMAGING OF BIOLOGICAL SOFT TISSUES BY TABLE-TOP SMALL-ANGLE X-RAY SCATTERING SET-UP 📌 Flash Talk: Wed-F-F1
P-F-29	Cody Webb Jr.	FORMATION OF METAL-ORGANIC FRAMEWORKS STUDIED BY SAXS COMBINED WITH A STOP-FLOW SET-UP
P-F-30	Chenhui Zhu	RESONANT SOFT X-RAY SCATTERING STUDY OF LIQUID CRYSTAL HELICAL NANOFILAMENT STRUCTURE

Hybrid and Biomaterials

NUMBER	NAME	POSTERS: HYBRID AND BIOMATERIALS
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P-H-02	Elise Azar	INTERACTION BETWEEN HYBRID INCLUSIONS MEDIATED BY SURFACTANT MEMBRANES
P-H-04	Liubov Dadinova	INFLUENCE OF EMBEDDED GOLD NANOPARTICLES ON STRUCTURE OF DNA CHOLESTERIC LIQUID-CRYSTALLINE DISPERSION REVEALED BY SAXS 📌 Flash Talk: Mon-F-H1
P-H-05	Karen Edler	POLYMER STABILIZED PHOSPHOLIPID NANODISCS
P-H-06	Gerhard Findeneegg	MORPHOLOGY OF SURFACTANT AGGREGATES IN PORES STUDIED BY SANS
P-H-07	Raul Garcia-Diez	SIZE DETERMINATION OF A LIPOSOMAL DRUG BY SAXS USING CONTINUOUS CONTRAST VARIATION
P-H-08	Andrey Gruzinov	SAXS/WAXS STUDY OF PHASE TRANSITIONS IN STRATUM CORNEUM MODEL LIPID MEMBRANES

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NUMBER	NAME	POSTERS: HYBRID AND BIOMATERIALS
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P-H-10	Madhusudhanan Jambunathan	IN-SITU SMALL ANGLE X-RAY SCATTERING OF SINGLE HAIR FIBRE UNDER STRAIN Flash Talk: Mon-F-H1
P-H-12	Inkeri Kontro	REASSEMBLY OF SLPA OF L. BREVIS ON CATIONIC LIPOSOMES STUDIED BY SAXS Flash Talk: Mon-F-H1
P-H-13	Victoria Latza	SMALL ANGLE X-RAY SCATTERING (SAXS) OF THERMOPLASTIC PROTEIN: INTERLINK BETWEEN NANO-STRUCTURE AND THERMAL STABILITY
P-H-14	Anne Martel	UNDERSTANDING THE EFFECT OF CATIONS ON SILK FIBER FORMATION
P-H-16	Vitaliy Pipich	BIOMIMETIC MULTIFUNCTIONAL MAGNETITE / GEL COMPOSITES
P-H-17	Nobuhiro Sato	NANOSTRUCTURE OF WHEAT PROTEIN GLIADINS EXTRACTED IN WATER
P-H-18	Nitin Saxena	HYBRID THERMOELECTRICS BASED ON A POLYMER / NANOPARTICLE COMPOSITE
P-H-19	Johannes Schlipf	INVESTIGATING THE MORPHOLOGY OF MAPBI3-XCLX HIGHLY EFFICIENT PEROVSKITE SOLAR CELLS
P-H-20	Britta M. Seidt	A SMALL-ANGLE X-RAY SCATTERING STUDY OF BIOINSPIRED HYBRIDMATERIALS USING PEPTIDE PEO-CONJUGATES TO ADHERE MAGNESIUMFLUO
P-H-21	Ramsia Sreij	HIERARCHICALLY LINKED STRUCTURE AND DYNAMICS OF PHOSPHOLIPID VESICLES NEAR THE MAIN TRANSITION
P-H-22	Chun-Jen Su	COMPETITION BETWEEN ENTROPY AND ENTHALPY IN THE BINDING OF MELITTIN WITH ULV VESICLES AND THE ULV CHAIN LENGTH EFFECTS Flash Talk: Mon-F-H1
P-H-23	Cheng Wang	RESONANT SOFT X-RAY SCATTERING FOR SOFT MATERIALS Flash Talk: Mon-F-H1
P-H-24	Ching-Hsun Yang	USE SAXS AND SANS TO OBSERVE THE INTERACTION BETWEEN DIBLOCK-COPOLYMER PS-B-P4VPQ AND DNA IN SOLUTION

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P-H-25	Thomas Zander	SAS STUDIES ON THE INTERACTION OF DPPC AND HYALURONAN
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Magnetism and Material Science

NUMBER	NAME	POSTERS: MAGNETISM AND MATERIAL SCIENCE
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P-M-01	Eugen Anitas	EFFECT OF TRANSITION FROM SPIN GLASS TO FERROMAGNETIC STATE ON TRANSPORT IN $\text{La}_{0.54}\text{Ho}_{0.11}\text{Sr}_{0.35}\text{Mn}_{1-x}\text{Cr}_x\text{O}_3$ MANGANITES Flash Talk: Wed-F-M1
P-M-03	Roberto Coppola	COMPARATIVE SANS INVESTIGATION OF 9CR AND OF AISI304 OXIDE DISPERSION STRENGTHENED (ODS) STEELS FOR NUCLEAR APPLICATIONS Flash Talk: Wed-F-M1
P-M-05	Young-Soo Han	SMALL ANGLE NEUTRON SCATTERING STUDY OF OXIDE DISPERSION STRENGTHENED ALLOYS FOR FUTURE NUCLEAR APPLICATION
P-M-06	Maximilian Heinz	CHARACTERIZATION OF AG/AU NANOPARTICLES AS PREPARED BY ARF-EXCIMER LASER IRRADIATION BY MEANS OF SAXS AND ASAXS
P-M-08	Kenneth C. Littrell	FAST, QUANTITATIVE, AND NONDESTRUCTIVE EVALUATION OF HYDRIDED LWR FUEL CLADDING BY SMALL ANGLE INCOHERENT NEUTRON SCATTE
P-M-09	Kenneth C. Littrell	SMALL ANGLE NEUTRON SCATTERING – A POWERFUL TOOL TO STUDY MICROSTRUCTURE OF IRRADIATED REACTOR PRESSURE VESSEL STEELS
P-M-10	Kenneth C. Littrell	RADIATION TOLERANCE OF FE-CR-AL ALLOYS: ROLE OF AL AND CR ON PHASE STABILITY UNDER NEUTRON IRRADIATION Flash Talk: Wed-F-M1
P-M-11	Denis Mettus	MAGNETIC SANS CORRELATION FUNCTIONS OF BULK MAGNETIC MATERIALS

