

Fortschrittsbericht des  
Helmholtz-Zentrum Berlin  
für Materialien und Energie  
GmbH  
für das Jahr 2020

**Liste der ISI/SCOPUS zitierten  
Veröffentlichungen 2020**

1. Juni 2021

Abdi, F.F.; Gutierrez Perez, R.R.; Haussener, S., *Mitigating voltage losses in photoelectrochemical cell scale-up*, Sustain. Energ. Fuels **4**, 2734-2740 (2020), 10.1039/d0se00246a

Abdullayev, A.; Kamm, P. H.; Bekheet, M. F.; Gurlo, A., *Fabrication and Characterization of Ice Templatized Membrane Supports from Portland Cement*, Membr. **10**, 93/1-13 (2020), 10.3390/membranes10050093

Abouserie, A.; El-Nagar, G.A.; Heyne, B.; Gunter, C.; Schilde, U.; Mayer, M.T.; Stojkovicj, S.; Roth, C.; Taubert, A., *Facile Synthesis of Hierarchical CuS and CuCo<sub>2</sub>S<sub>4</sub> Structures from an Ionic Liquid Precursor for Electrocatalysis Applications*, ACS Appl. Mat. Interfaces **12**, 52560-52570 (2020), 10.1021/acsami.0c13927

Absmeier, E.; Santos, K.F.; Wahl, M.C., *Molecular Mechanism Underlying Inhibition of Intrinsic ATPase Activity in a Ski2-like RNA Helicase*, Struc. **28**, 236-243.e3 (2020), 10.1016/j.str.2019.11.014

Acierno, A.; Toman, J.; Kimes, K.; Mostafaei, A.; Boin, M.; Wimpory, R.; Chmielus, M., *Grain growth, porosity, and hardness changes in sintered and annealed binder-jet 3D printed Ni-Mn-Ga magnetic shape memory alloys*, Micro. Microanal. **26**, 3082-3085 (2020), 10.1017/s1431927620023764

Adamson, A.; Väli, R.; Paalo, M.; Aruväli, J.; Koppel, M.; Palm, R.; Härik, E.; Nerut, J.; Romann, T.; Lust, E.; Jänes, A., *Peat-derived hard carbon electrodes with superior capacity for sodium-ion batteries*, RSC Adv. **10**, 20145-20154 (2020), 10.1039/d0ra03212c

Agostini, P.; Barbieri, G.; Coppola, R.; Moncada, M.; Ohms, C.; Wimpory, R.C., *Stress Distributions in P91 Martensitic Steel and in AISI 316LN Steel Welds for Gen IV Nuclear Applications*, J. Surf. Invest. **14**, S25-S30 (2020), 10.1134/s1027451020070022

Ahiboz, D.; Manley, P.; Becker, C., *Adjustable large-area dielectric metasurfaces for near-normal oblique incident excitation*, OSA Cont. **3**, 971-981 (2020), 10.1364/OSAC.391940

Akrivos, V.; Wimpory, R.C.; Hofmann, M.; Stewart, B.; Muransky, O.; Smith, M.C.; Bouchard, J., *Neutron diffraction measurements of weld residual stresses in three-pass slot weld (Alloy 600/82) and assessment of the measurement uncertainty*, J. Appl. Crystallogr. **53**, 1181-1194 (2020), 10.1107/s1600576720009140

Al-Ashouri, A.; Köhnen, E.; Bor, L.; Magomedov, A.; Hempel, H.; Caprioglio, P.; Márquez, J.; Morales Vilches, A.B.; Kasparavicius, E.; Smith, J.A.; Phung, N.; Menzel, D.; Grischek, M.; Kegelmann, L.; Skroblin, D.; Gollwitzer, C.; Malinauskas, T.; Jošt, M., *Monolithic perovskite/silicon tandem solar cell with >29% efficiency by enhanced hole extraction*, Science **370**, 1300-1309 (2020), 10.1126/science.abd4016

Al-Hada, M.; Gregoratti, L.; Amati, M.; Neeb, M., *Pristine and oxidised Ag-nanoparticles on free-standing graphene as explored by X-ray photoelectron and Auger spectroscopy*, Surf. Sci. **693**, 121533/1-6 (2020), 10.1016/j.susc.2019.121533

Ali, H.; Golnak, R.; Seidel, R.; Winter, B.; Xiao, J., *In-Situ X-ray Spectroscopy of the Electric Double Layer around TiO<sub>2</sub> Nanoparticles Dispersed in Aqueous Solution: Implications for H<sub>2</sub> Generation*, ACS App. Nano Mat. **3**, 264-273 (2020), 10.1021/acsanm.9b01939

Al-Temimi, A.; Anasori, B.; Mazzio, K.A.; Kronast, F.; Seredych, M.; Kurra, N.; Mawass, M.A.; Raoux, S.; Gogotsi, Y.; Petit, T., *Enhancement of Ti<sub>3</sub>C<sub>2</sub> MXene Pseudocapacitance after Urea Intercalation Studied by Soft X-ray Absorption Spectroscopy*, J. Phys. Chem. C **124**, 5079-5086 (2020), 10.1021/acs.jpcc.9b11766

Al-Temimy, A.; Prenger, K.; Golnak, R.; Lounasvuori, M.; Naguib, M.; Petit, T., *Impact of Cation Intercalation on the Electronic Structure of Ti<sub>3</sub>C<sub>2</sub>Tx MXenes in Sulfuric Acid*, ACS Appl. Mat. Interfaces **12**, 15087-15094 (2020), 10.1021/acsami.9b22122

Al-Temimy, A.; Kronast, F.; Mawass, M.A.; Mazzio, K.A.; Prenger, K.; Naguib, M.; Petit, T.; Raoux, S., *Spatially resolved X-ray absorption spectroscopy investigation of individual cation-intercalated multi-layered Ti<sub>3</sub>C<sub>2</sub>Tx MXene particles*, Appl. Surf. Sci. **530**, 147157/1-7 (2020), 10.1016/j.apsusc.2020.147157

Amorese, A.; Marino, A.; Sundermann, M.; Chen, K.; Hu, Z.; Willers, T.; Choukani, F.; Ohresser, P.; Herrero-Martin, J.; Agrestini, S.; Chen, C.T.; Lin, H.J.; Haverkort, M.W.; Seiro, S.; Geibel, C.; Steglich, F.; Tjeng, L.H.; Zwicknagl, G.; Severing, A., *Possible multiorbital ground state in CeCu<sub>2</sub>Si<sub>2</sub>*, Phys. Rev. B **102**, 245146/1-8 (2020), 10.1103/physrevb.102.245146

Apel, D.; Genzel, M.; Meixner, M.; Boin, M.; Klaus, M.; Genzel, C., *EDDIDAT: a graphical user interface for the analysis of energy-dispersive diffraction data*, J. Appl. Crystallogr. **53**, 1130-1137 (2020), 10.1107/s1600576720005506

Arlt, T.; Liebert, M.; Paulisch, M.; Lüdeking, I.; Bergbreiter, C.; Jörissen, L.; Manke, I., *Multi-scale Analysis and Phase Segmentation of FIB and X-ray Tomographic Data of Electrolyzer Electrodes Using Machine Learning Algorithms*, ECS Trans. **97**, 639-649 (2020), 10.1149/09707.0639ecst

Arrozi, U.S.F.; Bon, V.; Krause, S.; Lübken, T.; Weiss, M.S.; Senkovska, I.; Kaskel, S., *In Situ Imine-Based Linker Formation for the Synthesis of Zirconium MOFs: A Route to CO<sub>2</sub> Capture Materials and Ethylene Oligomerization Catalysts*, Inorg. Chem. **59**, 350-359 (2020), 10.1021/acs.inorgchem.9b02517

Arvind, M.; Tait, C.E.; Guerrini, M.; Krumland, J.; Valencia, A.M.; Cocchi, C.; Mansour, A.E.; Koch, N.; Barlow, S.; Marder, S.R.; Behrends, J.; Neher, D., *Quantitative Analysis of Doping-Induced Polarons and Charge-Transfer Complexes of Poly(3-hexylthiophene) in Solution*, J. Phys. Chem. B **124**, 7694-7708 (2020), 10.1021/acs.jpcb.0c03517

Awino, C.; Barasa, G.O.; Odari, V.; Kegelmann, L.; Dittrich, T., *Corrigendum: Light induced degradation of the transport length of CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> studied by modulated surface photovoltage spectroscopy after Goodman*, Org. Electr. **87**, 105930/1 (2020), 10.1016/j.orgel.2020.105930

Badaczewski, F.M.; Loeh, M.O.; Pfaff, T.; Wallacher, D.; Clemens, D.; Smarsly, B.M., *An advanced structural characterization of templated meso-macroporous carbon monoliths by small- and wide-angle scattering techniques*, Beilstein J. Nanotechnol. **11**, 310-322 (2020), 10.3762/bjnano.11.23

Badaczewski, F.M.; Loeh, M.O.; Pfaff, T.; Wallacher, D.; Clemens, D.; Smarsly, B.M., *Correction: An advanced structural characterization of templated meso-macroporous carbon monoliths by small- and wide-angle scattering techniques*, Beilstein J. Nanotechnol. **11**, 678-679 (2020), 10.3762/bjnano.11.54

Baez, M.L.; Goihl, M.; Haferkamp, J.; Bermejo-Vega, J.; Gluza, M.; Eisert, J., *Dynamical structure factors of dynamical quantum simulators*, Proc. Nat. Acad. Sci. USA **117**, 26123-26134 (2020), 10.1073/pnas.2006103117

Bagschik, K.; Schneider, M.; Wagner, J.; Buss, R.; Riepp, M.; Philippi-Kobs, A.; Muller, L.; Roseker, W.; Trinter, F.; Hoesch, M.; Viefhaus, J.; Eisebitt, S.; Grubel, G.; Oepen, H.P.; Fromter, R., *Enabling time-resolved 2D spatial-coherence measurements using the Fourier-analysis method with an integrated curved-grating beam monitor*, Opt. Lett. **45**, 5591-5594 (2020), 10.1364/ol.402264

Bagschik, K.; Wagner, J.; Buß, R.; Riepp, M.; Philippi-Kobs, A.; Müller, L.; Buck, J.; Trinter, F.; Scholz, F.; Seltmann, J.; Hoesch, M.; Viefhaus, J.; Grübel, G.; Oepen, H.P.; Frömter, R., *Direct 2D spatial-coherence determination using the Fourier-analysis method: Multi-parameter characterization of the P04 beamline at PETRA III*, Opt. Express **28**, 7282-7301 (2020), 10.1364/oe.382608

Baran, S.; Tyvanchuk, Yu.; Penc, B.; Kalychak, Y.; Hoser, A.; Szytula, A., *Crystal structure and complex magnetic properties of R<sub>11</sub>Pd<sub>4</sub>In<sub>9</sub> compounds (R = Y, Gd-Er)*, Interm. **123**, 106837/1-12 (2020), 10.1016/j.intermet.2020.106837

Baran, S.; Kurzydlo, P.; Tyvanchuk, Yu.; Hoser, A.; Szytula, A., *Magnetic properties and magnetic structures in R<sub>3</sub>Ni<sub>2</sub>In<sub>4</sub> (R = Tb-Tm)*, J. Alloy. Compd. **832**, 154926/1-9 (2020), 10.1016/j.jallcom.2020.154926

Barthel, A.; Sayre, L.; Lang, F.; Kusch, G.; Bundesmann, J.; Denker, A.; Oliver, R.; Hirst, L., *Cathodoluminescence Study of 68 MeV Proton-Irradiated Ultra-Thin GaAs Solar Cells*, **0**, 1070-1074 (2020), 10.1109/pvsc45281.2020.9300748

Bartkowiak, M.; Prokeš, K.; Fromme, M.; Budack, A.; Dirlick, J.; Prokhnenko, O., *EXEQ and InEXEQ: software tools for experiment planning at the Extreme Environment Diffractometer*, J. Appl. Crystallogr. **53**, 1613-1619 (2020), 10.1107/S1600576720011942

Basbus, J.F.; Arce, M.D.; Napolitano, F.R.; Troiani, H.E.; Alonso, J.A.; Saleta, M.E.; González, M.A.; Cuello, G.J.; Fernández-Díaz, M.T.; Sainz, M.P.; Bonanos, N.; Jimenez, C.E.; Giebelner, L.; Figueroa, S.J.A.; Caneiro, A.; Serquis, A.C.; Mogni, L.V., *Revisiting the Crystal Structure of BaCe<sub>0.4</sub>Zr<sub>0.4</sub>Y<sub>0.2</sub>O<sub>3-delta</sub> Proton Conducting Perovskite and Its Correlation with Transport Properties*, ACS Appl. En. Mat. **3**, 2881-2892 (2020), 10.1021/acs.chema.9b02498

Bassi, P.S.; Xi, F.; Koelbach, M.; Gunder, R.; Ahmet, I.; van de Krol, R.; Fiechter, S., *Pulsed Laser Deposited Fe<sub>2</sub>TiO<sub>5</sub> Photoanodes for Photoelectrochemical Water Oxidation*, J. Phys. Chem. C **124**, 19911-19921 (2020), 10.1021/acs.jpcc.0c04396

Bauer, L.J.; Mustafa, H.A.; Zaslansky, P.; Mantouvalou, I., *Chemical mapping of teeth in 2D and 3D: X-ray fluorescence reveals hidden details in dentine surrounding fillings*, Acta Biom. **109**, 142-152 (2020), 10.1016/j.actbio.2020.04.008

