# Publications and Invited Talks

Dr. Christian Schüßler-Langeheine

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## Refereed Publications in Scientific Journals and Books

55. C. Trabant, N. Pontius, E. Schierle, E. Weschke, T. Kachel, G. Springholz, K. Holldack, A. Föhlisch, and C. Schüßler-Langeheine: *Time and momentum resolved resonant magnetic x-ray diffraction on EuTe*, EPJ Web of Conferences 41, 03014 (2013).

54. A. Tanaka, C. F. Chang, M. Buchholz, C. Trabant, E. Schierle, J. Schlappa, D. Schmitz, H. Ott, P. Metcalf, L. H. Tjeng, and C. Schüßler-Langeheine: *Analysis of charge and orbital order in $Fe_3O_4$ by Fe $L_{2,3}$ resonant x-ray diffraction,* Phys. Rev. **B 88**, 195110 (2013).

53. M. Beye, S. Schreck, F. Sorgenfrei, C. Trabant, N. Pontius, C. Schüßler-Langeheine, W. Wurth, and A. Föhlisch: *Stimulated X-ray Emission for Materials Science*, Nature **501**, 191 (2013).

52. M. A. Hossain, I. Zegkinoglou, Y.-D. Chuang, J. Geck, B. Bohnenbuck, A. G. Cruz Gonzalez, H.-H. Wu, C. Schüßler-Langeheine, D. G. Hawthorn, J. D. Denlinger, R. Mathieu, Y. Tokura, S. Satow, H. Takagi, Y. Yoshida, Z. Hussain, B. Keimer, G. A. Sawatzky, and A. Damascelli: *Electronic superlattice revealed by resonant scattering from random impurities in $Sr_3Ru_2O_7$*, Scientific Reports **3**, 2299 (2013).

51. S. de Jong, R. Kukreja, C. Trabant, N. Pontius, C. F. Chang, T. Kachel, M. Beye, F. Sorgenfrei, C. H. Back, B Bräuer, W. F. Schlotter, J. J. Turner, O. Krupin, M. Doehler, D. Zhu, M. A. Hossain, A. O. Scherz, D. Fausti, F. Novelli, M. Esposito, W. S. Lee, Y. D. Chuang, D. H. Lu, R. G. Moore, M. Yi, M. Trigo, P. Kirchmann, L. Pathey, M. S. Golden, M. Buchholz, P. Metcalf, F. Parmigiani, W. Wurth, A. Föhlisch, C. Schüßler-Langeheine, and H. A. Dürr: *Speed limit of the insulator-metal transition in magnetite* Nature Materials **12**, 882 (2013).

50. M. Beye, P. Wernet, C. Schüßler-Langeheine, and A. Föhlisch: *Time resolved resonant inelastic X-ray scattering: A supreme tool to understand dynamics in solids and molecules,* J. Electron Spect. Rel. Phen., **188** 172 (2013).

49. R. Könnecke, R. Follath, N. Pontius, J. Schlappa, F. Eggenstein, T. Zeschke, P. Bischoff, J. S. Schmidt, T. Noll, C. Trabant, S. Schreck, P. Wernet, S. Eisebitt, F. Senf, C. Schüßler-Langeheine, A. Erko, and A. Föhlisch: *The confocal plane grating spectrometer at BESSY II,* J. Electron Spect. Rel. Phen., **188**, 133 (2013).

48. Z. Hu, W. Hua, T. C. Koethe, S. N. Barilo, S. V. Shiryaev, G. L. Bychkov, C. Schüßler-Langeheine, T. Lorenz, A. Tanaka, H. H. Hsieh, H. J. Lin, C. T. Chen, N. B. Brookes, S. Agrestini, Y. Y. Chin, M. Rotter, and L. H. Tjeng: *Spin-state order/disorder and metal-insulator transition in $GdBaCo_2O_{5.5}$: experimental determination of the underlying electronic structure,* New J. Phys **14**, 123025 (2012).

47. H.-H. Wu, M. Buchholz, C. Trabant, C. F. Chang, A. C. Komarek, F. Heigl, M. v. Zimmermann, M. Cwik, F. Nakamura, M. Braden, and C. Schüßler-Langeheine: *Charge stripe order near the surface of 12-percent doped $La_{2-x}Sr_xCuO_4$,* Nature Comm. **3**, 1023 (2012).