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NUMBER	NAME	POSTERS: MAGNETISM AND MATERIAL SCIENCE
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P-M-14	Yojiro Oba	SANS AND BRAGG-EDGE TRANSMISSION ANALYSIS USING PULSED NEUTRON
P-M-15	Masato Ohnuma	HETEROGENEITY IN MARTENSITE PHASE OF STEELS
P-M-16	Hiroshi Okuda	FORMATION OF LONG-PERIOD STACKING ORDERED STRUCTURED IN RAPIDLY/SLOWLY QUENCHED Mg ₈₅ Y ₉ Zn ₆ ALLOYS
P-M-17	Kanta Ono	OBSERVATION OF MAGNETIZATION REVERSAL PROCESS IN (ND,DY)-FE-B SINTERED MAGNETS USING MAGNETIC VSANS
P-M-18	Elio Alberto Périgo	SANS STUDY OF ND-FE-B SINTERED MAGNETS
P-M-02	Ilya Roslyakov	COMPACT SMALL-ANGLE SYNCHROTRON DIFFRACTION TECHNIQUE WITH TUNABLE PROBE SIZE: STUDY OF THE ANODIC ALUMINA MEMBRANE
P-M-20	Junji Saida	EVALUATION OF LOCAL STRUCTURE AND NANO QUASICRYSTAL-FORMATION IN Zr-BASED GLASSY ALLOYS CONTAINING NOBLE METALS Flash Talk: Wed-F-M1
P-M-21	Kotaro Saito	INITIAL MAGNETIZATION PROCESS OF NANOCRYSTALLINE ND-FE-B MAGNETS
P-M-22	Eunjoo Shin	CU PRECIPITATION ANALYSIS IN STEEL USING SANS Flash Talk: Wed-F-M1
P-M-23	Ivan Shishkin	STUDY OF TEMPERATURE BEHAVIOR OF CRITICAL FIELDS IN FERROMAGNETIC INVERSE OPAL-LIKE STRUCTURES
P-M-24	P. Strunz	FORMATION AND DISSOLUTION OF 'PRECIPITATES IN IN792 SUPERALLOY AT ELEVATED TEMPERATURES Flash Talk: Wed-F-M1
P-M-25	Tetsuro Ueno	MULTIPLE-SCATTERING EFFECT ON SMALL-ANGLE NEUTRON SCATTERING FOR ND-FE-B MAGNETS
P-M-26	Tetsuro Ueno	MAGNETIZATION REVERSAL PROCESS OF ND-FE-B NANOCRYSTALLINE MAGNETS OBSERVED BY MAGNETIC SANS

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P-M-28	Satoshi Yamazaki	QUANTITATIVE ANALYSIS OF NANOMETER PRECIPITATES IN COPPER FOIL BY USING SMALL-ANGLE X-RAY SCATTERING
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P-M-29	Satoru Yoshioka	DEFECT STRUCTURE IN CERIA / SILICA IRRADIATED WITH SWIFT HEAVY IONS
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Structural Biology

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P-S-01	Roi Asor	FOLLOWING VIRUS LIKE PARTICLES ASSEMBLY USING TIME RESOLVED SMALL ANGLE X-RAY SCATTERING
P-S-02	Linda Bruetzel	PROBING pH- AND CO-FACTOR DEPENDENT CONFORMATIONAL TRANSITIONS OF VON WILLEBRAND FACTOR BY SMALL ANGLE X-RAY SCATTERING
P-S-04	Jianhan Chen	ADVANCED SAMPLING AND ATOMISTIC MODELING FOR STRUCTURAL INTERPRETATION OF SMALL ANGLE SCATTERING
P-S-06	Angela Criswell	BISAXS-2000 ADVANCES FOR BIOLOGICAL SOLUTION SCATTERING
P-S-07	Liubov Dadinova	STRUCTURE OF INORGANIC PYROPHOSPHATASE AND OF ITS PROTEIN-PARTNERS IN SOLUTION STUDIED BY SAXS
P-S-09	Alessandra Del Giudice	STRUCTURAL INSIGHTS INTO THE SHAPE AND ASSEMBLY OF PHOTOSYNTHETIC GAPDH/CP12/PRK COMPLEX BY SMALL ANGLE X-RAY SCATTERING
P-S-10	Cedric Dicko	NEW LIGHTS ON MULTIMERIC ENZYMES – A COMBINATION OF CHROMATOGRAPHY, SAXS AND SPECTROSCOPY
P-S-11	Dominique DURAND	MODELING THE COMD/COME/COMCDE INTERACTION NETWORK USING SMALL ANGLE X-RAY SCATTERING
P-S-12	Lixin Fan	THE SMALL-ANGLE X-RAY SCATTERING CORE FACILITY OF CENTER FOR CANCER RESEARCH OF NATIONAL CANCER INSTITUTE
P-S-13	Sergio S. Funari	EFFECT OF UREA AND TMAO ON LIPID BILAYERS
P-S-14	Christopher Garvey	THE EFFECT OF ICE ON GLUCOSE DISTRIBUTION IN LIPID MESOPHASES
P-S-15	Yulia Gorshkova	SANS INVESTIGATION OF THE STRUCTURE AND INTERMEMBRANE INTERACTION OF THE ULVs DMPC IN THE SULFOXIDES PRESENCE
P-S-17	Gerhard Grüber	SOLUTION X-RAY STUDIES OF NAD ⁺ - and NADH-BOUND ALKYLHYDROPEROXIDE REDUCTASE FROM ESCHERICHIA COLI
P-S-18	Mitsuhiro Hirai	CROWDING EFFECT ON PROTEIN STRUCTURE STABILITY CLARIFIED BY X-RAY AND NEUTRON SCATTERING