Baumgaertl, K.; Gräfe, J.; Che, P.; Mucchietto, A.; Förster, J.; Träger, N.; Bechtel, M.; Weigand, M.; Schütz, G.; Grundler, D., *Nanoimaging of ultrashort magnon emission by ferromagnetic grating couplers at GHz frequencies*, Nano Lett. **20**, 7281-7286 (2020), 10.1021/acs.nanolett.0c02645

Bayrak Pehlivan, I.; Malm, U.; Neretnieks, P.; Glüsen, A.; Müller, M.; Welter, K.; Haas, S.; Calnan, S.; Canino, A.; Milazzo, R. G.; Privitera, S. M. S.; Lombardo, S. A.; Stolt, L.; Edoff, M.; Edvinsson, T., *The climatic response of thermally integrated photovoltaic-electrolysis water splitting using Si and CIGS combined with acidic and alkaline electrolysis*, Sustain. Energ. Fuels **4**, 6011-6022 (2020), 10.1039/D0SE01207F

Bermel, P.; Saive, R.; Jäger, K.; Yoo, S., *Feature issue introduction: Optical Devices and Materials for Solar Energy and Solid-state Lighting (PVLED) 2019*, Opt. Express **28**, 16027-16029 (2020), 10.1364/OE.392718

Bernardo, V.; Leon, J.M. de; Pinto, J.; Schade, U.; Rodriguez-Perez, M.A., *On the interaction of infrared radiation and nanocellular polymers: First experimental determination of the extinction coefficient*, Colloids Surf A: Physicochem Eng. Aspects **600**, 124937/1-8 (2020), 10.1016/j.colsurfa.2020.124937

Betto, D.; Bluschke, M.; Putzky, D.; Schierle, E.; Amorese, A.; Fürsich, K.; Blanco-Canosa, S.; Christiani, G.; Logvenov, G.; Keimer, B.; Minola, M., *Imprint of charge and oxygen orders on Dy ions in DyBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> thin films probed by resonant x-ray scattering*, Phys. Rev. B **102**, 195149/1-9 (2020), 10.1103/physrevb.102.195149

Beyer, P.; Meister, E.; Florian, T.; Generalov, A.; Brütting, W.; Koch, N.; Opitz, A., *Fermi level pinned molecular donor/acceptor junctions: Reduction of induced carrier density by interfacial charge transfer complexes*, J. Mater. Chem. C **8**, 15199-15207 (2020), 10.1039/d0tc02774j

Bhattacharyya, R.; Dhar, J.; Dastidar, S.G.; Chakrabarti, P.; Weiss, M.S., *The susceptibility of disulfide bonds towards radiation damage may be explained by S center dot center dot center dot O interactions*, IUCrJ **7**, 825-834 (2020), 10.1107/s2052252520008520

Biglione, C.; Glitscher, E.A.; Arora, S.; Klemke, B.; Giulbudagian, M.; Laux, P.; Luch, A.; Bergueiro, J.; Calderón, M., *Galvanic Replacement as a Synthetic Tool for the Construction of Anisotropic Magnetoplasmonic Nanocomposites with Synergistic Phototransducing and Magnetic Properties*, ACS Appl. Mat. Interfaces **12**, 56839-56849 (2020), 10.1021/acsami.0c18096

Biglione, C.; Bergueiro, J.; Wedepohl, S.; Klemke, B.; Strumia, M.C.; Calderón, M., *Revealing the NIR-triggered chemotherapy therapeutic window of magnetic and thermoresponsive nanogels*, Nanoscale **12**, 21635-21646 (2020), 10.1039/d0nr02953j

Birch, M.T.; Cortés-Ortuño, D.; Turnbull, L.A.; Wilson, M.N.; Groß, F.; Träger, N.; Laurenson, A.; Bukin, N.; Moody, S..H; Weigand, M.; Schütz, G.; Popescu, H.; Fan, R.; Steadman, P.; Verezhak, J.A.T.; Balakrishnan, G.; Loudon, J.C.; Twitchett-Harrison, A., *Real-space imaging of confined magnetic skyrmion tubes*, Nat. Commun. **11**, 1726/1-8 (2020), 10.1038/s41467-020-15474-8

Biswas, S.; Förg, B.; Ortmann, L.; Schötz, J.; Schweinberger, W.; Zimmermann, T.; Pi, L.; Baykusheva, D.; Masood, H.A.; Liantos, I.; Kamal, A.M.; Kling, N.G.; Alharbi, A.F.; Alharbi, M.; Azzeer, A.M.; Hartmann, G.; Wörner, H.J.; Landsman, A.S.; Kling, M.F., *Probing molecular environment through photoemission delays*, Nat. Phys. **16**, 778-783 (2020), 10.1038/s41567-020-0887-8

Böhme, M.; Jochim, A.; Rams, M.; Lohmiller, T.; Suckert, S.; Schnegg, A.; Plass, W.; Näther, C., *Variation of the Chain Geometry in Isomeric 1D Co(NCS)2 Coordination Polymers and Their Influence on the Magnetic Properties*, Inorg. Chem. **59**, 5325-5338 (2020), 10.1021/acs.inorgchem.9b03357

Bokai, K.A.; Tarasov, A.V.; Shevelev, V.O.; Vilkov, O.Y.; Makarova, A.A.; Marchenko, D.; Petukhov, A.E.; Muntwiler, M.; Fedorov, A.V.; Voroshnin, V.Y.; Yashina, L.V.; Laubschat, C.; Vyalikh, D.V.; Usachov, D.Y., *Hybrid h-BN-Graphene Monolayer with B-C Boundaries on a Lattice-Matched Surface*, Chem. Mater. **32**, 1172-1181 (2020), 10.1021/acs.chemmater.9b04207

Bombsch, J.; Avancini, E.; Carron, R.; Handick, E.; Garcia-Diez, R.; Hartmann, C.; Félix, R.; Ueda, S.; Wilks, R.G.; Bär, M., *NaF/RbF-Treated Cu(In,Ga)Se<sub>2</sub> Thin-Film Solar Cell Absorbers: Distinct Surface Modifications Caused by Two Different Types of Rubidium Chemistry*, ACS Appl. Mat. Interfaces **12**, 34941-34948 (2020), 10.1021/acsami.0c08794

Bontapalle, S.; Opitz, A.; Schlesinger, R.; Marder, S.R.; Varughese, S.; Koch, N., *Electrode Work Function Reduction by Polyethylenimine Interlayers: Choice of Solvent and Residual Solvent Removal for Superior Functionality*, Adv. Mater. Interfaces **7**, 2000291/1-6 (2020), 10.1002/admi.202000291

Borgwardt, M.; Mahl, J.; Roth, F.; Wenthaus, L.; Brauße, F.; Blum, M.; Schwarzburg, K.; Liu, G.; Toma, F.M.; Gessner, O., *Photoinduced Charge Carrier Dynamics and Electron Injection Efficiencies in Au*

*Nanoparticle-Sensitized TiO<sub>2</sub> Determined with Picosecond Time-Resolved X-ray Photoelectron Spectroscopy*, J. Phys. Chem. Lett. **11**, 5476-5481 (2020), 10.1021/acs.jpclett.0c00825

Borisenko, S.; Bezguba, V.; Fedorov, A.; Kushnirenko, Y.; Voroshnin, V.; Sturza, M.; Aswartham, S.; Yaresko, A., *Strongly correlated superconductor with polytypic 3D Dirac points*, npj Quant. Mat. **5**, 67/1-8 (2020), 10.1038/s41535-020-00268-4

Bossi, A.; Waluk, J.; Yivlialin, R.; Penconi, M.; Campione, M.; Bussetti, G., *Porphycene Protonation: A Fast and Reversible Reaction Enabling Optical Transduction for Acid Sensing*, ChemPhotoChem **4**, 5264-5270 (2020), 10.1002/cptc.202000142

Bozheyev, F.; Xi, F.; Ahmet, I.; Höhn, C.; Ellmer, K., *Evaluation of Pt, Rh, SnO<sub>2</sub>, (NH<sub>4</sub>)<sub>2</sub>Mo<sub>3</sub>S<sub>13</sub>, BaSO<sub>4</sub> protection coatings on WSe<sub>2</sub> photocathodes for solar hydrogen evolution*, Int. J. Hydrogen Energ. **45**, 19112-19120 (2020), 10.1016/j.ijhydene.2020.04.251

Bragaglia, V.; Ramsteiner, M.; Schick, D.; Boschker, J.E.; Mitzner, R.; Calarco, R.; Holldack, K., *Phonon anharmonicities and ultrafast dynamics in epitaxial Sb<sub>2</sub>Te<sub>3</sub>*, Sci. Rep. **10**, 12962/1-9 (2020), 10.1038/s41598-020-69663-y

Brandi, F.; Bäumel, M.; Molinari, V.; Shekova, I.; Lauermann, I.; Heil, T.; Antonietti, M.; Al-Naji, M., *Nickel on nitrogen-doped carbon pellets for continuous-flow hydrogenation of biomass-derived compounds in water*, Green Chem. **22**, 2755-2766 (2020), 10.1039/c9gc03826d

Breen, A.J.; Stephenson, L.T.; Sun, B.; Li, Y.; Kasian, O.; Raabe, D.; Herbig, M.; Gault, B., *Solute hydrogen and deuterium observed at the near atomic scale in high-strength steel*, Acta Mat. **188**, 108-120 (2020), 10.1016/j.actamat.2020.02.004

Breternitz, J.; Lehmann, F.; Barnett, S.A.; Nowell, H.; Schorr, S., *Role of the Iodide-Methylammonium Interaction in the Ferroelectricity of CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>*, Angew. Chem. Int. Ed. **59**, 424-428 (2020), 10.1002/anie.201910599

Breternitz, J.; Tovar, M.; Schorr, S., *Twinning in MAPbI<sub>3</sub> at room temperature uncovered through Laue neutron diffraction*, Sci. Rep. **10**, 16613/1-8 (2020), 10.1038/s41598-020-73487-1

Brzhezinskaya, M.; Svechnikov, N.Yu.; Stankevich, V.G.; Lebedev, A.M.; Sukhanov, L.P.; Menshikov, K.A., *Characterization of amorphous hydrocarbon CD<sub>x</sub> films (x similar to 0.5) for energy storage applications*, Full. Nano. and Carb. Nanostr. **28**, 173–178 (2020), 10.1080/1536383X.2019.1686616

Brzhezinskaya, M.; Kapitanova, O.O.; Kononenko, O.V.; Koveshnikov, S.; Korepanov, V.; Roshchupkin, D., *Large-scalable graphene oxide films with resistive switching for non-volatile memory applications*, J. Alloy. Compd. **849**, 156699/1-9 (2020), 10.1016/j.jallcom.2020.156699

Buchanan, C.; Garvey, C.J.; Puskar, L.; Perlmutter, P.; Mechler, A., *Coordination crosslinking of helical substituted oligoamide nanorods with Cu(II)*, Supram. Chem. **32**, 222-232 (2020), 10.1080/10610278.2020.1730839

Burmeister, D.; Ahrens, L.; Opitz, A.; Ligorio, G.; Hermerschmidt, F.; Jänsch, D.; Freudenberg, J.; Bunz, U.H.F.; Müllen, K.; List-Kratochvil, E.J.W., *Utilizing Diels-Alder click chemistry to functionalize the organic-organic interface of semiconducting polymers*, J. Mater. Chem. C **8**, 3302-3307 (2020), 10.1039/c9tc06180k

Busch, M.; Hofmann, T.; Frick, B.; Embs, J.P.; Dyatkin, B.; Huber, P., *Ionic liquid dynamics in nanoporous carbon: A pore-size- and temperature-dependent neutron spectroscopy study on*

*supercapacitor materials*, Phys. Rev. Mat. **4**, 055401/1-12 (2020),  
10.1103/physrevmaterials.4.055401

Busse, P.; Yin, Z.; Mierwaldt, D.; Scholz, J.; Kressdorf, B.; Glaser, L.; Miedema, P.; Rothkirch, A.; Viefhaus, J.; Jooss, C.; Techert, S.; Risch, M., *Probing the Surface of La<sub>0.6</sub>Sr<sub>0.4</sub>MnO<sub>3</sub> in Water Vapor by In Situ Photon-In / Photon-Out Spectroscopy*, J. Phys. Chem. C **124**, 7893-7902 (2020),  
10.1021/acs.jpcc.0c00840

Bussetti, G.; Campione, M.; Bossi, A.; Yivlialin, R.; Duò, L.; Cicacci, F., *Anion intercalated graphite: a combined electrochemical and tribological investigation by in situ AFM*, J. of Microsc. **280**, 222-228 (2020), 10.1111/jmi.12927

Buttersack, T.; Mason, P.E.; Jungwirth, P.; Schewe, H.C.; Winter, B.; Seidel, R.; McMullen, R.S.; Bradforth, S.E., *Deeply cooled and temperature controlled microjets: Liquid ammonia solutions released into vacuum for analysis by photoelectron spectroscopy*, Rev. Sci. Instrum. **91**, 043101/1-9 (2020), 10.1063/1.5141359

Buttersack, T.; Mason, P.E.; McMullen, R.S.; Schewe, H. C.; Martinek, T.; Brezina, K.; Crhan, M.; Gomez, A.; Hein, D.; Wartner, G.; Seidel, R.; Ali, H.; Thürmer, S.; Marsalek, O.; Winter, B.; Bradforth, S.E.; Jungwirth, P., *Photoelectron spectra of alkali metal–ammonia microjets: From blue electrolyte to bronze metal*, Science **368**, 1086-1091 (2020), 10.1126/science.aaz7607

