

Publications

Dr. Christian Schüßler-Langeheine

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Refereed Publications in Scientific Journals and Books

83. J. O. Schunck, F. Döring, B. Rösner, J. Buck, R. Y. Engel, P. S. Miedema, S. K. Mahatha, M. Hoesch, A. Petraru, H. Kohlstedt, C. Schüßler-Langeheine, K. Rossnagel, C. David, and M. Beye: *Microstructure Effects on the Phase Transition Behavior of a Prototypical Quantum Material*, Scientific Reports, accepted (2022).
82. X. Wang, R. Y. Engel, I. Vaskivskiy, D. Turenne, V. Shokeen, A. Yaroslavtsev, O. Grånäs, R. Knut, J. O. Schunck, S. Dziarzhytski, G. Brenner, R.-P. Wang, M. Kuhlmann, F. Kuschewski, W. Bronsch, C. Schüßler-Langeheine, A. Styervoyedov, S. S. P. Parkin, F. Parmigiani, O. Eriksson, M. Beye, H. A. Dürr: *Ultrafast manipulation of the NiO antiferromagnetic order via sub-gap optical excitation*, Faraday Discussions, accepted (2022).
81. Y. W. Windsor, S.-E. Lee, D. Zahn, V. Borisov, D. Thonig, K. Kliemt, A. Ernst, C. Schüßler-Langeheine, N. Pontius, U. Staub, C. Krellner, D. V. Vyalikh, O. Eriksson, and L. Rettig: *Exchange scaling of ultrafast angular momentum transfer in 4f antiferromagnets*, Nature Materials **21**, 514 (2022).
80. K. Yamamoto, T. Tsuyama, S. Ito, K. Takubo, I. Matsuda, N. Pontius, C. Schüßler-Langeheine, M. Minohara, H. Kumigashira, Y. Yamasaki, H. Nakao, Y. Murakami, T. Katase, T. Kamiya, and H. Wadati: *Photoinduced transient states of antiferromagnetic orderings in $La_{1/\beta}Sr_{2/\beta}FeO_3$ and $SrFeO_{3-\delta}$ thin films observed through time-resolved resonant soft x-ray scattering*, New J. Phys. **24** 043012 (2022).
79. Y. Zhang, T. Katayama, A. Chikamatsu, C. Schüßler-Langeheine, N. Pontius, Y. Hirata, K. Takubo, K. Yamagami, K. Ikeda, K. Yamamoto, T. Hasegawa, and H. Wadati: *Photo-induced antiferromagnetic-ferromagnetic and spin-state transition in a double-perovskite cobalt oxide thin film*, Comm. Phys. **5**, 50 (2022).
78. S. Jana, R. Knut, S. Muralidhar, R. S. Malik, R. Stefanuik, J. Åkerman, O. Karis, C. Schüßler-Langeheine, and N. Pontius: *Experimental confirmation of the delayed Ni demagnetization in FeNi alloy*, App. Phys. Lett. **120**, 102404 (2022).
77. S. Parchenko, N. Ortiz Hernández, M. Savoini, M. Porer, M. Decker, B. Burganov, E. M. Bothschafter, C. Dornes, Y. W. Windsor, M. Ramakrishnan, L. Rettig, M. Buzzi, D. Schick, K. Holldack, N. Pontius, C. Schüßler-Langeheine, M. Radovic, J. A. Heuver, B. Noheda, S. L. Johnson, and U. Staub: *Ultrafast probe of magnetization dynamics in multiferroic $CoCr_2O_4$ and $Co_{0.975}Ge_{0.025}Cr_2O_4$* , Phys. Rev. **B 105**, 064432 (2022).

76. A. Ricci, N. Poccia, G. Campi, S. Mishra, L. Müller, B. Joseph, Bo Shi, A. Zozulya, M. Buchholz, C. Trabant, J. C. T. Lee, J. Viefhaus, J. B. Goedkoop, A. A. Nugroho, M. Braden, S. Roy, M. Sprung, and C. Schüßler-Langeheine: *Measurement of Spin Dynamics in a Layered Nickelate Using X-Ray Photon Correlation Spectroscopy: Evidence for Intrinsic Destabilization of Incommensurate Stripes at Low Temperatures*, Phys. Rev. Lett. **127**, 057001 (2021).
75. S. Jana, S. Muralidhar, J. Åkerman, C. Schüßler-Langeheine, and N. Pontius: *Using the photoinduced L_3 resonance shift in Fe and Ni as time reference for ultrafast experiments at low flux soft x-ray sources*, Structural Dynamics **8**, 044304 (2021).
74. T. J. Boyle, M. Walker, A. Ruiz, E. Schierle, Z. Zhao, F. Boschini, R. Sutarto, T. D. Boyko, W. Moore, N. Tamura, F. He, E. Weschke, A. Gozar, W. Peng, A. C. Komarek, A. Damascelli, C. Schüßler-Langeheine, A. Frano, E. H. da Silva Neto, and S. Blanco-Canosa: *Large response of charge stripes to uniaxial stress in $La_{1.475}Nd_{0.4}Sr_{0.125}CuO_4$* , Phys. Rev. Research **3**, L022004 (2021).
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68. Y. W. Windsor, A. Ernst, K. Kummer, K. Kliemt, C. Schüßler-Langeheine, N. Pontius, U. Staub, E. V. Chulkov, C. Krellner, D. V. Vyalikh, L. Rettig: *Deterministic control of an antiferromagnetic spin arrangement using ultrafast optical excitation*, Communications Physics **3**, 139 (2020).
67. K. HOLLDAK, C. Schüßler-Langeheine, P. Goslawski, N. Pontius, T. Kachel, F. Armbrorst, M. Ries, A. Schälicke, M. Scheer, W. Frentrup, and J. Bahrdt: *Flipping the helicity of X-rays from an undulator at unprecedented speed*, Communications Physics **3**, 61 (2020).

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65. P. S. Miedema, N. Thielemann-Kühn, I. Alonso Calafell, C. Schüßler-Langeheine, and M. Beye: *Strain analysis from M-edge Resonant Inelastic X-ray Scattering of NiO films*, *Physical Chemistry Chemical Physics*, **21** 21596 (2019).
64. G. Campi, N. Poccia, B. Joseph, A. Bianconi, S. Mishra, J. Lee, S. Roy, A. A. Nugroho, M. Buchholz, M. Braden, C. Trabant, A. Zozulya, L. Müller, J. Viefhau, C. Schüßler-Langeheine, M. Sprung and A. Ricci: *Direct Visualization of Spatial Inhomogeneity of Spin Stripes Order in $La_{1.72}Sr_{0.28}NiO_4$* , *Condensed Matter* **4**, 77 (2019).
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61. N. Thielemann-Kühn, D. Schick, N. Pontius, C. Trabant, R. Mitzner, K. Holldack, H. Zabel, A. Föhlich, and C. Schüßler-Langeheine: *Ultrafast and energy-efficient quenching of spin order: Antiferromagnetism beats Ferromagnetism*, *Phys. Rev. Lett.* (Editor's suggestion) **119**, 197202 (2017).
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