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P-S-45	Mitsuhiro Hirai	INTERACTION OF AMYLOID- β PROTEIN WITH RAFT-MODEL LIPOSOME UNDER MIMIC ENVIRONMENT OF CELL
P-S-19	Greg Hura	COMBINING SAXS AND CRYSTALLOGRAPHY TO BUILD INTUITION IN INTERACTION NETWORKS AND MACROMOLECULAR ENGINEERING
P-S-20	Cy Jeffries	M.O.S.E.S: MICROSPLITTING FOR ONLINE SEPARATION, EXTENDED CHARACTERIZATION AND SAXS ANALYSIS
P-S-21	Cy Jeffries	ASSEMBLY OF A STRONG NANOROD FROM TANDEM CLAMPS OF SHORT PROTEIN REPEATS
P-S-22	Ashley Jordan	STRUCTURAL CHARACTERISATION OF CHROMATIN PROTEINS IN THE HUMAN MALARIAL PARASITE
P-S-23	Michael Kachala	EXTENSION OF SASCIF FILE FORMAT AND DEVELOPMENT OF SASCIFTOOLS
P-S-24	Mikhail Kiselev	CHARACTERIZATION OF THE PHOSPHOLIPID VESICLES VIA SANS AND SAXS
P-S-25	Alexandros Koutsoumpas	AB INITIO BIOMOLECULAR STRUCTURE RECOVERY AND THE HYDRATION LAYER
P-S-27	Bernhard Lehofner	LIPID CORE PHASE TRANSITION AND SHAPE MODIFICATION OF LOW DENSITY LIPOPROTEIN INDUCED BY HIGH HYDROSTATIC PRESSURE
P-S-28	Jan Lipfert	MEASURING INTRA-MOLECULAR DISTANCES BY ANOMALOUS SMALL-ANGLE X-RAY SCATTERING
P-S-29	Dmitry Molodenskiy	SERUM ALBUMIN CONFORMATIONAL CHANGES UNDER THERMAL INFLUENCE OBSERVED BY SMALL ANGLE X-RAY SCATTERING (SAXS)
P-S-30	Atsushi Mukaiyama	HEXAMERIZATION PROCESS OF CYANOBACTERIAL CLOCK PROTEIN KAI _C MONITORED WITH SAXS AND FLUORESCENCE SPECTROSCOPY
P-S-31	Efstathios Mylonas	STRUCTURE OF THE E.COLI CELL CYCLE REGULATOR 6S NON-CODING RNA AND ITS COMPLEX WITH RNA POLYMERASE 👉 Flash Talk: Mon-F-S1
P-S-32	Renata Naporano Bicev	SAXS TECHNIQUE APPLIED TO PROTEASOME 20S 👉 Flash Talk: Mon-F-S1

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P-S-35	Alejandro Panjkovich	DECIPHERING PROTEIN CONFORMATIONAL CHANGE THROUGH SMALL ANGLE X-RAY SCATTERING AND NORMAL MODE ANALYSIS
P-S-36	Alejandro Panjkovich	DARA: A DATABASE FOR RAPID SEARCH OF STRUCTURAL NEIGHBORS USING SOLUTION SMALL ANGLE X-RAY SCATTERING DATA
P-S-37	Javier Pérez	A PREEXISTING EQUILIBRIUM GOVERNS ELECTRON FLUX EFFICIENCY OF A BIDOMAIN DIFLAVIN REDUCTASE: COMBINED SAXS AND NMR STUDY
P-S-42	Javier Pérez	A COMPREHENSIVE MECHANISM OF FIBRIN NETWORK FORMATION FROM COUPLED TIME-RESOLVED SAXS AND MULTI-ANGLE LIGHT SCATTERING
P-S-38	Stephen Perkins	THE FLEXIBLE SOLUTION STRUCTURES OF MANNOSE-BINDING LECTIN-ASSOCIATED SERINE PROTEASES-1 AND -2 PROVIDE NOVEL INSIGHT ON
P-S-39	Georgy Peters	DEVELOPING METHODS OF NON-INVASIVE DIAGNOSTICS BASED ON SMALL-ANGLE X-RAY DIFFRACTION STUDIES OF ANIMAL HAIR FIBER Flash Talk: Mon-F-S1
P-S-40	Maxim Petoukhov	CRY SOL 3.0 – A NEW TOOL FOR COMPUTATION OF SOLUTION SCATTERING PROFILES FROM ATOMIC MODELS
P-S-41	Cristiano Luis Pinto Oliveira	STRUCTURAL CHARACTERIZATION OF LIPOPROTEINS UNDER OXIDATIVE AND TEMPERATURE STRESS
P-S-43	Shinya Saijo	SAXS STUDIES ON HUMAN PEPTIDYLARGININE DEIMINASE (PAD)
P-S-44	Heiner Santner	AVOIDING PROTEIN RADIATION DAMAGE IN SAXS: HOW A CLEVER COLLIMATION CONCEPT HELPS
P-S-46	Wuan Geok Saw	DYNAMIC FEATURES OF THE DENGUE VIRUS NS5 PROTEIN OF SEROTYPE 3 IN SOLUTION
P-S-47	Gundolf Schenk	THE POTENTIAL OF CSAXS (CORRELATED SAXS) FOR OBSERVING SUPERCOILS IN RANDOMLY ORIENTED ENSEMBLES OF DNA FRAGMENTS Flash Talk: Mon-F-S1

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P-S-49	Emerson R. Silva	SELF-ASSEMBLY OF A DESIGNED ALTERNATING ARGININE/PHENYLALANINE OLIGOPEPTIDE
P-S-50	Christopher Söderberg	SMALL ANGLE X-RAY SCATTERING STUDIES OF MOLECULAR CHAPERONE HSP21 AND CLIENT PROTEINS DURING HEAT STRESS Flash Talk: Mon-F-S1
P-S-51	Pernille Sønderby	INTERACTION AND STABILITY OF HUMAN SERUM ALBUMIN – A SAXS STUDY
P-S-53	Alessandro Spilotros	DEDICATED SETUPS AT BIO-SAXS P12 BEAMLINE FOR MICROFLUIDIC SCREENING AND KINETIC EXPERIMENTS
P-S-54	Ralf Stehle	STRUCTURE OF PROTEIN COMPLEXES DURING SPLICEOSOME ASSEMBLY
P-S-55	Masaaki Sugiyama	KINETICS OF SUBUNITS IN A-CRYSTALLIN AS STUDIED BY SMALL-ANGLE NEUTRON SCATTERING
P-S-56	Aurelien Thureau	SEC-SAXS AS FAST AS BATCH?
P-S-57	Mark Tully	ANOSAXS AT B21
P-S-58	Erica Valentini	SASBDB, A REPOSITORY OF SMALL ANGLE SCATTERING DATA AND MODELS
P-S-59	Leonie van 't Hag	EXPLORING THE IN MESO CRYSTALLIZATION MECHANISM BY USING SYNCHROTRON SMALL ANGLE X-RAY SCATTERING Flash Talk: Mon-F-S1
P-S-60	Shu-Ying Wang	FUNCTIONAL FLEXIBILITY OF THE INTERLEUKIN-1 RECEPTOR FAMILY
P-S-61	Thomas Weiss	BL4-2: THE BIOLOGICAL SMALL ANGLE X-RAY SCATTERING FACILITY AT SSRL
P-S-62	Shun Yu	STRUCTURAL STUDY OF PROTEINS AND THEIR COMPLEX FORMATION WITH POLYELECTROLYTES USING SMALL-ANGLE NEUTRON SCATTERING Mon-F-S1