Buttner, F.; Mawass, M.A.; Bauer, J.; Rosenberg, E.; Caretta, L.; Avci, C.O.; Graefe, J.; Finizio, S.; Vaz, C.A.F.; Novakovic, N.; Weigand, M.; Litzius, K.; Foerster, J.; Traeger, N.; Gross, F.; Suzuki, D.; Huang, M.; Bartell, J.; Kronast, F.; Raabe, J., *Thermal nucleation and high-resolution imaging of submicrometer magnetic bubbles in thin thulium iron garnet films with perpendicular anisotropy*, Phys. Rev. Mat. **4**, 011401/1-7 (2020), 10.1103/physrevmaterials.4.011401

Caicedo-Dávila, S.; Gunder, R.; Márquez, J.A.; Levenco, S.; Schwarzburg, K.; Unold, T.; Abou-Ras, D., *Effect of Post-deposition Annealing on the Luminescence of Mixed-phase CsPb<sub>2</sub>Br<sub>5</sub>/CsPbBr<sub>3</sub> Thin Films*, J. Phys. Chem. C **124**, 19514-19521 (2020), 10.1021/acs.jpcc.0c06955

Çakır, ; Dias, E.; Priolkar, K.R.; Hoser, A.; Farle, M.; Acet, M., *Heterogeneous magnetism and kinetic arrest in antiperovskite Mn<sub>3-x</sub>Ni<sub>x</sub>GaC compounds with Ni<sub>2</sub>MnGa Heusler insertions*, Phys. Rev. B **102**, 024431/1-8 (2020), 10.1103/physrevb.102.024431

Cambo, C.; Rouquette, S.; Bendaoud, I.; Bordreuil, C.; Wimpory, R.; Soulie, F., *Thermo-mechanical simulation of overlaid layers made with wire + arc additive manufacturing and GMAW-cold metal transfer*, Weld. World **64**, 1427–1435 (2020), 10.1007/s40194-020-00951-x

Camus, C.; Kaspari, C.; Rappich, J.; Blank, V.; Nickel, N., *Going beyond Alchemy: In-situ Analysis of Perovskite Growth by Optical Reflectance*, **0**, 1212-1216 (2020), 10.1109/pvsc45281.2020.9300415

Cao, H.; Dong, Z.; Qiu, Y.; Li, J.; Wang, Y.; Li, Z.; Yang, L.; Yin, S., *Inverted-Structure Perovskite Solar Cells*, ACS Appl. Mat. Interfaces **12**, 41303-41311 (2020), 10.1021/acsami.0c10379

Cao, Y.; Lin, K.; Liu, Z.; Hu, J.; Wang, C.W.; Liu, X.; Tereshina-Chitrova, E.; Kato, K.; Li, Q.; Deng, J.; Chen, J.; Zhang, H.; Xing, X., *Manipulating Spin Alignments of (Y,Lu)(1.7)Fe-17 Intermetallic Compounds via Unusual Thermal Pressure*, Inorg. Chem. **59**, 5247-5251 (2020),  
10.1021/acs.inorgchem.9b03570

Caprioglio, P.; Wolff, C.M.; Sandberg, O.J.; Armin, A.; Rech, B.; Albrecht, S.; Neher, D.; Stolterfoht, M., *On the Origin of the Ideality Factor in Perovskite Solar Cells*, Adv. Energy Mat. **10**, 2000502/1-10 (2020), 10.1002/aenm.202000502

Carbonio, E.A.; Velasco-Velez, J.J.; Schlögl, R.; Knop-Gericke, A., *Perspective-Outlook on Operando Photoelectron and Absorption Spectroscopy to Probe Catalysts at the Solid-Liquid Electrochemical Interface*, J. Electrochem. Soc. **167**, 054509/1-5 (2020), 10.1149/1945-7111/ab68d2

Caron, L., *Magnetocaloric effect in transition metal-based compounds*, **0**, 111-166 (2020), 10.1016/bs.hmm.2020.09.003

Chen, J.; Wang, X.; Hu, Z.; Tjeng, L.H.; Agrestini, S.; Valvidares, M.; Chen, K.; Nataf, L.; Baudelet, F.; Nagao, M.; Inaguma, Y.; Belik, A.A.; Tsujimoto, Y.; Matsushita, Y.; Kolodiaznyi, T.; Sereika, R.; Tanaka, M.; Yamaura, K., *Enhanced magnetization of the highest- TC ferrimagnetic oxide Sr<sub>2</sub>CrOsO<sub>6</sub>*, Phys. Rev. B **102**, 184418/1-13 (2020), 10.1103/physrevb.102.184418

Chen, K.; Luo, C.; Chen, B. B.; Abrudan, R. M.; Koster, G.; Mishra, S. K.; Radu, F., *Charge-transfer-induced interfacial ferromagnetism in La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>/NdNiO<sub>3</sub>*, Phys. Rev. Mat. **4**, 054408/1-8 (2020), 10.1103/physrevmaterials.4.054408

Chen, K.; Lott, D.; Philippi-Kobs, A.; Weigand, M.; Luo, C.; Radu, F., *Observation of compact ferrimagnetic skyrmions in DyCo(3) film*, Nanoscale **12**, 18137-18143 (2020), 10.1039/d0nr02947e

Chen, T.; Chen, Y.; Tam, D.W.; Gao, B.; Qiu, Y.; Schneidewind, A.; Radelytskyi, I.; Prokes, K.; Chi, S.; Matsuda, M.; Broholm, C.; Dai, P., *Anisotropic effect of a magnetic field on the neutron spin resonance in FeSe*, Phys. Rev. B **101**, 140504(R)/1-7 (2020), 10.1103/physrevb.101.140504

Chernyavskii, I.O.; Nikitin, S.E.; Onykiienko, Y.A.; Inosov, D.S.; Stahl, Q.; Geck, J.; Hong, X.C.; Hess, C.; Gass, S.; Wolter, A.U.B.; Wolf, D.; Lubk, A.; Efremov, D.V.; Yokaichiya, F.; Aswartham, S.; Büchner, B.; Morozov, I.V., *Incommensurate magnet iron monophosphide FeP: Crystal growth and characterization*, Phys. Rev. Mat. **4**, 083403/1-9 (2020), 10.1103/physrevmaterials.4.083403

Chikina, A.; Fedorov, A.; Bhoi, D.; Voroshnin, V.; Haubold, E.; Kushnirenko, Y.; Kim, K.H.; Borisenko, S., *Turning charge-density waves into Cooper pairs*, npj Quant. Mat. **5**, 22.01.2005 (2020), 10.1038/s41535-020-0225-5

Chikina, A.; Fedorov, A.; Bhoi, D.; Voroshnin, V.; Haubold, E.; Kushnirenko, Y.; Kim, K.H.; Borisenko, S., *Publisher Correction: Turning charge-density waves into Cooper pairs*, npj Quant. Mat. **5**, 25.Jan (2020), 10.1038/s41535-020-0231-7

Chillal, S.; Iqbal, Y.; Jeschke, H.O.; Rodriguez-Rivera, J.A.; Bewley, R.; Manuel, P.; Khalyavin, D.; Steffens, P.; Thomale, R.; Islam, A. T. M. N.; Reuther, J.; Lake, B., *Evidence for a three-dimensional quantum spin liquid in PbCuTe<sub>2</sub>O<sub>6</sub>*, Nat. Commun. **11**, 2348 (2020), 10.1038/s41467-020-15594-1

Chillal, S.; Islam, N.A.T.M.; Luetkens, H.; Canevet, E.; Skourski, Y.; Khalyavin, D.; Lake, B., *Magnetic structure of the quantum magnet SrCuTe<sub>2</sub>O<sub>6</sub>*, Phys. Rev. B **102**, 224424/1-11 (2020), 10.1103/PhysRevB.102.224424

Chillal, S.; Schierle, E.; Weschke, E.; Yokaichiya, F.; Hoffmann, J.- U.; Volkova, O.S.; Vassiliev, A.N.; Sinchenko, A.A.; Lejay, P.; Hadj-Ajjem, A.; Monceau, P.; Lake, B., *Strongly coupled charge, orbital, and spin order in TbTe<sub>3</sub>*, Phys. Rev. B **102**, 241110(R)/1-6 (2020), 10.1103/PhysRevB.102.241110

Christiakova, G.; Macco, B.; Korte, L., *Low-Temperature Atomic Layer Deposited Magnesium Oxide as a Passivating Electron Contact for c-Si-Based Solar Cells*, IEEE J. Photovolt, **10**, 398-406 (2020), 10.1109/jphotov.2019.2961603

Christiakova, G.; Korte, L., *Implementation of ALD-grown MgO layers as electron-selective contact for silicon solar cells*, **0**, 1632-1634 (2020), 10.1109/pvsc45281.2020.9300974

Choubrac, L.; Bär, M.; Kozina, X.; Félix, R.; Wilks, R.G.; Brammertz, G.; Levchenko, S.; Arzel, L.; Barreau, N.; Harel, S.; Meuris, M.; Vermang, B., *Sn Substitution by Ge: Strategies to Overcome the Open-Circuit Voltage Deficit of Kesterite Solar Cells*, ACS Appl. En. Mat. **3**, 5830-5839 (2020), 10.1021/acsael.0c00763

Ciprian, R.; Lamperti, A.; Capasso, L.; Motti, F.; Cianci, E.; Weschke, E.; Torelli, P.; Debernardi, A., *Magnetic behavior of Fe-doped zirconia studied by synchrotron radiation measurements and first-principles simulations*, Phys. Rev. Mat. **4**, 054417/1-14 (2020), 10.1103/physrevmaterials.4.054417

Coles, S.W.; Park, C.; Nikam, R.; Kanduc, M.; Dzubiella, J.; Rotenberg, B., *Correlation Length in Concentrated Electrolytes: Insights from All-Atom Molecular Dynamics Simulations*, J. Phys. Chem. B **124**, 1778-1786 (2020), 10.1021/acs.jpcb.9b10542

Connolley, T.; Magdysyuk, O.V.; Michalik, S.; Allan, P.K.; Klaus, M.; Kamm, P.H.; Garcia-Moreno, F.; Nelson, J.A.; Wilson, C. V.; Wilson, M. d., *An operando spatially resolved study of alkaline battery discharge using a novel hyperspectral detector and X-ray tomography*, J. Appl. Crystallogr. **53**, 01.Okt (2020), 10.1107/S1600576720012078

Couto, R.C.; Kjellsson, L.; Ågren, H.; Caravetta, V.; Sorensen, S.L.; Kubin, M.; Bülow, C.; Timm, M.; Zamudio-Bayer, V.; Von Issendorff, B.; Lau, J.T.; Söderström, J.; Rubensson, J.E.; Lindblad, R., *The carbon and oxygen K-edge NEXAFS spectra of CO+*, Phys. Chem. Chem. Phys. **22**, 16215-16223 (2020), 10.1039/d0cp02207a

Crovetto, A.; Hempel, H.; Rusu, M.; Choubrac, L.; Kojda, D.; Habicht, K.; Unold, T., *Water Adsorption Enhances Electrical Conductivity in Transparent P-Type CuI*, ACS Appl. Mat. Interfaces **12**, 48741-48747 (2020), 10.1021/acsami.0c11040

Crovetto, A.; Kim, S.; Fischer, M.; Stenger, N.; Walsh, A.; Chorkendorff, I.; Vesborg, P.C.K., *Assessing the defect tolerance of kesterite-inspired solar absorbers*, En. Envir. Science **13**, 3489-3503 (2020), 10.1039/d0ee02177f

Crovetto, A.; Xing, Z.; Fischer, M.; Nielsen, R.; Savory, C.N.; Rindzevicius, T.; Stenger, N.; Scanlon, D.O.; Chorkendorff, I.; Vesborg, P.C.K., *Experimental and First-Principles Spectroscopy of Cu<sub>2</sub>SrSnS<sub>4</sub> and Cu<sub>2</sub>BaSnS<sub>4</sub> Photoabsorbers*, ACS Appl. Mat. Interfaces **12**, 50446-50454 (2020), 10.1021/acsami.0c14578

Cruz, A.; Ruske, F.; Eljarrat, A.; Michalowski, P.P.; Morales-Vilches, A.B.; Neubert, S.; Wang, E.-C.; Koch, C.T.; Szyszka, B.; Schlatmann, R.; Stannowski, B., *Influence of Silicon Layers on the Growth of ITO and AZO in Silicon Heterojunction Solar Cells*, IEEE J. Photovolt, **10**, 703-709 (2020), 10.1109/JPHOTOV.2019.2957665

Czub, J.; Shtender, V.; Przewoznik, J.; Zarzecka, A.; Hoser, A.; Gondek, L., *On the properties of the novel CeMgNi<sub>2</sub>T<sub>2</sub> (T = Co, Cu) alloys and their hydrides*, J. Alloy. Compd. **814**, 152244/1-7 (2020), 10.1016/j.jallcom.2019.152244

Dai, L.; Niu, G.; Zhao, J.; Zhao, H.; Liu, Y.; Wang, Y.; Zhang, Y.; Wu, H.; Wang, L.; Pfützenreuter, D.; Schwarzkopf, J.; Dubourdieu, C.; Schroeder, T.; Ye, Z.-G.; Xie, Y.-H.; Ren, W., *Toward van der Waals epitaxy of transferable ferroelectric barium titanate films via a graphene monolayer*, J. Mater. Chem. C **8**, 3445-3451 (2020), 10.1039/C9TC06454K