46. A. Tanaka, C. F. Chang, M. Buchholz, C. Trabant, E. Schierle, J. Schlappa, D. Schmitz, H. Ott, P. Metcalf, L. H. Tjeng, and C. Schüßler-Langeheine: *Symmetry of Orbital Order in $Fe_3O_4$ Studied by Fe $L_{2,3}$ Resonant X-Ray Diffraction,* Phys. Rev. Lett. **108**, 227203 (2012).

45. J. Schlappa, C. F. Chang, Z. Hu, E. Schierle, H. Ott, E. Weschke, G. Kaindl, M. Huijben, G. Rijnders, D. H. A. Blank, L. H. Tjeng, and C Schüßler-Langeheine: *Resonant soft x-ray scattering from stepped surfaces of $SrTiO_3$,* J. Phys.: Condens. Matter **24** 035501 (2012).

44. H. Wadati, J. Geck, D. G. Hawthorn, T. Higuchi, M. Hosoda, C. Bell, Y. Hikita, H. Y. Hwang, C. Schüßler-Langeheine, E. Schierle, E. Weschke and G. A. Sawatzky: *Electronic structure of the $SrTiO_3/LaAlO_3$ interface revealed by resonant soft x-ray scattering,* IOP Conf. Ser.: Mater. Sci. Eng. **24**, 012012 (2011).

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42. S. Konings, C. Schüßler-Langeheine, H. Ott, E. Weschke, E. Schierle, H. Zabel, and J. B. Goedkoop: *Magnetic Domain Fluctuations in an Antiferromagnetic Film Observed with Coherent Resonant Soft X-Ray Scattering,* Phys. Rev. Lett. **106**, 077402 (2011).

41. N. Pontius, T. Kachel, C. Schüßler-Langeheine, W. F. Schlotter, M. Beye, F. Sorgenfrei, C. F. Chang, A. Föhlisch, W. Wurth, P. Metcalf, I. Leonov, A. Yaresko, N. Stojanovic, M. Berglund, N. Guerassimova, S. Düsterer, H. Redlin, and H. A. Dürr: *Time-resolved resonant soft x-ray diffraction with free-electron lasers: Femtosecond dynamics across the Verwey transition in magnetite,* Appl. Phys. Lett. **98**, 182504 (2011).

40. H. Ott, C. Schüßler-Langeheine, E. Schierle, E. Weschke, and G. Kaindl: *Depth-resolved magnetic structure across the ferromagnetic to helical-antiferromagnetic phase transition in Dy/W(110),* Phys. Rev. **B 82**, 214408 (2010).

39. H. Wadati, D. G. Hawthorn, J. Geck, T. Higuchi, Y. Hikita, H. Y. Hwang, L. Fitting Kourkoutis, D. A. Muller, S.-W. Huang, D. J. Huang, H.-J. Lin, C. Schüßler-Langeheine, H.-H. Wu, E. Schierle, E. Weschke, N. J. C. Ingle, and G. A. Sawatzky: *Resonant soft x-ray scattering studies of interface reconstructions in $SrTiO_3/LaAlO_3$ superlattices,* J. Appl. Phys. **106**, 083705 (2009).

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35. B. Bohnenbuck, I. Zegkinoglou, J. Strempfer, C. Schüßler-Langeheine, C. S. Nelson, Ph. Leininger, H. H. Wu, E. Schierle, J. C. Lang, G. Srajer, S. I. Ikeda, Y. Yoshida, K. Iwata, S. Katano, N. Kikugawa, and B. Keimer: *Magnetic structure and orbital state of $Ca_3Ru_2O_7$ investigated by resonant x-ray diffraction,* Phys. Rev. **B 77**, 224412 (2008).

34. J. Schlappa, C. Schüßler-Langeheine, C. F. Chang, H. Ott, A. Tanaka, Z. Hu, M. W. Haverkort, E. Schierle, E. Weschke, G. Kaindl und L. H. Tjeng: *Direct observation of $t_{2g}$ orbital order in magnetite,* Phys. Rev. Lett. **100**, 026406 (2008).

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31. H. Ott, C. Schüßler-Langeheine, E. Schierle, G. Kaindl, and E. Weschke: *Magnetic depth profile from resonant soft x-ray scattering: Dy thin films,* Appl. Phys. Lett. **88**, 212507 (2006).

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27. E. Weschke, H. Ott, E. Schierle, C. Schüßler-Langeheine, D. V. Vyalikh, G. Kaindl, V. Leiner, M. Ay, T. Schmitte, H. Zabel, and P. J. Jensen: *Finite-size effect on magnetic ordering temperatures in long-period antiferromagnets: Holmium thin films*, Phys. Rev. Lett. **93**, 157204 (2004).

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