Interfaces and Surfaces

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P-I-02	Sigrid Bernstorff	THE EFFECTS OF DEPOSITION CONDITIONS AND ANNEALING TEMPERATURE ON THE STRUCTURE AND MORPHOLOGY OF TA-N THIN FILMS
P-I-03	Sigrid Bernstorff	COMPARISON OF GISAXS AND AFM CAPABILITIES FOR SURFACE SWIFT HEAVY ION TRACK ANALYSIS
P-I-04	Sigrid Bernstorff	FORMATION DYNAMICS AND PLASMON PROPERTIES OF CU NANOPARTICLES
P-I-05	Gabriele Campanella	THERMODYNAMICS OF PROTEIN-NANOPARTICLE INTERACTIONS. A SAXS STUDY.
P-I-06	Henrich Frielinghaus	MICROEMULSIONS AT PLANAR WALLS WITH AND WITHOUT ADDITIVE
P-I-07	Gerhard Fritz-Popovski	DEFORMATION OF MICROPOROUS FILMS DURING ADSORPTION AND DESORPTION OF WATER
P-I-08	Shyjumon Ibrahimkutty	IN SITU GISAXS INVESTIGATION OF THE THERMAL STABILITY OF SELF-ORGANIZED RARE-EARTH SILICIDE NANOSTRUCTURES
P-I-09	Sebastian Jaksch	IBUPROFEN AND DRYING IN PHOSPHOLIP FILMS
P-I-10	Gunther Kellermann	IN SITU GISAXS STUDY OF THE KINETIC OF FORMATION AND GROWTH OF CoSi_2 NANOPATELETS BURIED IN $\text{Si}(001)$
P-I-14	Uri Raviv	LIPID STRUCTURE, LATERAL ORDER AND INTER-MEMBRANE FORCES 📌 Flash Talk: Mon-F-11
P-I-15	Emanuel Schneck	STANDING-WAVE X-RAY FLUORESCENCE PROBES ELEMENT PROFILES IN BIOMOLECULAR LAYERS WITH SUB-NANOMETER RESOLUTION
P-I-16	Emanuel Schneck	NEUTRON REFLECTOMETRY IDENTIFIES DIFFERENT MODES OF PROTEIN ADSORPTION ONTO POLYMER BRUSHES

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P-I-18	Beatrix-Kamelia Seidlhofer	LITHIATION OF A CRYSTALLINE SILICON ANODE FOR LITHIUM-ION BATTERIES Flash Talk: Mon-F-11
P-I-19	Randall Winans	DESIGNING POROUS OVER COATED CATALYTS WITH IN SITU SAXS
P-I-20	Shun Yu	METAL NANOSTRUCTURES ON TOP OF ALQ3 THIN FILM: A GISAXS STORY Flash Talk: Mon-F-11

Dynamics

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P-D-03	Elizabeth Kelley	INFLUENCE OF TAIL LENGTH MISMATCH ON THE STRUCTURE AND DYNAMICS OF PHOSPHOLIPID BILAYERS
P-D-04	Felix Lehmkuhler	CORRELATED HETEROGENEOUS DYNAMICS IN GLASS-FORMING POLYMERS
P-D-05	Dmitrii Lvov	MULTIPLE SMALL ANGLE NEUTRON SCATTERING AT HIGH CONCENTRATION OF INHOMOGENEITIES Flash Talk: Mon-F-D1
P-D-06	Kazuya Matsui	DYNAMICS NEAR GLASS TRANSITION TEMPERATURE OF IONIC LIQUID STUDIED BY X-RAY PHOTON CORRELATION SPECTROSCOPY
P-D-07	Gemma Newby	TIME RESOLVED X-RAY SCATTERING STUDIES OF PROTEIN UNFOLDING
P-D-08	Chikara Sasaki	XPCS INVESTIGATION OF THE DYNAMICS OF SILICA NANOPARTICLES IN SWOLLEN RUBBER
P-D-09	Grethe Vestergaard Jensen	A MICROFLUIDIC CHIP FOR SYNCHROTRON SAXS STUDIES OF PROTEIN KINETICS
P-D-10	Zhonghua Wu	SAXS STUDY ON THE GROWTH BEHAVIOR OF SILVER NANOPARTICLES
P-D-11	Fan Zhang	COHERENT X-RAY SCATTERING AT THE ULTRA-SMALL ANGLE REGIME
P-S-12	Lixin Fan	THE SMALL-ANGLE X-RAY SCATTERING CORE FACILITY OF CENTER FOR CANCER RESEARCH OF NATIONAL CANCER INSTITUTE
P-S-13	Sergio S. Funari	EFFECT OF UREA AND TMAO ON LIPID BILAYERS

Instruments and Techniques

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P-T-03	Clement E. Blanchet	THE P 12 BIOSAXS BEAMLINE OF EMBL HAMBURG
P-T-04	Joerg Bolze	A LABORATORY XRD PLATFORM ENABLING USAXS, SAXS, WAXS AND PDF MEASUREMENTS WITHIN A Q-RANGE OF ALMOST FIVE DECADES
P-T-05	Linda Bruetzel	A MO-BASED IN-HOUSE SOURCE FOR SAXS MEASUREMENTS ON BIOLOGICAL MACROMOLECULES
P-T-06	Fernando Cacho-Nerin	A SMALL ACTIVE BEAMSTOP FOR MICROFOCUSING BEAMLINES
P-T-07	Fernando Cacho-Nerin	A DEDICATED MICRO-NANOFOCUS FACILITY FOR X-RAY SCATTERING AT DIAMOND LIGHT SOURCE
P-T-08	Chun-Yu Chen	THE FIRST COHERENT X-RAY SCATTERING BEAMLINE AT TAIWAN PHOTON SOURCE
P-T-09	Andre L C Conceição	DEVELOPMENT OF AN APPROACH TO LOCALIZE AND TO IDENTIFY BIOLOGICAL SUPRAMOLECULAR STRUCTURES BY μ SAXS-CT IMAGES ➤ Flash Talk: Mon-F-T1
P-T-11	Charles Dewhurst	NON-STANDARD CONFIGURATION OF SANS INSTRUMENTS: MULTIPLE BEAM TECHNIQUES FOR VSANS, SCANNING AND MAGNIFIED IMAGING ➤ Flash Talk: Mon-F-T1
P-T-13	Artem Feoktystov	KWS-1 HIGH-RESOLUTION SMALL-ANGLE NEUTRON SCATTERING INSTRUMENT AT JCNS: CURRENT STATE
P-T-14	Stefan Fischer	COMPARISON OF MO AND CU X-RAY ENERGY FOR SAXS FROM WEAK SCATTERS IN SOLUTION
P-T-15	Sören Gayer	ACCURACY AND PRECISION OF ASAXS FORMALISMS ➤ Flash Talk: Mon-F-T1
P-T-16	Eike Gericke	ASAXS STRUCTURE INVESTIGATIONS OF SEMICONDUCTOR QUANTUM DOTS IN THE THENDER X-RAY RANGE ➤ Flash Talk: Mon-F-T1