Danilovich, I.L.; Deeva, E.B.; Bukhteev, K.Y.; Vorobyova, A.A.; Morozov, I.V.; Volkova, O.S.; Zvereva, E.A.; Maximova, O.V.; Solovyev, I.V.; Nikolaev, S.A.; Phuyal, D.; Abdel-Hafiez, M.; Wang, Y.C.; Lin, J.Y.;

Chen, J.M.; Gorbunov, D.I.; Puzniak, K.; Lake, *Co(NO<sub>3</sub>)<sub>2</sub> as an inverted umbrella-type chiral noncoplanar ferrimagnet*, Phys. Rev. B **102**, 094429/1-7 (2020), 10.1103/physrevb.102.094429

David, T.W.; Anizelli, H.; Jacobsson, T.J.; Gray, C.; Teahan, W.; Kettle, J., *Enhancing the stability of organic photovoltaics through machine learning*, Nano Energy **78**, 105342/1-10 (2020), 10.1016/j.nanoen.2020.105342

D'Avino, G.; Duham, S.; Della Valle, R.G.; Heimel, G.; Oehzelt, M.; Kera, S.; Ueno, N.; Beljonne, D.; Salzmann, I., *Electrostatic Interactions Shape Molecular Organization and Electronic Structure of Organic Semiconductor Blends*, Chem. Mater. **32**, 1261–1271 (2020), 10.1021/acs.chemmater.9b04763

De Oliveira, L.P.; Souza, A.P.S.; Yokaichiya, F.; Genezini, F.A.; Franco, M.K.K.D., *Monte Carlo simulations of the S-shaped neutron guide*, J. Instrum. **15**, (2020), 10.1088/1748-0221/15/01/p01012

De Rosa, S.; Branchini, P.; Yivlialin, R.; Duò, L.; Bussetti, G.; Tortora, L., *Disclosing the Graphite Surface Chemistry in Acid Solutions for Anion Intercalation*, ACS App. Nano Mat. **3**, 691-698 (2020), 10.1021/acsanm.9b02220

De Sousa, J.; Bejarano, F.; Gutiérrez, D.; Leroux, Y.; Nowik-Boltyk, E.; Junghofer, T.; Giangrisostomi, E.; Ovsyannikov, R.; Casu, M.; Veciana, J.; Mas-Torrent, M.; Fabre, B.; Rovira, C.; Crivillers, N., *Exploiting the versatile alkyne-based chemistry for expanding the applications of a stable triphenylmethyl organic radical on surfaces*, Chem. Sci. **11**, 516-524 (2020), 10.1039/c9sc04499j

Dehlinger, A.; Seim, C.; Stiel, H.; Twamley, S.; Ludwig, A.; Kördel, M.; Grötzsch, D.; Rehbein, S.; Kanngießer, B., *Laboratory Soft X-Ray Microscopy with an Integrated Visible-Light Microscope-Correlative Workflow for Faster 3D Cell Imaging*, Micro. Microanal. **26**, 1124-1132 (2020), 10.1017/s1431927620024447

Deinert, S.; Schrottd, A.; Hartmann, G.; Achner, A.; Artemyev, A.N.; Ehresmann, A.; Hans, A.; Ilchen, M.; Glaser, L.; Scholz, F.; Seltmann, J.; Viefhaus, J.; Demekhin, P.V.; Knie, A., *Interatomic resonant Auger effect in N<sub>2</sub>O*, J. Phys. B **53**, 224003/1-5 (2020), 10.1088/1361-6455/abbd2f

Deli shen, ; Wu, W.; Li, Y.; Abate, A.; Wei, M., *2-Methylimidazole as an interlayer for the enhancement of the open-circuit voltage in perovskite solar cells*, J. Power Sourc. **450**, 227714/1-7 (2020), 10.1016/j.jpowsour.2020.227714

Deng, X.; Chao, A.W.; Feikes, J.; Huang, W. H.; Ries, M.; Tang, C.X., *Single-particle dynamics of microbunching*, Phys. Rev Accel. Beams **23**, 044002/1-18 (2020), 10.1103/PhysRevAccelBeams.23.044002

Deng, X.; Klein, R.; Chao, A.W.; Hoehl, A.; Huang, W.H.; Li, J.; Kubeck, J.; Petenev, Y.; Ries, M.; S., I.; Tang, C.X.; Feikes, J., *Widening and distortion of the particle energy distribution by chromaticity in quasi-isochronous rings*, Phys. Rev Accel. Beams **23**, 044001/1-6 (2020), 10.1103/PhysRevAccelBeams.23.044001

Dhiman, I.; Ziesche, R.; Rilk, L.; Manke, I.; Hilger, A.; Radhakrishnan, B.; Burress, T.; Treimer, W.; Kardjilov, N., *Visualization of magnetic domain structure in FeSi based highpermeability steel plates by neutron Imaging*, Mater. Lett. **259**, 126816/1-6 (2020), 10.1016/j.matlet.2019.126816

Di Girolamo, D.; Phung, N.; Kosasih, F.U.; Di Giacomo, F.; Matteocci, F.; Smith, J.A.; Flatken, M.A.; Köbler, H.; Turren Cruz, S.H.; Mattoni, A.; Cinà, L.; Rech, B.; Latini, A.; Divitini, G.; Ducati, C.; Di Carlo, A.; Dini, D.; Abate, A., *Ion Migration-Induced Amorphization and Phase Segregation as a Degradation*

*Mechanism in Planar Perovskite Solar Cells*, Adv. Energy Mat. **10**, 2000310/1-11 (2020), 10.1002/aenm.202000310

Digernes, E.; Leliaert, J.; Weigand, M.; Folven, E.; Van Waeyenberge, B., *Direct observation of temperature dependent vortex dynamics in a La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> micromagnet*, Phys. Rev. Res. **2**, 043429/1-7 (2020), 10.1103/PhysRevResearch.2.043429

Ding, F.; Zhao, C.; Zhou, D.; Meng, Q.; Xiao, D.; Zhang, Q.; Niu, Y.; Li, Y.; Rong, X.; Lu, Y.; Chen, L.; Hu, Y.S., *A Novel Ni-rich O<sub>3</sub>-Na[Ni<sub>0.60</sub>Fe<sub>0.25</sub>M<sub>0.15</sub>]O<sub>2</sub> Cathode for Na-ion Batteries*, En. Stor. Mat. **30**, 420-430 (2020), 10.1016/j.ensm.2020.05.013

Ding, Y.; Gu, Q.; Klyushin, A.; Huang, X.; Choudhury, S.H.; Spanos, I.; Song, F.; Mom, R.; Düngen, P.; Mechler, A.K.; Schlögl, R.; Heumann, S., *Dynamic carbon surface chemistry: Revealing the role of carbon in electrolytic water oxidation*, J. of Energy Chem. **47**, 155-159 (2020), 10.1016/j.jec.2019.12.006

Dislaki, E.; Cialone, M.; Celegato, F.; Rizzi, P.; Tiberto, P.; Vadilonga, S.; Többens, D.; Sort, J.; Pellicer, E., *Unraveling the properties of sharply defined submicron scale FeCu and FePd magnetic structures fabricated by electrodeposition onto electron-beam-lithographed substrates*, Mater. Design **193**, 108826/1-12 (2020), 10.1016/j.matdes.2020.108826

Dobrovolsky, A.; Merdasa, A.; Li, J.; Hirselandt, K.; Unger, E.L.; Scheblykin, I.G., *Relating Defect Luminescence and Nonradiative Charge Recombination in MAPbI<sub>3</sub> Perovskite Films*, J. Phys. Chem. Lett. **11**, 1714–1720 (2020), 10.1021/acs.jpcllett.9b03878

Driver, T.; Li, S.; Champenois, E.G.; Duris, J.; Ratner, D.; Lane, T.J.; Rosenberger, P.; Al-Haddad, A.; Averbukh, V.; Barnard, T.; Berrah, N.; Bostedt, C.; Bucksbaum, P.H.; Coffee, R.; Dimauro, L.F.; Fang, L.; Garratt, D.; Gatton, A.; Guo, Z.; Hartmann,, *Attosecond transient absorption spooktroscopy: a ghost imaging approach to ultrafast absorption spectroscopy*, Phys. Chem. Chem. Phys. **22**, 2704-2712 (2020), 10.1039/c9cp03951a

Durmus, Y.E.; Zhang, H.; Baakes, F.; Desmaizieres, G.; Hayun, H.; Yang, L.; Kolek, M.; Küpers, V.; Janek, J.; Mandler, D.; Passerini, S.; Ein-Eli, Y., *Side by Side Battery Technologies with Lithium-Ion Based Batteries*, Adv. Energy Mat. **10**, 2000089/1-5 (2020), 10.1002/aenm.202000089

Dziarzhytski, S.; Biednov, M.; Dicke, B.; Wang, A.; Miedema, P.S.; Engel, R.Y.; Schunck, J.O.; Redlin, H.; Weigelt, H.; Siewert, F.; Behrens, C.; Sinha, M.; Schulte, A.; Grimm-Lebsanft, B.; Chiuzbaian, S. G.; Wurth, W.; Beye, M.; Rübhausen, M.; Brenner, G., *The TRIXS end-station for femtosecond timeresolved resonant inelastic x-ray scattering experiments at the soft x-ray free-electron laser FLASH*, Str. Dyn. **7**, 054301/1-12 (2020), 10.1063/4.0000029

Eckhoff, M.; Schönwald, F.; Risch, M.; Volkert, C.A.; Blöchl, P.; Behler, J., *Closing the gap between theory and experiment for lithium manganese oxide spinels using a high-dimensional neural network potential*, Phys. Rev. B **102**, 174102/1-19 (2020), 10.1103/PhysRevB.102.174102

Eisert, J.; Hangleiter, D.; Walk, N.; Roth, I.; Markham, D.; Parekh, R.; Chabaud, U.; Kashefi, E., *Quantum certification and benchmarking*, Nat. Rev. Phys. **2**, 382-390 (2020), 10.1038/s42254-020-0186-4

Elia, G.A.; Greco, G.; Kamm, P.H.; Garcia-Moreno, F.; Raoux, S.; Hahn, R., *Simultaneous X-Ray Diffraction and Tomography Operando Investigation of Aluminum/Graphite Batteries*, Adv. Funct. Mater. **30**, 2003913/1-9 (2020), 10.1002/adfm.202003913

Elizabeth, A.; Conradi, H.; Sahoo, S.K.; Kodalle, T.; Kaufmann, C.A.; Kühne, T.D.; Mirhosseini, H.; Abou-Ras, D.; Mönig, H., *Correlating facet orientation, defect-level density and dipole layer formation at the surface of polycrystalline CuInSe<sub>2</sub> thin films*, *Acta Mat.* **200**, 463-470 (2020), 10.1016/j.actamat.2020.09.028

Emmel, D.; Hofmann, J.D.; Arlt, T.; Manke, I.; Wehinger, G.D.; Schröder, D., *Understanding the Impact of Compression on the Active Area of Carbon Felt Electrodes for Redox Flow Batteries*, *ACS Appl. En. Mat.* **3**, 4384-4393 (2020), 10.1021/acsael.0c00075

Engel, J.; Gross, M.; Koss, G.; Lishilin, O.; Loisch, G.; Philipp, S.; Richter, D.; Stephan, F., *Polymer foil windows for gas-vacuum separation in accelerator applications*, *AIP Adv.* **10**, 025224/1-5 (2020), 10.1063/1.5143258

Engel, R.Y.; Miedema, P.S.; Turenne, D.; Vaskivskyi, I.; Brenner, G.; Dziarzhytski, S.; Kuhlmann, M.; Schunck, J.O.; Döring, F.; Styervooyedov, A.; Parkin, S.S.P.; David, C.; Schüßler-Langeheine, C.; Dürr, H.A.; Beye, M., *Parallel Broadband Femtosecond Reflection Spectroscopy at a Soft X-Ray Free-Electron Laser*, *App. Sci.* **10**, 08.01.6947 (2020), 10.3390/app10196947

Ennaceri, H.; Fischer, K.; Hanus, K.; Chemseddine, A.; Prager, A.; Griebel, J.; Kühnert, M.; Schulze, A.; Abel, B., *Effect of morphology on the photoelectrochemical activity of TiO<sub>2</sub> self-organized nanotube arrays*, *Cat.* **10**, 279/1-15 (2020), 10.3390/catal10030279

Erfurt, D.; Koida, T.; Heinemann, M.D.; Li, C.; Bertram, T.; Nishinaga, J.; Szyszka, B.; Shibata, H.; Klenk, R.; Schlatmann, R., *Impact of rough substrates on hydrogen-doped indium oxides for the application in CIGS devices*, *Solar Energy Mat Solar Cells* **0**, (2020), 10.1016/j.solmat.2019.110300

Falke, S.; Feiler, C.; Chapman, H.; Sarrou, I., *Crystal structures of native cytochrome c(6) from Thermosynechococcus elongatus in two different space groups and implications for its oligomerization*, *Acta Crystallogr. F* **76**, 444-452 (2020), 10.1107/s2053230x20010249

Fantin, A.; Lepore, G.O.; Manzoni, A.M.; Kasatikov, S.; Scherb, T.; Huthwelker, T.; d'Acapito, F.; Schumacher, G., *Short-range chemical order and local lattice distortion in a compositionally complex alloy*, *Acta Mat.* **193**, 329-337 (2020), 10.1016/j.actamat.2020.04.034

Farias-Basulto, G.A.; Reyes-Figueroa, P.; Ulbrich, C.; Szyszka, B.; Schlatmann, R.; Klenk, R., *Validation of a multiple linear regression model for CIGSSe photovoltaic module performance and Pmpp prediction*, *Sol. Energy* **208**, 859–865 (2020), 10.1016/j.solener.2020.08.040