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P-T-18	E. P. Gilbert	QUOKKA - THE 40 M PINHOLE SANS INSTRUMENT AT THE OPAL REACTOR
P-T-19	Christian Gollwitzer	A DIFFRACTION EFFECT INSIDE THE SENSOR LAYER OF X-RAY AREA DETECTORS
P-T-20	Annegret Günther	COMBINATION OF 3D-CROSS CORRELATION LIGHT SCATTERING WITH SMALL-ANGLE NEUTRON SCATTERING
P-T-66	Xiaoai Guo	A LABSCALE SAXS/WAXS EQUIPMENT FOR NANOSTRUCTURAL STUDIES OF NANOPARTICLES IN THE ELECTRICAL DISCHARGE SYNTHESIS PROCESS
P-T-67	Xiaoai Guo	DETERMINATION OF ABSOLUTE SCATTERING INTENSITIES USING A LAB-SCALE SAXS CAMERA
P-T-22	Björn Hansson	CURRENT STATUS OF THE LIQUID-METAL-JET X-RAY SOURCE TECHNOLOGY
P-T-23	Lilin He	GEOMETRIC CORRECTIONS OF THETUBE DETECTORS ON SANS INSTRUMENTS AT ORNL
P-T-24	Takaaki Hikima	THE CURRENT STATUS OF RIKEN STRUCTURAL BIOLOGY BEAMLINE I (BL45XU) IN SPRING-8
P-T-25	Armin Hoell	THE BESSY ASAXS DEDICATED INSTRUMENT - A REVIEW
P-T-26	Noriyuki Igarashi	NEW UNDULATOR SAXS BEAMLINE BL-15A2 AT THE PHOTON FACTORY 🔴 Flash Talk: Mon-F-T1
P-T-27	Jan Ilavsky	USAXS FACILITY FOR CHARACTERIZATION OF HIERARCHICAL STRUCTURES - FROM MICRONS TO ANGSTROMS IN LESS THAN 3 MINUTES
P-T-28	Kazuki Ito	ADVANCES IN SAXS INSTRUMENTS FOR HOME LABORATORY
P-T-29	Kazuki Ito	IN-SITU 2D SAXS AND 2D WAXS SIMULTANEOUS MEASUREMENT SYSTEM FOR HOME LABORATORY
P-T-30	Kazuki Ito	HYBRID PIXEL ARRAY DETECTOR FOR HOME LABORATORY SAXS INSTRUMENT

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P-T-32	Andreas Keilbach	NEW DEVELOPMENTS IN LABORATORY SMALL-ANGLE X-RAY SCATTERING INSTRUMENTATION
P-T-33	Ben Kent	INVESTIGATING PARTICLE FORMATION USING SMALL ANGLE NEUTRON SCATTERING WITH IN SITU DROPLET BASED MICROFLUIDICS
P-T-34	Andreas Kleine	UPGRADING SAXS SETUPS WITH INCOATEC'S SCATTERLESS PINHOLES AND/OR MICROFOCUS SOURCE 1µs
P-T-35	Satoshi Koizumi	CONTRAST VARIATION METHODS AVAILABLE FOR MULTI-COMPONENTS SMALL-ANGLE SCATTERING ANALYSIS
P-T-36	Manfred Kriechbaum	HYDROSTATIC HIGH-PRESSURE CELL FOR THE SAXS-BEAMLINE AT ELETTRA
P-T-37	Søren Kynde	NXUS, AN INDUSTRY PORTAL TO LARGE SCALE FACILITY SAXS AND SANS
P-T-38	Ana Labrador	THE ACHIEVEMENTS AT MAX IV LABORATORY DOING SAXS AT THE PERIPHERY OF A MULTIPOLE WIGGLER FAN
P-T-39	Na LI	NEW NCPSS BL19U2 BEAMLINE FOR SMALL-ANGLE X-RAY SCATTERING FROM BIOLOGICAL MACROMOLECULES IN SOLUTION ➤ Flash Talk: Mon-F-T1
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P-T-47	Brian Richard Pauw	AN ULTRA-SAXS INSTRUMENT ON A SHOESTRING BUDGET
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P-T-50	Giuseppe Portale	NEW SAXS/WAXS, MICROBEAM AND SURFACE SCATTERING CAPABILITIES AT THE BM26B-DUBBLE BEAMLINE AT THE ESRF Flash Talk: Mon-F-T1
P-T-51	Shuo Qian	DEVELOPMENT OF THE BIO-SANS AS A NEUTRON TOOLBOX FOR BIOMACROMOLECULES STUDY Flash Talk: Mon-F-T1
P-T-52	Aurel Radulescu	A NEW FAST DETECTION SYSTEM FOR THE HIGH-INTENSITY SANS DIFFRACTOMETER KWS-2 OF THE JCNS
P-T-53	Pierre Roblin	CONCEPTION AND DEVELOPMENT OF A POLYVALENT PIPETTING ROBOT DEDICATED TO LIQUID STATE EXPERIMENTS
P-T-54	Sergio Rodrigues	LATEST DEVELOPMENTS IN LABORATORY SAXS / WAXS SYSTEMS: TOWARDS BROAD, LARGER LENGTH SCALES AND DYNAMIC STUDIES
P-T-55	Sarah Rogers	SMALL-ANGLE NEUTRON SCATTERING AT ISIS
P-T-56	Vasyi Ryukhtin	RECENT DETECTOR UPGRADE OF HIGH-RESOLUTION SANS INSTRUMENT MAUD
P-T-57	Ralf Schweins	USANS AS OPTION FOR SANS INSTRUMENTS: THE UPGRADE OF D11@ILL AND AN OUTLOOK FOR LOKI@ESS
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P-T-62	Geert Vanhoyland	PUSHING THE LIMITS OF SAXS HOME LAB INSTRUMENTATION
P-T-63	Egor Vezhlev	NEW POLARIMETER FOR VECTOR ANALYSIS OF NEUTRON POLARIZATION. APPLICATION FOR SMALL ANGLE NEUTRON SCATTERING.
P-T-64	András Wacha	BUILDING AND OPTIMIZING A SAXS INSTRUMENT FROM THE BASICS – LESSONS LEARNED
P-T-65	Steven Weigand	SIMULTANEOUS OVERLAPPING SMALL, MEDIUM, AND WIDE ANGLE SCATTERING DATA COLLECTION ON DND-CAT'S NEW TRIPLE AREA DETECTOR