Feiler, C.G.; Weiss, M.S.; Blankenfeldt, W., *The hypothetical periplasmic protein PA1624 from Pseudomonas aeruginosa folds into a unique two-domain structure*, *Acta Crystallogr. F* **76**, 609-615 (2020), 10.1107/s2053230x20014612

Feiler, T.; Bhattacharya, B.; Michalchuk, A.A.L.; Schröder, V.; List-Kratochvil, E.; Emmerling, F., *Mechanochemical Syntheses of Isostructural Luminescent Cocrystals of 9-Anthracenecarboxylic Acid with two Dipyridines Coformers*, *Cryst.* **10**, 889/1-14 (2020), 10.3390/crust10100889

Feng, H.L.; Chen, J.; Hu, Z.; Wang, X.; Reehuis, M.; Adler, P.; Hoser, A.; Wu, M.X.; Agrestini, S.; Vasili, H.B.; Herrero-Martin, J.; Nataf, L.; Baudelet, F.; Chen, K.; Matsushita, Y.; Li, M.R.; Tjeng, L.H.; Felser, C.; Jansen, M.; Yamaura, K., *From antiferromagnetism to high-T-c weak ferromagnetism manipulated by atomic rearrangement in Ba<sub>3</sub>NiOs<sub>2</sub>O<sub>9</sub>*, *Phys. Rev. Mat.* **4**, 064420/1-9 (2020), 10.1103/physrevmaterials.4.064420

Fengler, S.; Kriegel, H.; Schieda, M.; Gutzmann, H.; Klassen, T.; Wollgarten, M.; Dittrich, T., *Charge Transfer in c-Si(n++)/TiO<sub>2</sub>(ALD) at the Amorphous/Anatase Transition: A Transient Surface*

*Photovoltage Spectroscopy Study*, ACS Appl. Mat. Interfaces **12**, 3140-3149 (2020),  
10.1021/acsami.9b17592

Filnov, S.O.; Klimovskikh, I.I.; Estyunin, D.A.; Fedorov, A.V.; Voroshnin, V.Y.; Koroleva, A.V.; Rybkin, A.G.; Shevchenko, E.V.; Aliev, Z.S.; Babanly, M.B.; Amiraslanov, I.R.; Mamedov, N.T.; Schwier, E.F.; Miyamoto, K.; Okuda, T.; Kumar, S.; Kimura, A.; M, *Probe-dependent Dirac-point gap in the gadolinium-doped thallium-based topological insulator TlBi0.9Gd0.1Se2*, Phys. Rev. B **102**, 085149/1-7 (2020), 10.1103/physrevb.102.085149

Flisgen, T.; Gjonaj, E.; Glock, H.W.; Tsakanian, A., *Generalization of coupled S -parameter calculation to compute beam impedances in particle accelerators*, Phys. Rev Accel. Beams **23**, 034601/1-13 (2020), 10.1103/physrevaccelbeams.23.034601

Fogh, E.; Kihara, T.; Toft-Petersen, R.; Bartkowiak, M.; Narumi, Y.; Prokhnenko, O.; Miyake, A.; Tokunaga, M.; Oikawa, K.; Sørensen, M.K.; Dyrnum, J.C.; Grimmer, H.; Nojiri, H.; Christensen, N.B., *Magnetic structures and quadratic magnetoelectric effect in LiNiPO4 beyond 30 T*, Phys. Rev. B **101**, 024403/1-12 (2020), 10.1103/physrevb.101.024403

Förster, J.-D.; Gurk, C.; Lamneck, M.; Tong, H.; Ditas, F.; Steimer, S.S.; Alpert, P.A.; Ammann, M.; Raabe, J.; Weigand, M.; Watts, B.; Pöschl, U.; Andreae, M.O.; Pöhlker, C., *MIMiX: a Multipurpose In situ Microreactor system for X-ray microspectroscopy to mimic atmospheric aerosol processing*, Atm. Meas. Techn. **13**, 3717–3729 (2020), 10.5194/amt-13-3717-2020

Franco, M.K.K.D.; Sepulveda, A.F.; Vigato, A.A.; Oshiro, A.; Machado, I.P.; Kent, B.; Clemens, D.; Yokaichiya, F.; de Araujo, D.R., *Supramolecular Structure of Temperature-Dependent Polymeric Hydrogels Modulated by Drug Incorporation*, Chem. Sel. **5**, 12853-12861 (2020), 10.1002/slct.202001116

Franz, A.; Többens, D.M.; Lehmann, F.; Kärgell, M.; Schorr, S., *The influence of deuteration on the crystal structure of hybrid halide perovskites: a temperature-dependent neutron diffraction study of FAPbBr3*, Acta Crystallogr. B **76**, 267-274 (2020), 10.1107/s2052520620002620

Freitas Mariano, K.; Monteiro do Nascimento, M.; Querobino, S.; Ramos Campos, E.; de Oliveira, J.; Yokaichiya, F.; Franco, M.; Alberto-Silva, C.; de Paula, E.; Lombello, C.; de Lima, R.; Fraceto, L.; de Araujo, D., *Influence of chitosan-tripolyphosphate nanoparticles on thermosensitive polymeric hydrogels: structural organization, drug release mechanisms and cytotoxicity*, Int. J. Polym. Mater. **69**, 592-603 (2020), 10.1080/00914037.2019.1596909

Frijnts, T.; Pellegrino, C.; Gall, S.; Neitzert, H.C., *Proton induced degradation of liquid phase crystallized poly-Si thin-film solar cells*, **0**, 2683-2687 (2020), 10.1109/pvsc45281.2020.9300392

Frolov, A. S.; Sánchez-Barriga, J.; Callaert, C.; Hadermann, J.; Fedorov, A. V.; Usachov, D. Yu.; Chaika, A.; Walls, B.; Zhussupbekov, K.; Shvets, I. V.; Muntwiler, M.; Varykhalov, A.; Rader, O.; Yashina, L. V., *Atomic and electronic structure of multidomain GeTe crystal surface*, ACS Nano **14**, 16576–16589 (2020), 10.1021/acsnano.0c05851

Fu, Z.; Qin, L.; Sun, K.; Hao, L.; Zheng, Y.Z.; Lohstroh, W.; Günther, G.; Russina, M.; Liu, Y.; Xiao, Y.; Jin, W.; Chen, D., *Low-temperature spin dynamics of ferromagnetic molecular ring {Cr8Y8}*, npj Quant. Mat. **5**, 32/1-6 (2020), 10.1038/s41535-020-0234-4

Funk, H.; Shargaieva, O.; Eljarrat, A.; Unger, E.L.; Koch, C.T.; Abou-Ras, D., *In Situ TEM Monitoring of Phase-Segregation in Inorganic Mixed Halide Perovskite*, J. Phys. Chem. Lett. **11**, 4945–4950 (2020), 10.1021/acs.jpclett.0c01296

Furchner, A.; Kratz, C.; Ogieglo, W.; Pinna, I.; Rappich, J.; Hinrichs, K., *Ultrasensitive broadband infrared 4x4 Mueller-matrix ellipsometry for studies of depolarizing and anisotropic thin films*, J. Vacuum Sc. Techn. B **38**, 014003/1-11 (2020), 10.1116/1.5129800

Gabani, S.; Flachbart, K.; Siemensmeyer, K.; Mori, T., *Magnetism and superconductivity of rare earth borides*, J. Alloy. Compd. **821**, 153201/1-21 (2020), 10.1016/j.jallcom.2019.153201

Gabáni, S.; Takácová, I.; Orendáć, M.; Pristás, G.; Gazo, E.; Siemensmeyer, K.; Bogach, A.; Sluchanko, N.; Shitsevalova, N.; Prokleska, J.; Sechovský, V.; Flachbart, K., *Spin, charge and lattice dynamics of magnetization processes in frustrated Shastry-Sutherland system TmB4*, Solid State Sci. **105**, 106210/1-4 (2020), 10.1016/j.solidstatesciences.2020.106210

Gai, C.; Wang, J.; Wang, Y.; Li, J., *The low-dimensional three-dimensional tin halide perovskite: Film characterization and device performance*, Energ. **13**, 02.01.2026 (2020), 10.3390/en13010002

Gao, D.; Yang, S.; Xi, L.; Risch, M.; Song, L.; Lv, Y.; Li, C.; Li, C.; Chen, G., *External and internal interface-controlled trimetallic PtCuNi nanoframes with high defect-density for enhanced electrooxidation of liquid fuels*, Chem. Mater. **32**, 1581-1594 (2020), 10.1021/acs.chemmater.9b04789

Gao, R.; Zhou, D.; Ning, D.; Zhang, W.; Huang, L.; Sun, F.; Schuck, G.; Schumacher, G.; Hu, Z.; Liu, X., *Probing the Self-Boosting Catalysis of LiCoO<sub>2</sub> in Li-O<sub>2</sub> Battery with Multiple In Situ/Operando Techniques*, Adv. Funct. Mater. **30**, 2002223/1-9 (2020), 10.1002/adfm.202002223

Gao, R.; Chen, Q.; Zhang, W.; Zhou, D.; Ning, D.; Schumacher, G.; Smirnov, D.; Sun, L.; Liu, X., *Oxygen defects-engineered LaFeO<sub>3-x</sub> nanosheets as efficient electrocatalysts for lithium-oxygen battery*, J. Catal. **384**, 199-207 (2020), 10.1016/j.jcat.2020.02.024

Garai, B.; Bon, V.; Krause, S.; Schwotzer, F.; Gerlach, M.; Senkovska, I.; Kaskel, S., *Tunable Flexibility and Porosity of the Metal-Organic Framework DUT-49 through Postsynthetic Metal Exchange*, Chem. Mater. **32**, 889-896 (2020), 10.1021/acs.chemmater.9b04769

Garai, B.; Bon, V.; Efimova, A.; Gerlach, M.; Senkovska, I.; Kaskel, S., *Reversible switching between positive and negative thermal expansion in a metal-organic framework DUT-49*, J. Mater. Chem. A **8**, 20420-20428 (2020), 10.1039/d0ta06830f

Garcia-Moreno, F.; Jürgens, M.; Banhart, J., *Temperature dependence of film rupture and internal structural stability in liquid aluminium alloy foams*, Acta Mat. **196**, 325-337 (2020), 10.1016/j.actamat.2020.06.054

Garcia-Moreno, F.; Radtke, L.A.; Neu, T.R.; Kamm, P. H.; Klaus, M.; Schlepütz, C.M.; Banhart, J., *The Influence of Alloy Composition and Liquid Phase on Foaming of Al–Si–Mg Alloys*, Metals **10**, 189/1-18 (2020), 10.3390/met10020189

Garud, S.; Trinh, C.T.; Abou-Ras, D.; Stannowski, B.; Schlatmann, R.; Rech, B.; Amkreutz, D., *Toward High Solar Cell Efficiency with Low Material Usage: 15% Efficiency with 14 % mikro m Polycrystalline Silicon on Glass*, Sol. RRL **4**, 2000058/1-8 (2020), 10.1002/solr.202000058

Garud, S.; Bokalic, M.; Trinh, C.T.; Rech, B.; Amkreutz, D.; Topic, M., *Analysis of Surface Passivation and Laser Firing on Thin-Film Silicon Solar Cells via Light-Beam Induced Current*, IEEE J. Photovolt, **10**, 1246-1253 (2020), 10.1109/jphotov.2020.3001908

Gebhard, M.; Schnucklake, M.; Hilger, A.; Röhe, M.; Osenberg, M.; Krewer, U.; Manke, I.; Roth, C., *X-Ray-Computed Radiography and Tomography Study of Electrolyte Invasion and Distribution inside*

*Pristine and Heat-Treated Carbon Felts for Redox Flow Batteries*, En. Techn. **8**, 1901214/1-8 (2020), 10.1002/ente.201901214

Gebhard, M.; Tichter, T.; Franzen, D.; Paulisch, M. C.; Schutjajew, K.; Turek, T.; Manke, I.; Roth, C., *Improvement of Oxygen-Depolarized Cathodes in Highly Alkaline Media by Electrospinning of Poly(vinylidene fluoride) Barrier Layers*, ChemElectroChem **7**, 830-837 (2020), 10.1002/celc.201902115

Gebhard, M.; Tichter, T.; Schneider, J.; Mayer, j.; Hilger, A.; Osenberg, M.; Rahn, M.; Manke, I.; Roth, C., *On the stability of bismuth in modified carbon felt electrodes for vanadium redox flow batteries: An in-operando X-ray computed tomography study*, J. Power Sourc. **478**, 228695/1-9 (2020), 10.1016/j.jpowsour.2020.228695

Geiger, J.; Sprik, M.; May, M.M., *Band positions of anatase (001) and (101) surfaces in contact with water from density functional theory*, J. Chem. Phys. **152**, 194706/1-6 (2020), 10.1063/5.0004779

Georgalas, C.; Samartzis, A.; Biniskos, N.; Syskakis, E., *Effects of Cr-doping on the Jahn-Teller, the orthorhombic to rhombohedral, and the magnetic transitions in LaMn<sub>1-x</sub>CrxO<sub>3</sub> compounds*, Phy. B **586**, 412101/1-8 (2020), 10.1016/j.physb.2020.412101

Gericke, Eicke; Melskens, J.; Wendt, R.; Wollgarten, M.; Hoell, A.; Lips, K., *Quantification of Nanoscale Density Fluctuations in Hydrogenated Amorphous Silicon*, Phys. Rev. Lett. **125**, 185501/1-6 (2020), 10.1103/PhysRevLett.125.185501