Dimensional Metrology by SAS

NUMBER	NAME	POSTERS: DIMENSIONAL METROLOGY BY SAS
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P-L-02	Eike Gericke	HIGH ORDERED SBA-15 POWDER WITH TUNABLE BRAGG PEAK POSITION AS SMALL-ANGLE CALIBRATION STANDARD FOR SAXS AND SANS
P-L-03	Kazuhiko Omote	GRAZING INCIDENCE SMALL ANGLE X-RAY SCATTERING FOR DETERRING NANOSCALE DEVICE STRUCTURE Flash Talk: Mon-F-L1
P-L-04	Mika Pflüger	MEASURING NANOSTRUCTURES WITHOUT BREAKING THEM: GISAXS FOR NANOMETROLOGY Flash Talk: Mon-F-L1

Data Analysis, Data Formats and Software

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P-A-01	Andrew J. Allen	A NEW NIST REFERENCE MATERIAL FOR SAXS INTENSITY CALIBRATION BASED ON GLASSY CARBON
P-A-02	Cassio Alves	SIMULATION AND MODELING OF SCATTERING PATTERNS FOR NANOSCALED SYSTEMS Flash Talk: Wed-F-A1
P-A-03	Yoshiyuki Amemiya	EFFECT OF MULTIPLE SCATTERING ON SMALL-ANGLE X-RAY SCATTERING AND X-RAY PHOTON CORRELATION SPECTROSCOPY Flash Talk: Wed-F-A1
P-A-04	Eugen Anitas	SCATTERING FROM SURFACE FRACTALS
P-A-05	Peter Boesecke	THE DATA ACQUISITION SYSTEM OF THE ESRF ID02 TRUSAXS BEAMLINE

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P-A-07	Emre Brookes	GENAPP FRAMEWORK FOR DEPLOYMENT OF SAS SOFTWARE
P-A-08	Emre Brookes	NEW DEVELOPMENTS IN THE ULTRASCAN SOLUTION MODELER (US-SOMO) HPLC-SAXS DATA ANALYSIS MODULE 📌 Flash Talk: Wed-F-A1
P-A-09	Maja Buljan	GisaxStudio: A PROGRAM FOR GISAXS ANALYSIS OF THREE DIMENSIONAL QUANTUM DOT LATTICES
P-A-11	Mathieu Doucet	SASVIEW: ANALYSIS PLATFORM FOR SMALL-ANGLE SCATTERING
P-A-13	Richard Gillilan	SIGNAL QUALITY, RADIATION DAMAGE, AND MICROFLUIDICS AT HIGH-FLUX X-RAY SOURCES
P-A-14	Christian Gollwitzer	AUTOSAXS – A NEW TOOL FOR SAS DATA FITTING
P-A-15	Alexander Holmes	SIMPLE BAYESIAN METHOD FOR IMPROVED ANALYSIS OF QUASI-TWO-DIMENSIONAL SCATTERING DATA
P-A-16	Pete Jemian	THE CANSAS FORMAT FOR SINGLE AND MULTI-DIMENSIONAL REDUCED SMALL-ANGLE SCATTERING DATA
P-A-17	Al Kikhney	ATSAS 2.7 – AUTOMATED PROCESSING AND ADVANCED INTERPRETATION OF SCATTERING FROM ISOTROPIC SYSTEMS
P-A-18	Al Kikhney	AUTOMATED ANALYSIS OF DATA FROM HIGH-THROUGHPUT BIOLOGICAL SOLUTION SAXS EXPERIMENTS 📌 Flash Talk: Wed-F-A1
P-A-19	Petr Konarev	RAPID AUTOMATED SUPERPOSITION OF HIGH AND LOW-RESOLUTION MODELS USING SPHERICAL HARMONICS
P-A-20	Dinesh Kumar	AUTOMATION OF DATA CALIBRATION FOR GISAXS AND GIWAXS EXPERIMENTS
P-A-21	Zhihong Li	A PROGRAM FOR SAXS DATA PROCESSING AND ANALYSIS

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P-A-24	Javier Pérez	MEMPROT: A PROGRAM TO MODEL THE DETERGENT CORONA AROUND A MEMBRANE PROTEIN, BASED ON SEC-SAXS DATA Flash Talk: Wed-F-A 1
P-A-25	Vitaliy Pipich	NEED SOFTWARE FOR SA.S DATA? WHY NOT TO TRY QTIKWS?
P-A-31	Robert Rambo	INCREASING THE RESOLUTION OF SAXS-DERIVED AB INITIO MODELS
P-A-26	Adam Round	ISPYB AND ADVANCED DATA ANALYSIS: THE POTENTIAL FOR FULLY AUTOMATED AND EFFICIENT HIGH THROUGHPUT BIOSAXS EXPERIMENTS
P-A-27	P. Strunz	EVALUATION OF ANISOTROPIC SMALL-ANGLE SCATTERING DATA FROM METASTABLE BTI ALLOYS
P-A-28	Olivier Taché	PYSAXS, AN OPEN SOURCE PYTHON PACKAGE AND GRAPHIC USER INTERFACE FOR SAXS DATA TREATMENT Flash Talk: Wed-F-A 1
P-A-29	Singanallur Venkatakrishnan	ADVANCED IMAGING ALGORITHMS FOR GISAXS Flash Talk: Wed-F-A 1
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P-O-03	Yurii Larichev	SAXS STUDY OF SUPPORTED METAL CATALYSTS: TECHNIQUES AND PERSPECTIVES
P-O-04	Brian Richard Pauw	LIVING WITH A SAS WEBLOG: HIGHLIGHTS AND LESSONS LEARNT
P-O-05	Brian Richard Pauw	THE FUTURE OF SCATTERING: AN OPINION
P-O-06	Guang Wang	PHASE TRANSITION INDUCED BY 1-BUTANOL ON BINARY ASSEMBLIES OF SODIUM DODECYL SULFONATE AND WATER
P-O-07	Hailiang Zhang	SASCALC – A FAST AND COMPREHENSIVE SCATTERING CALCULATOR FOR CHEMICAL AND BIOLOGICAL SYSTEMS

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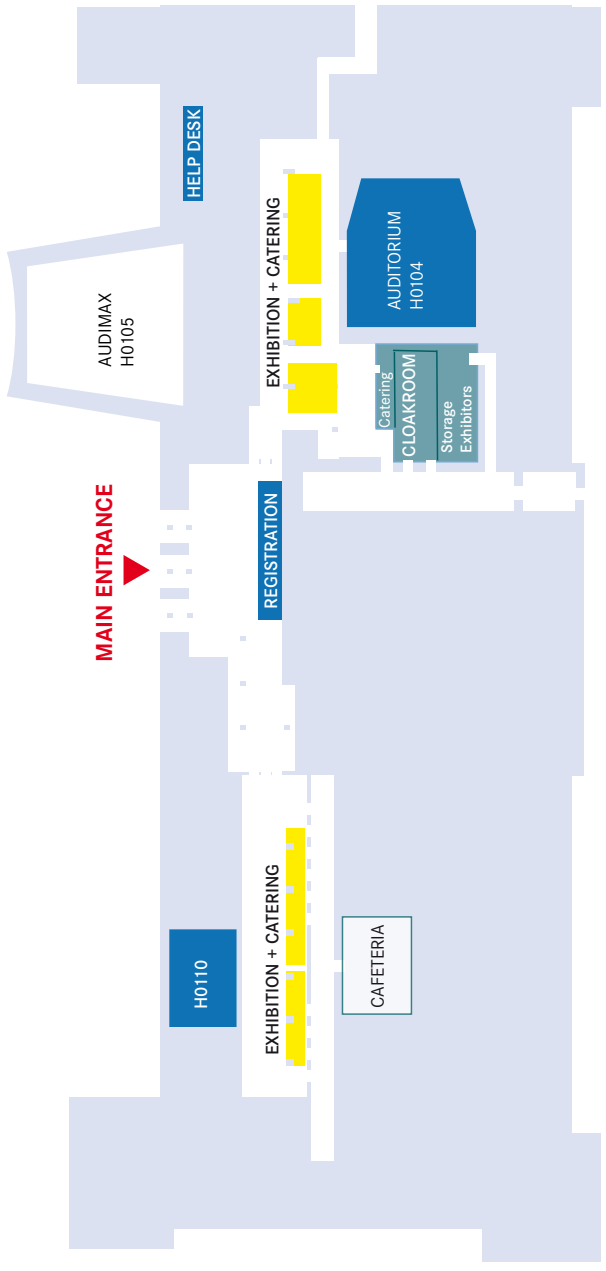