Guttinger, M.; Höflich, K.; Smirnov, V.; Kollmann, H.; Lienau, C.; Silies, M., *Strongly coupled, high-quality plasmonic dimer antennas fabricated using a sketch-and-peel technique*, Nanophot. **9**, 401–412 (2020), 10.1515/nanoph-2019-0379

Gómez, A.; Wang, Q.; Goñi, A.R.; Campoy-Quiles, M.; Abate, A., *Reply to the “Comment on the publication ‘Ferroelectricity-free lead halide perovskites’ by Gomez et al.” by Colsmann et al.*, En. Envir. Science **13**, 1892-1895 (2020), 10.1039/D0EE00880J

Gorbunov, D.I.; Andreev, A.V.; Ishii, I.; Prokes, K.; Suzuki, T.; Zherlitsyn, S.; Wosnitza, J., *Acoustic signatures of the phase transitions in the antiferromagnet U<sub>2</sub>Rh<sub>2</sub>Sn*, Phys. Rev. B **101**, 014408/1-6 (2020), 10.1103/physrevb.101.014408

Gostkowska-Lekner, N.; Trawinski, B.; Kosonowski, A.; Bochentyn, B.; Lapinski, M.; Miruszewski, T.; Wojciechowski, K.; Kusz, B., *New synthesis route of highly porous In<sub>x</sub>Co<sub>4</sub>Sb<sub>12</sub> with strongly reduced thermal conductivity*, J. Mater. Sci. **55**, 13658–13674 (2020), 10.1007/s10853-020-04952-5

Gostkowska-Lekner, N.; Wallacher, D.; Grimm, N.; Habicht, K.; Hofmann, T., *A novel electrochemical anodization cell for the synthesis of mesoporous silicon*, Rev. Sci. Instrum. **91**, 105113/1-6 (2020), 10.1063/5.0008536

Gottesman, R.; Song, A.; Levine, I.; Krause, M.; Islam, A.T.M.N.; Abou-Ras, D.; Dittrich, T.; van de Krol, R.; Chemseddine, A., *Pure CuBi<sub>2</sub>O<sub>4</sub> Photoelectrodes with Increased Stability by Rapid Thermal Processing of Bi<sub>2</sub>O<sub>3</sub>/CuO Grown by Pulsed Laser Deposition*, Adv. Funct. Mater. **30**, 1910832/1-13 (2020), 10.1002/adfm.201910832

Gozem, S.; Seidel, R.; Hergenhahn, U.; Lugovoy, E.; Abel, B.; Winter, B.; Krylov, A.I.; Bradforth, S.E., *Probing the Electronic Structure of Bulk Water at the Molecular Length Scale with Angle-Resolved Photoelectron Spectroscopy*, J. Phys. Chem. Lett. **11**, 5162-5170 (2020), 10.1021/acs.jpclett.0c00968

Graefe, J.; Gruszecki, P.; Zelent, M.; Decker, M.; Keskinbora, K.; Noske, M.; Gawronski, P.; Stoll, H.; Weigand, M.; Krawczyk, M.; Back, C.H.; Goering, E.J.; Schuetz, G., *Direct observation of spin-wave focusing by a Fresnel lens*, Phys. Rev. B **102**, 024420/1-10 (2020), 10.1103/physrevb.102.024420

Greco, G.; Passerini, S., *Sodium induced morphological changes of carbon coated TiO<sub>2</sub> anatase nanoparticles - High-performance materials for na-ion batteries*, MRS Adv. **5**, 2221-2229 (2020), 10.1557/adv.2020.259

Greening, D.; Weaver, B.; Pettipher, A.J.; Walke, D.J.; Larsen, E.W.; Pmarangos, J.; Gtisch, J.W., *Generation and measurement of isolated attosecond pulses with enhanced flux using a two colour synthesized laser field*, Opt. Express **28**, 23329-23337 (2020), 10.1364/oe.396927

Greulich, K.; Belser, A.; Bölke, S.; Grüninger, P.; Karstens, R.; Sättele, M.S.; Ovsyannikov, R.; Giangrisostomi, E.; Basova, T.V.; Klyamer, D.; Chassé, T.; Peisert, H., *Charge Transfer from Organic Molecules to Molybdenum Disulfide: Influence of the Fluorination of Iron Phthalocyanine*, J. Phys. Chem. C **124**, 16990-16999 (2020), 10.1021/acs.jpcc.0c03862

Groß, F.; Zelent, M.; Träger, N.; Förster, J.; Sanli, U.T.; Sauter, R.; Decker, M.; Back, C.H.; Weigand, M.; Keskinbora, K.; Schütz, G.; Krawczyk, M.; Gräfe, J., *Building blocks for magnon optics: Emission and conversion of short spin waves*, ACS Nano **14**, 17184-17193 (2020), 10.1021/acsnano.0c07076

Grosse, M.; Schillinger, B.; Trtik, P.; Kardjilov, N.; Steinbrück, M., *Investigation of the 3D hydrogen distribution in zirconium alloys by means of neutron tomography*, Int. J. Mat. Res. **111**, 40-46 (2020), 10.3139/146.111863

Grube, T.; Reul, J.; Reuß, M.; Calnan, S.; Monnerie, N.; Schlatmann, R.; Sattler, C.; Robinius, M.; Stolten, D., *A techno-economic perspective on solar-tohydrogen concepts through 2025*, Sustain. Energ. Fuels **4**, 5818-5834 (2020), 10.1039/DOS-E00896F

Grzimek, V.; Kuchar, J., *Synthesis, properties and crystal structure of novel Copper(II) ammine complex with [Pd(CN)(4)](2-) building blocks*, Z. Kristallogr. **235**, 459–463 (2020), 10.1515/zkri-2020-0033

Gu, S.; Risso, S.; Lu, Y.; Ballauff, M., *Mechanism of the Oxidation of 3,3',5,5'-Tetramethylbenzidine Catalyzed by Peroxidase-Like Pt Nanoparticles Immobilized in Spherical Polyelectrolyte Brushes: A Kinetic Study*, ChemPhysChem **21**, 450-458 (2020), 10.1002/cphc.201901087

Gubarev, V.M.; Yakovlev, V.Y.; Sertsu, M.G.; Yakushev, O.F.; Krivtsun, V.M.; Gladush, Y.G.; Ostanin, I.A.; Sokolov, A.; Schäfers, F.; Medvedev, V.V.; Nasibulin, A.G., *Corrigendum to Single-walled carbon nanotube membranes for optical applications in the extreme ultraviolet rang*, Carbon **156**, 576/1 (2020), 10.1016/j.carbon.2019.10.007

Guc, M.; Kodalle, T.; Raghupathy, R.K.M.; Mirhosseini, H.; Kuehne, T.D.; Becerril-Romero, I.; Pérez-Rodríguez, A.; Kaufmann, C.A.; Izquierdo-Roca, V., *Vibrational Properties of RbInSe<sub>2</sub>: Raman Scattering Spectroscopy and First-Principle Calculations*, J. Phys. Chem. C **124**, 1285-1291 (2020), 10.1021/acs.jpcc.9b08781

Guo, H.; Li, Z.W.; Chang, C.F.; Hu, Z.; Kuo, C.Y.; Perring, T.G.; Schmidt, W.; Piovano, A.; Schmalzl, K.; Walker, H.C.; Lin, H.J.; Chen, C.T.; Blanco-Canosa, S.; Schlappa, J.; Schüßler-Langeheine, C.; Hansmann, P.; Khomskii, D.I.; Tjeng, L.H.; Komarek, A., *Charge disproportionation and nano phase separation in RSrNiO<sub>4</sub>*, Sci. Rep. **10**, 18012/1-11 (2020), 10.1038/s41598-020-74884-2

Gurieva, G.; Marquez, J.A.; Franz, A.; Hages, C.J.; Levchenko, S.; Unold, T.; Schorr, S., *Effect of Ag incorporation on structure and optoelectronic properties of (Ag<sub>1-x</sub>Cu<sub>x</sub>)<sub>2</sub>ZnSnSe<sub>4</sub> solid solutions*, Phys. Rev. Mat. **4**, 054602/1-8 (2020), 10.1103/physrevmaterials.4.054602

Gurieva, G.; Többens, D.M.; Levcenco, S.; Unold, T.; Schorr, S., *Cu/Zn disorder in stoichiometric Cu<sub>2</sub>ZnSn(S<sub>1-x</sub>Se<sub>x</sub>)<sub>4</sub> semiconductors: A complementary neutron and anomalous X-ray diffraction study*, J. Alloy. Compd. **846**, 156304/1-8 (2020), 10.1016/j.jallcom.2020.156304

Haferkamp, J.; Hangleiter, D.; Bouland, A.; Fefferman, B.; Eisert, J.; Bermejo-Vega, J., *Closing Gaps of a Quantum Advantage with Short-Time Hamiltonian Dynamics*, Phys. Rev. Lett. **125**, 250501/1-7 (2020), 10.1103/physrevlett.125.250501

Hagedorn, S.; Walde, S.; Susilo, N.; Netzel, C.; Tillner, N.; Unger, R.-S.; Manley, P.; Ziffer, E.; Wernicke, T.; Becker, C.; Lugauer, H. - J.; Kneissel, M.; Weyers, M., *Improving AlN crystal quality and strain management on nano-patterned sapphire substrates by high temperature annealing for UVC-LEDs*, Phys. Status Solidi A **217**, 1900796/1-7 (2020), 10.1002/pssa.201900796

Haltenhof, T.; Kotte, A.; De Bortoli, F.; Schiefer, S.; Meinke, S.; Emmerichs, A.-K.; Petermann, K. K.; Timmermann, B.; Imhof, P.; Franz, A.; Loll, B.; Wahl, M.C.; Preussner, M.; Heyd, F., *A Conserved Kinase-Based Body-Temperature Sensor Globally Controls Alternative Splicing and Gene Expression*, Mol. Cell **78**, 57-69.e4 (2020), 10.1016/j.molcel.2020.01.028

Handwerg, M.; Mitdank, R.; Levcenco, S.; Schorr, S.; Fischer, S.F., *Thermal and electrical conductivity of single crystalline kesterite Cu<sub>2</sub>ZnSnS<sub>4</sub>*, Mat. Res. Expr. **7**, 105908/1-7 (2020), 10.1088/2053-1591/abc276

Hangleiter, D.; Roth, I.; Nagaj, D.; Eisert, J., *Easing the Monte Carlo sign problem*, Sci. Adv. **6**, eabb8341/1-9 (2020), 10.1126/sciadv.abb8341

Härk, E.; Ballauff, M., *Carbonaceous Materials Investigated by Small-Angle X-ray and Neutron Scattering*, JCI Ins. **6**, 82/1-18 (2020), 10.3390/c6040082

Hartmann, C.; Gupta, S.; Bendikov, T.; Kozina, X.; Kunze, T.; Félix, R.; Hodes, G.; Wilks, R.G.; Cahen, D.; Bär, M., *Impact of SnF<sub>2</sub> addition on the chemical and electronic surface structure of CsSnBr<sub>3</sub>*, ACS Appl. Mat. Interfaces **12**, 12353-12361 (2020), 10.1021/acsami.9b22967

Hassa, A.; Sturm, C.; Kneiss, M.; Splith, D.; von Wenckstern, H.; Schultz, T.; Koch, N.; Lorenz, M.; Grundmann, M., *Solubility limit and material properties of a kappa-(Al(x)Ga<sub>1-x</sub>)(2)O<sub>3</sub> thin film with a lateral cation gradient on (00.1)Al<sub>2</sub>O<sub>3</sub> by tin-assisted PLD*, APL Mater. **8**, 021103/1-6 (2020), 10.1063/1.5141041

He, Y.; Fecher, G.H.; Kroder, J.; Borrmann, H.; Wang, X.; Zhang, L.; Kuo, C.Y.; Liu, C.E.; Chen, C.T.; Chen, K.; Choueikani, F.; Ohresser, P.; Tanaka, A.; Hu, Z.; Felser, C., *Easy-cone magnetic structure in (Cr<sub>0.9</sub>B<sub>0.1</sub>)Te*, Appl. Phys. Lett. **116**, 102404/1-4 (2020), 10.1063/5.0002118

Heim, K.; Ershov, A.; Rack, A.; Banhart, J.; Garcia-Moreno, F., *Motion of liquid and stabilising particles in individual liquid aluminium alloy films*, J. Mater. Sci. **55**, 14125-14136 (2020), 10.1007/s10853-020-05007-5

Hein, D.; Wartner, G.; Bergmann, A.; Bernal, M.; Cuenya, B.R.; Seidel, R., *Reversible water-induced phase changes of cobalt oxide nanoparticles*, ACS Nano **14**, 15450-15457 (2020), 10.1021/acsnano.0c06066

Hein, S.; Danner, T.; Westhoff, D.; Prifling, B.; Scurtu, R.; Kremer, L.; Hoffmann, A.; Hilger, A.; Osenberg, M.; Manke, I.; Wohlfahrt-Mehrens, M.; Schmidt, V.; Latz, A., *Influence of Conductive Additives and Binder on the Impedance of Lithium-Ion Battery Electrodes: Effect of Morphology*, J. Electrochem. Soc. **167**, 013546/1-14 (2020), 10.1149/1945-7111/ab6b1d

Held, G.; Venturini, F.; Grinter, D.C.; Ferrer, P.; Arrigo, R.; Deacon, L.; Quevedo Garzon, W.; Roy, K.; Large, A.; Stephens, C.; Watts, A.; Larkin, P.; Hand, M.; Wang, H.; Pratt, L.; Mudd, J.J.; Richardson, T.; Patel, S.; Hillman, M.; Scott, S., *Ambient-pressure endstation of the Versatile Soft X-ray (VerSoX) beamline at Diamond Light Source*, J. Synchrot. Radiat. **27**, 1153-1166 (2020), 10.1107/s1600577520009157

Hempel, C.; Kapishnikov, S.; Perez-Berna, A.J.; Werner, S.; Guttmann, P.; Pereiro, E.; Qvortrup, K.; Andresen, T.L., *The need to freeze - dehydration during specimen preparation for electron microscopy collapses the endothelial glycocalyx regardless of fixation method*, Microsc. **27**, e12643/1-11 (2020), 10.1111/micc.12643

Hennes, M.; Merhe, A.; Liu, X.; Weder, D.; Von Korff Schmising, C.; Schneider, M.; Günther, C.M.; Mahieu, B.; Malinowski, G.; Hehn, M.; Lacour, D.; Capotondi, F.; Pedersoli, E.; Nikolov, I.P.; Chardonnet, V.; Jal, E.; Lüning, J.; Vodungbo, B., *Laser-induced ultrafast demagnetization and perpendicular magnetic anisotropy reduction in a Co<sub>88</sub>Tb<sub>12</sub> thin film with stripe domains*, Phys. Rev. B **102**, 174437/1-12 (2020), 10.1103/physrevb.102.174437

Henning, R.; Liebig, F.; Prietzel, C.; Klemke, B.; Koetz, J., *Gold nanotriangles with magnetite satellites*, Colloids Surf A: Physicochem Eng. Aspects **600**, 124913/1-7 (2020), 10.1016/j.colsurfa.2020.124913

Hermerschmidt, F.; Mathies, F.; Schröder, V.R.F.; Rehermann, C.; Zorn Morales, N.; Unger, E.L.; List-Kratochvil, E., *Finally, inkjet-printed metal halide perovskite LEDs – utilizing seed crystal templating of salty PEDOT:PSS*, Mater. Horizons **7**, 1773-1781 (2020), 10.1039/DOMH00512F

Herrmann, H.; Hlawenka, P.; Siemensmeyer, K.; Weschke, E.; Sánchez-Barriga, J.; Varykhalov, A.; Shitsevalova, N. Y.; Dukhnenko, A. V.; Filipov, V. B.; Flachbart, K.; Gabáni, S.; Rader, O.; Sterrer, M.; Rienks, E. D. L., *Contrast Reversal in Scanning Tunneling Microscopy and Its Implications for the Topological Classification of SmB<sub>6</sub>*, Adv. Mat. **32**, 1906725/1-5 (2020), 10.1002/adma.201906725

Heyl, M.; Burmeister, D.; Schultz, T.; Pallasch, S.; Ligorio, G.; Koch, N.; List-Kratochvil, E.J.W., *Thermally Activated Gold-Mediated Transition Metal Dichalcogenide Exfoliation and a Unique Gold-Mediated Transfer*, Phys. Status Solidi RRL **14**, 2000408/1-5 (2020), 10.1002/pssr.202000408

Hidalgo, J.; Perini, C.A.R.; Castro-Mendez, A.F.; Jones, D.; Köbler, H.; Lai, B.; Li, R.; Sun, S.; Abate, A.; Correa-Baena, J.P., *Moisture-Induced Crystallographic Reorientations and Effects on Charge Carrier Extraction in Metal Halide Perovskite Solar Cells*, ACS En. Lett. **5**, 3526-3534 (2020), 10.1021/acsenergylett.0c01964

Hinrichs, K.; Rappich, J.; Shaykhutdinov, T., *Field Manipulation of Infrared Absorption Properties in Thin Films*, Phys. Status Solidi B **257**, 1900490/1-6 (2020), 10.1002/pssb.201900490

Hinte, C.; Barienti, K.; Steinbrücker, J.; Hartmann, J.M.; Gerstein, G.; Herbst, S.; Piorunek, D.; Frenzel, J.; Fantin, A.; Maier, H.J., *The Effect of Increasing Chemical Complexity on the Mechanical and Functional Behavior of NiTi-Related Shape Memory Alloys*, Shape Memory Superel. **6**, 181-190 (2020), 10.1007/s40830-020-00284-0

Hirst, J.; Müller, S.; Peeters, D.; Sadlo, A.; Mai, L.; Reyes, O.; Friedrich, D.; Mitoraj, D.; Devi, A.; Beranek, R.; Eichberger, R., *Comparative Study of Photocarrier Dynamics in CVD-deposited CuWO<sub>4</sub>, CuO, and WO<sub>3</sub> Thin Films for Photoelectrocatalysis*, Z. Phys. Chem. **234**, 699-717 (2020), 10.1515/zpch-2019-1485

Hoell, A.; Raghuwanshi, V.S.; Bocker, C.; Herrmann, A.; Rüssel, C.; Höche, T., *Crystallization of BaF<sub>2</sub> from droplets of phase separated glass - evidence of a core-shell structure by ASAXS*, CRYSTENGCOMM **22**, 5031-5039 (2020), 10.1039/c9ce02003a

Hoenicke, P.; Andrle, A.; Kayser, Y.; Nikolaev, K.; Probst, J.; Scholze, F.; Soltwisch, V.; Weimann, T.; Beckhoff, B., *Grazing incidence-x-ray fluorescence for a dimensional and compositional characterization of well-ordered 2D and 3D nanostructures*, Nanotechnology **31**, 505709/1-8 (2020), 10.1088/1361-6528/abb557

Holldack, K.; Schüssler-Langeheine, C.; Goslawski, P.; Pontius, N.; Kachel, T.; Armburst, F.; Ries, M.; Schälicke, A.; Scheer, M.; Frentrup, W.; Bahrdt, J., *Flipping the helicity of X-rays from an undulator at unprecedented speed*, Comm. Phys. **3**, 61/1-8 (2020), 10.1038/s42005-020-0331-5

Holzapfel, X.; Schrotte, A.; Hartmann, G.; Marder, L.; Schmidt, P.; Ozga, C.; Reiß, P.; Wiegandt, F.; Ehresmann, A.; Hans, A.; Knie, A., *Determination of Mean Cluster Sizes by Fluorescence Detection upon Site-Specific Photoexcitation*, J. Phys. Chem. A **124**, 5352-5358 (2020), 10.1021/acs.jpca.0c02726

Horio, M.; Kramer, K.P.; Wang, Q.; Zaidan, A.; Von Arx, K.; Sutter, D.; Matt, C.E.; Sassa, Y.; Plumb, N.C.; Shi, M.; Hanff, A.; Mahatha, S.K.; Bentmann, H.; Reinert, F.; Rohlf, S.; Diekmann, F.K.; Buck, J.; Kalläne, M.; Rossnagel, K.; Rienks, E.; Granata, *Oxide Fermi liquid universality revealed by electron spectroscopy*, Phys. Rev. B **102**, 245153/1-7 (2020), 10.1103/physrevb.102.245153

Hu, J.; Aghdassi, N.; Bhagat, S.; Garmshausen, Y.; Wang, R.; Koch, N.; Hecht, S.; Duhm, S.; Salzmann, I., *Dipolar Substitution Impacts Growth and Electronic Properties of Para-Sexiphenyl Thin Films*, Adv. Mater. Interfaces **7**, 1901707/1-8 (2020), 10.1002/admi.201901707

Huang, Q.; Kozhevnikov, I.; Sokolov, A.; Zhuang, Y.; Li, T.; Feng, J.; Siewert, F.; Viefhaus, J.; Zhang, Z.; Wang, Z., *Theoretical analysis and optimization of highly efficient multilayer-coated blazed gratings with high fix-focus constant for the tender X-ray region*, Opt. Express **28**, 821-845 (2020), 10.1364/OE.28.000821

Huang, Y.-H.; Hilal, T.; Loll, B.; Buerger, J.; Mielke, T.; Boettcher, C.; Said, N.; Wahl, M.C., *Structure-Based Mechanisms of a Molecular RNA Polymerase/Chaperone Machine Required for Ribosome Biosynthesis*, Mol. Cell **79**, 1024-1036.e5 (2020), 10.1016/j.molcel.2020.08.010

Hunvik, K.W.B.; Loch, P.; Cavalcanti, L.P.; Seljelid, K.K.; Røren, P.M.; Rudic, S.; Wallacher, D.; Kirch, A.; Knudsen, K.D.; Rodrigues Miranda, C.; Breu, J.; Bordallo, H.N.; Fossum, J.O., *CO<sub>2</sub> Capture by Nickel Hydroxide Interstratified in the Nanolayered Space of a Synthetic Clay Mineral*, J. Phys. Chem. C **124**, 26222-26231 (2020), 10.1021/acs.jpcc.0c07206

Hwang, J.-G.; Miyajima, T.; Honda, Y.; Kim, E.-S., *Measurement of bunch length and temporal distribution using accelerating radio frequency cavity in low-emittance injector*, Sci. Rep. **10**, 18905/1-10 (2020), 10.1038/s41598-020-76054-w

Hwang, J.-G.; Abo-Bakr, M.; Matveenko, A.; Kourkafas, G.; Kamps, T., *Radiation Generation with an Existing Demonstrator of an Energy-Recovery Continuous-Wave Superconducting RF Accelerator*, J. the Korean Phys. Soc. **77**, 337-343 (2020), 10.3938/jkps.77.337

Hwang, Ji-G.; Abo-Bakr, M.; Atkinson, T.; Goslawski, P.; Jankowiak, A.; Klemz, G.; Müller, R.; Ries, M.; Schälicke, A.; Schiawietz, G., *Generation of intense and coherent sub-femtosecond X-ray pulses in electron storage rings*, Sci. Rep. **10**, 10093/1-7 (2020), 10.1038/s41598-020-67027-0

Ince, U.U.; Markötter, H.; Ge, N.; Klages, M.; Haußmann, J.; Göbel, M.; Scholta, J.; Bazylak, A.; Manke, I., *3D classification of polymer electrolyte membrane fuel cell materials from in-situ X-ray tomographic datasets*, Int. J. Hydrogen Energ. **45**, 12161-12169 (2020), 10.1016/j.ijhydene.2020.02.136

Irani, R.; Ahmet, I.Y.; Jang, J.-W.; Berglund, S.P.; Plate, P.; Hoehn, C.; Boettger, R.; Schmitt, S.W.; Dubourdieu, C.; Lardhi, S.; Cavallo, L.; Harb, M.; Bogdanoff, P.; van de Krol, R.; Abdi, F.F., *Nature of Nitrogen Incorporation in BiVO<sub>4</sub> Photoanodes through Chemical and Physical Methods*, Sol. RRL **4**, 1900290/1-11 (2020), 10.1002/solr.201900290

Irani, R.; Plate, P.; Hoehn, C.; Bogdanoff, P.; Wollgarten, M.; Hoeflich, K.; van de Krol, R.; Abdi, F.F., *The role of ultra-thin MnO<sub>x</sub> co-catalysts on the photoelectrochemical properties of BiVO<sub>4</sub> photoanodes*, J. Mater. Chem. A **8**, 5508-5516 (2020), 10.1039/d0ta00939c

Jacobsson, T. J.; Hultqvist, A.; Svanstrom, S.; Riekehr, L.; Cappel, U.B.; Unger, E.; Rensmo, H.; Johansson, E.M.J.; Edoff, M.; Boschloo, G., *2-Terminal CIGS-perovskite tandem cells: A layer by layer exploration*, Sol. Energy **207**, 270-288 (2020), 10.1016/j.solener.2020.06.034

Jafta, C.J.; Hilger, A.; Sun, X.-G.; Geng, L.; Li, M.; Rissee, S.; Belharouak, I.; Manke, I., *A Multidimensional Operando Study Showing the Importance of the Electrode Macrostructure in Lithium Sulfur Batteries*, ACS Appl. En. Mat. **3**, 6965-6976 (2020), 10.1021/acsael.0c01027

Jäger, K.; Tillmann, P.; Becker, C., *Detailed illumination model for bifacial solar cells*, Opt. Express **28**, 4751-4762 (2020), 10.1364/OE.383570

Jäger, K.; Tillmann, P.; Katz, E.A.; Becker, C., *Simulating bifacial perovskite/silicon tandem solar cells in large PV fields*, PvTh1G.3/1-2 (2020), 10.1364/PVLED.2020.PvTh1G.3

Jäger, R.; Teppor, P.; Häkki, E.; Härmä, M.; Adamson, A.; Paalo, M.; Volobujeva, O.; Kikas, A.; Kochovski, Z.; Romann, T.; Harmas, R.; Lust, E., *Cobalt and Nitrogen Co-Doped Peat Derived Carbon Based Catalysts for Oxygen Reduction*, ECS Trans. **97**, 605-613 (2020), 10.1149/09707.0605ecst

Jasiunas, R.; Gegevicius, R.; Franckevicius, M.; Phung, N.; Abate, A.; Gulbinas, V., *Suppression of Electron Trapping in MAPbI<sub>3</sub> Perovskite by Sr<sup>2+</sup> Doping*, Phys. Status Solidi RRL **14**, 2000307/1-5 (2020), 10.1002/pssr.202000307

Jay, R.M.; Eckert, S.; Mitzner, R.; Fondell, M.; Föhlisch, A., *Quantitative evaluation of transient valence orbital occupations in a 3d transition metal complex as seen from the metal and ligand perspective*, Chem. Phys. Lett. **754**, 137681/1-5 (2020), 10.1016/j.cplett.2020.137681