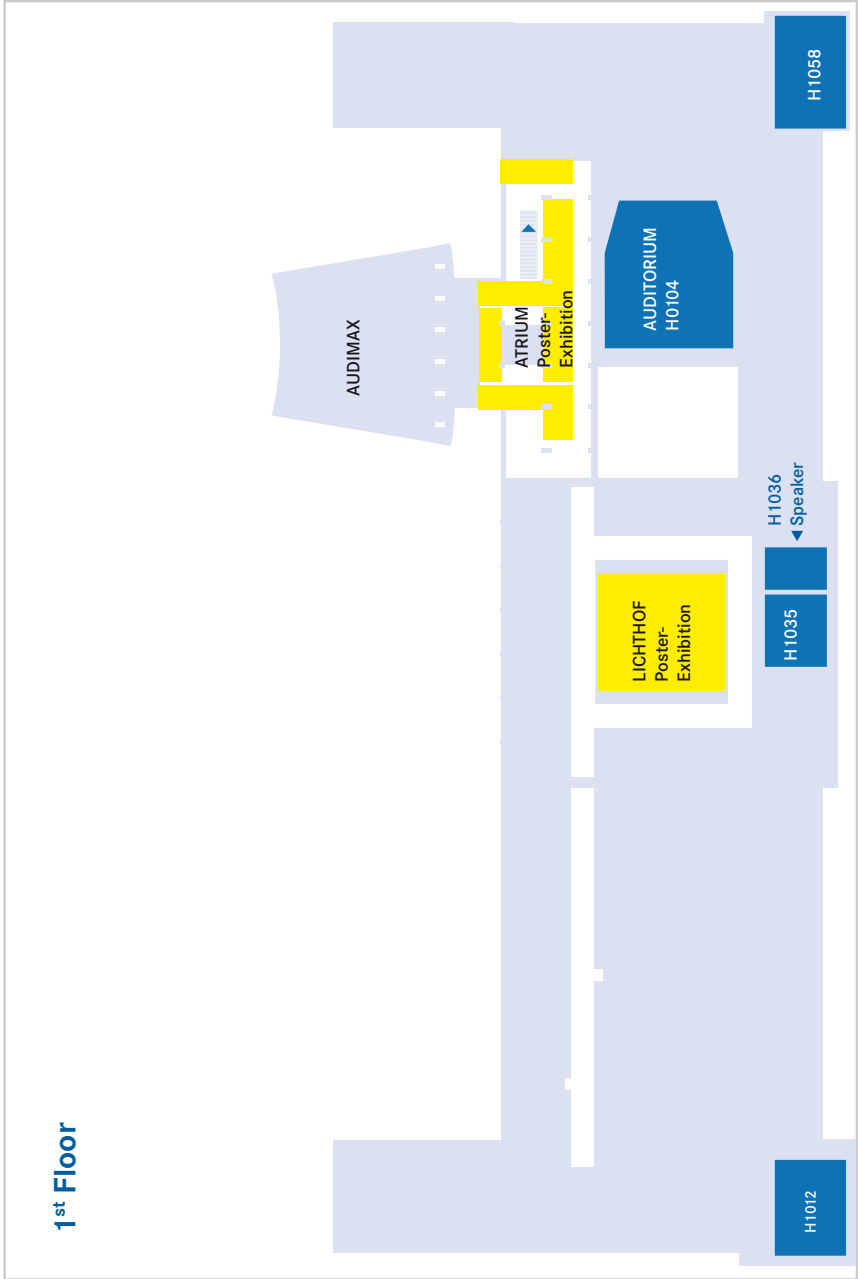
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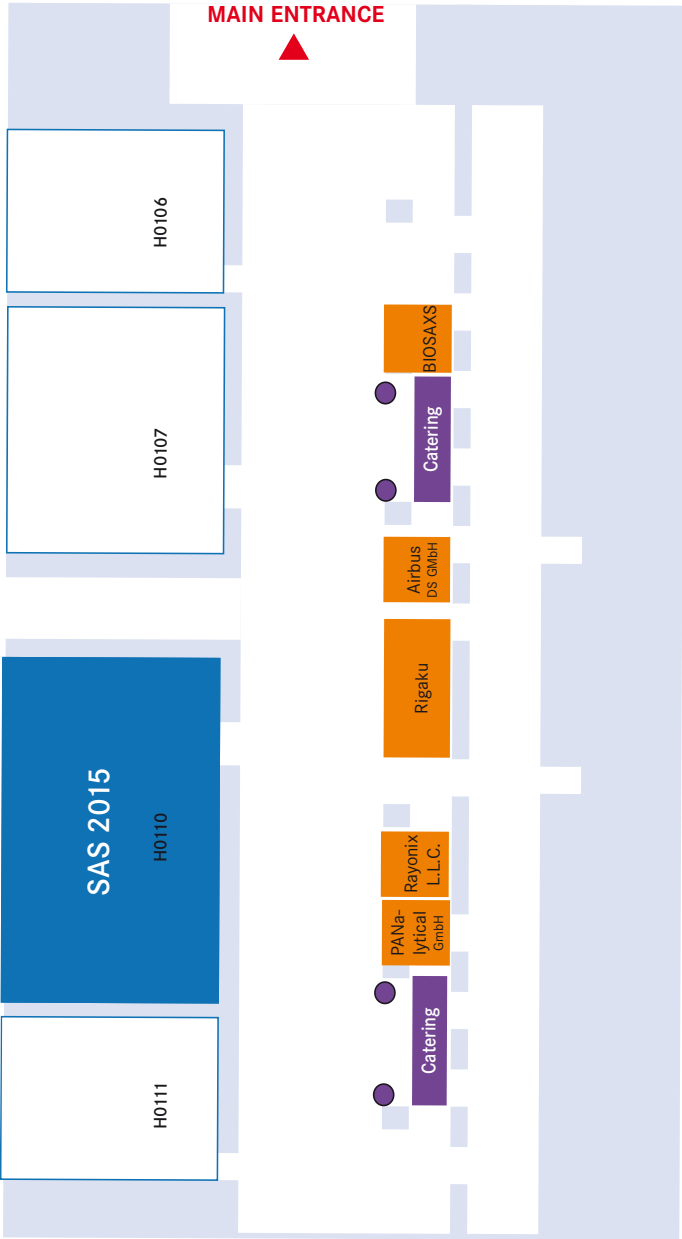
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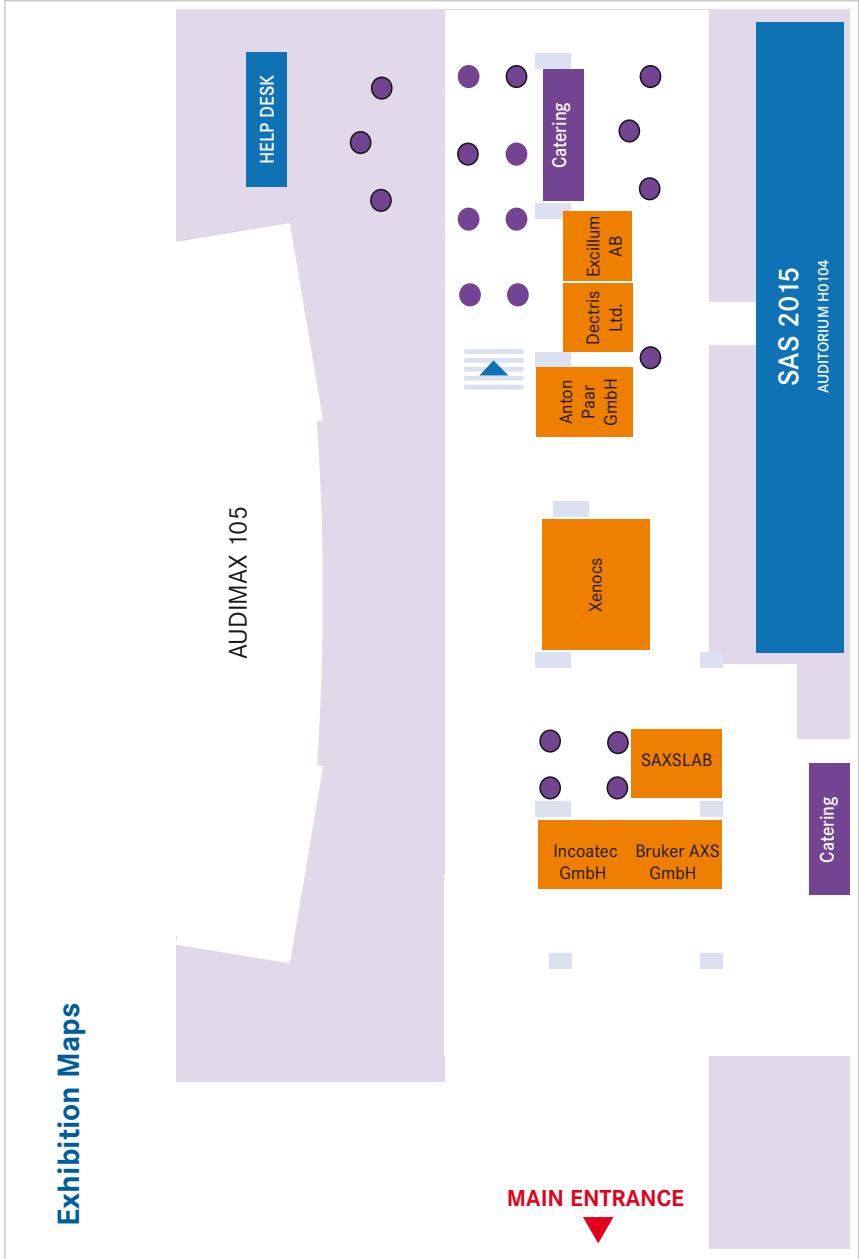
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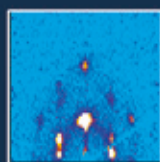
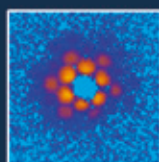
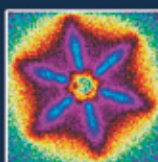


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