Jay, R.M.; Vaz da Cruz, V.; Eckert, S.; Fondell, M.; Mitzner, R.; Föhlisch, A., *Probing Solute-Solvent Interactions of Transition Metal Complexes Using L-Edge Absorption Spectroscopy*, J. Phys. Chem. B **124**, 5636-5645 (2020), 10.1021/acs.jpcb.0c00638

Jia, H.; Friebel, C.; Schubert, U.; Zhang, X.; Quan, T.; Lu, Y.; Gohy, J., *Core-Shell Nanoparticles with a Redox Polymer Core and a Silica Porous Shell as High-Performance Cathode Material for Lithium-Ion Batteries*, En. Techn. **8**, 1901040/1-8 (2020), 10.1002/ente.201901040

Jia, J.; Absmeier, E.; Holton, N.; Pietrzyk-Brzezinska, A.J.; Hackert, P.; Bohnsack, K.E.; Bohnsack, M.T.; Wahl, M.C., *The interaction of DNA repair factors ASCC2 and ASCC3 is affected by somatic cancer mutations*, Nat. Commun. **11**, 13.01.5535 (2020), 10.1038/s41467-020-19221-x

Jia, J.; Ganichkin, O.M.; Preussner, M.; Absmeier, E.; Alings, C.; Loll, B.; Heyd, F.; Wahl, M.C., A *Snu114-GTP-Prp8 module forms a relay station for efficient splicing in yeast*, Nuc. Acids Res. **48**, 4572–4584 (2020), 10.1093/nar/gkaa182

Jimenez, K.; Nicolosi, P.; Juschkin, L.; Ahmed, N.; Gaballah, A.E.H.; Cattaruzza, E.; Sertsu, M.G.; Gerardino, A.; Giglia, A.; Mussler, G.; Zuppella, P., *Extreme ultraviolet free-standing transmittance filters for high brilliance sources, based on Nb/Zr and Zr/Nb thin films on Si<sub>3</sub>N<sub>4</sub> membranes: Design, fabrication, optical and structural characterization*, Thin Solid Films **695**, 137739/1-9 (2020), 10.1016/j.tsf.2019.137739

Jochim, A.; Lohmiller, T.; Rams, M.; Böhme, M.; Ceglarska, M.; Schnegg, A.; Plass, W.; Näther, C., *Influence of the Coligand onto the Magnetic Anisotropy and the Magnetic Behavior of One-Dimensional Coordination Polymers*, Inorg. Chem. **59**, 8971–8982 (2020), 10.1021/acs.inorgchem.0c00815

Johansson, F.O.L.; Cappel, U.B.; Fondell, M.; Han, Y.; Gorgoi, M.; Leifer, K.; Lindblad, A., *Tailoring ultra-fast charge transfer in MoS<sub>2</sub>*, Phys. Chem. Chem. Phys. **22**, 10335-10342 (2020), 10.1039/D0CP00857E

Jonas, A.; Dammer, K.; Stiel, H.; Kanngiesser, B.; Sánchez-De-Armas, R.; Mantouvalou, I., *Transient Sub-nanosecond Soft X-ray NEXAFS Spectroscopy on Organic Thin Films*, Anal. Chem. **92**, 15611-15615 (2020), 10.1021/acs.analchem.0c03845

Jost, M.; Al-Ashouri, A.; Lipovsek, B.; Bertram, T.; Schlatmann, R.; Kaufmann, C.A.; Topic, M.; Albrecht, S., *Perovskite/CIGS tandem solar cells - Can they catch up with perovskite/c-Si tandems?*, **0**, 0763-0766 (2020), 10.1109/pvsc45281.2020.9300726

Jošt, M.; Lipovšek, B.; Glažar, B.; Al-Ashouri, A.; Brecl, K.; Matič, G.; Magomedov, A.; Getautis, V.; Topic, M.; Albrecht, S., *Perovskite Solar Cells go Outdoors: Field Testing and Temperature Effects on Energy Yield*, Adv. Energy Mat. **10**, 2000454/1-11 (2020), 10.1002/aenm.202000454

Jošt, M.; Kegelmann, L.; Korte, L.; Albrecht, S., *Monolithic Perovskite Tandem Solar Cells: A Review of the Present Status and Advanced Characterization Methods Toward 30% Efficiency*, Adv. Energy Mat. **10**, 1904102/1-43 (2020), 10.1002/aenm.201904102

Junghofer, T.; Nowik-Boltyk, E.M.; De Sousa, J.A.; Giangrisostomi, E.; Ovsyannikov, R.; Chass, T.; Veciana, J.; Mas-Torrent, M.; Rovira, C.; Crivillers, N.; Casu, M.B., *Stability of radical-functionalized gold surfaces by self-assembly and on-surface chemistry*, Chem. Sci. **11**, 9162-9172 (2020), 10.1039/d0sc03399e

Kagerer, P.; Fornari, C.I.; Buchberger, S.; Morelhão, S.L.; Vidal, R.C.; Tcakaev, A.; Zabolotnyy, V.; Weschke, E.; Hinkov, V.; Kamp, M.; Büchner, B.; Bentmann, H.; Reinert, F., *Molecular beam epitaxy of antiferromagnetic (MnBi<sub>2</sub>Te<sub>4</sub>)(Bi<sub>2</sub>Te<sub>3</sub>) thin films on BaF<sub>2</sub> (111)*, J. Appl. Phys. **128**, 135303/1-7 (2020), 10.1063/5.0025933

Kamimura, J.; Budde, M.; Bogdanoff, P.; Tschammer, C.; Abdi, F.F.; van de Krol, R.; Bierwagen, O.; Riechert, H.; Geelhaar, L., *Protection Mechanism against Photocorrosion of GaN Photoanodes Provided by NiO Thin Layers*, Sol. RRL **4**, 2000568/1-5 (2020), 10.1002/solr.202000568

Kanduć, M.; Kim, W.K.; Roa, R.; Dzubiella, J., *Modeling of stimuli-responsive nanoreactors: rational rate control towards the design of colloidal enzymes*, Mol. Syst. Design Eng. **5**, 602-619 (2020), 10.1039/c9me00106a

Katsikini, M.; Proiou, E.; Vouroutzis, N.; Pinakidou, F.; Paloura, E.C.; Smirnov, D.; Brzhezinskaya, M.; Ves, S., *Crystalline and amorphous calcium carbonate as structural components of the Calappa granulata exoskeleton*, J. Struct. Biol. **211**, 107557/1-9 (2020), 10.1016/j.jsb.2020.107557

Kay, A.; Fiegenbaum-Raz, M.; Müller, S.; Eichberger, R.; Dotan, H.; van de Krol, R.; Abdi, F.F.; Rothschild, A.; Friedrich, D.; Grave, D.A., *Effect of Doping and Excitation Wavelength on Charge Carrier Dynamics in Hematite by Time-Resolved Microwave and Terahertz Photoconductivity*, Adv. Funct. Mater. **30**, 1901590/1-10 (2020), 10.1002/adfm.201901590

Kemppainen, E.; Aschbrenner, S.; Bao, F.; Luxa, A.; Schary, C.; Bors, R.; Janke, S.; Dorbandt, I.; Stannowski, B.; Schlatmann, R.; Calnan, S., *Effect of the ambient conditions on the operation of a large-area integrated photovoltaic-electrolyser*, Sustain. Energ. Fuels **4**, 4831-4847 (2020), 10.1039/D0SE00921K

Kepsutlu, B.; Wycisk, V.; Achazi, K.; Kapishnikov, S.; Perez-Berna, A.; Guttmann, P.; Cossmer, A.; Pereiro, E.; Ewers, H.; Ballauff, M.; Schneider, G.; McNally, J., *Cells Undergo Major Changes in the Quantity of Cytoplasmic Organelles after Uptake of Gold Nanoparticles with Biologically Relevant Surface Coatings*, ACS Nano **14**, 2248-2264 (2020), 10.1021/acsnano.9b09264

Kepsutlu, B.; McNally, J., *Similarities and Differences in Cellular Processing of Biologically Relevant Nanoparticles*, Micro. Microanal. **26**, 3010-3012 (2020), 10.1017/s1431927620023521

Kesavan, J.K.; Mosca, D.F.; Sanna, S.; Borgatti, F.; Schuck, G.; Tran, P.M.; Woodward, P.M.; Mitrovic&#769;, V.F.; Franchini, C.; Boscherini, F., *Doping Evolution of the Local Electronic and Structural Properties of the Double Perovskite Ba<sub>2</sub>Na<sub>1-x</sub>CaxOsO<sub>6</sub>*, J. Phys. Chem. C **124**, 16577-16585 (2020), 10.1021/acs.jpcc.0c04807

Khenkin, M.V.; Katz, E.A.; Abate, A.; Bardizza, G.; Berry, J.J.; Brabec, C.; Brunetti, F.; Bulovi&#263;, V.; Burlingame, Q.; Di Carlo, A.; Cheacharoen, R.; Cheng, Y.B.; Colsmann, A.; Cros, S.; Domanski, K.; Dusza, M.; Fell, C.J.; Forrest, S.R.; Galagan, Y., *Consensus statement for stability assessment and reporting for perovskite photovoltaics based on ISO procedures*, Nat. Energy **5**, 35-49 (2020), 10.1038/s41560-019-0529-5

Khenkin, M.V.; Anoop, K.M.; Visoly-Fisher, I.; Di Giacomo, F.; Dogan, I.; Patil, B.R.; Turkovic, V.; Madsen, M.; Galagan, Y.; Ulbrich, C.; Katz, E.A., *Peculiarities of perovskite photovoltaics degradation and how to account for them in stability studies*, **0**, 0305-0308 (2020), 10.1109/pvsc45281.2020.9300576

Khodeir, M.; Jia, H.; Antoun, S.; Fribe, C.; Schubert, U.S.; Lu, Y.; Van Ruymbeke, E.; Gohy, J.-F., *Synthesis and Characterization of Hydrogels Containing Redox-Responsive 2,2,6,6-Tetramethylpiperidinyloxy Methacrylate and Thermo-Responsive N-Isopropylacrylamide*, J. Poly. Sci. **58**, 1553-1563 (2020), 10.1002/pol.20200172

Khomchenko, V.; Karpinsky, D.; Bushinsky, M.; Zhaludkevich, D.; Franz, A.; Silibin, M., *Effect of Mn substitution on the crystal and magnetic structure of Bi<sub>1-x</sub>CaxFeO<sub>3-x/2</sub> multiferroics*, Mater. Lett. **266**, 127470/1-3 (2020), 10.1016/j.matlet.2020.127470

Khomchenko, V.A.; Silibin, M.V.; Bushinsky, M.V.; Latushka, S.I.; Wisniewski, P.; Lukowiak, A.; Franz, A.; Karpinsky, D.V., *Increased Low-Temperature Magnetization and Spin-Reorientational Transition in the Polar Phase of (Ca, Mn)-Doped Bismuth Ferrites*, Phys. Status Solidi B **257**, 2000121/1-6 (2020), 10.1002/pssb.202000121

Kiener, J.; Bundesmann, J.; Deloncle, I.; Denker, A.; Tatischeff, V.; Gostojic, A.; Hamadache, C.; Röhrich, J.; Benhabiles, H.; Bougaoub, I.; Coc, A.; Hammache, F.; Peyré, J., *Gamma-ray emission in alpha-particle reactions with C, Mg, Si, Fe*, J. Phys. Conf. **1555**, 012011/1-6 (2020), 10.1088/1742-6596/1555/1/012011

Kiligaridis, A.; Merdasa, A.; Rehermann, C.; Unger, E.L.; Scheblykin, I.G., *Excitation wavelength dependence of photoluminescence flickering in degraded MAPbI<sub>3</sub>(3) perovskite and its connection to lead iodide formation*, J. of Lumin. **222**, 117129/1-6 (2020), 10.1016/j.jlumin.2020.117129

Kim, J. Y.; Park, J.; Ha, J.; Jung, M.; Wallacher, D.; Franz, A.; Balderas-Xicohténcatl, R.; Hirscher, M.; Kang, S. G.; Park, J.; Oh, I.H.; Moon, H. R.; Oh, H., *Specific Isotope-Responsive Breathing Transition in Flexible Metal-Organic Frameworks*, J. Am. Chem. Soc. **142**, 13278-13282 (2020), 10.1021/jacs.0c04277

Kim, S.; Lim, J.; Sahu, R.; Kasian, O.; Stephenson, L.; Scheu, C.; Gault, B., *Direct Imaging of Dopant and Impurity Distributions in 2D MoS<sub>2</sub>*, Adv. Mat. **32**, 1907235/1-6 (2020), 10.1002/adma.201907235

Kim, S.; Márquez, J.A.; Unold, T.; Walsh, A., *Upper limit to the photovoltaic efficiency of imperfect crystals from first principles*, En. Envir. Science **13**, 1481-1491 (2020), 10.1039/d0ee00291g

Kim, W.K.; Chudoba, R.; Milster, S.; Roa, R.; Kanduc, M.; Dzubiella, J., *Tuning the selective permeability of polydisperse polymer networks*, Soft Matter **16**, 8144-8154 (2020), 10.1039/d0sm01083a

Kinner, L.; List-Kratochvil, E.J.W.; Dimopoulos, T., *Gentle plasma process for embedded silver-nanowire flexible transparent electrodes on temperature-sensitive polymer substrates*, Nanotechnology **31**, 365303/1-11 (2020), 10.1088/1361-6528/ab97aa

Kinner, L.; Hermerschmidt, F.; Dimopoulos, T.; List-Kratochvil, E.J.W., *Implementation of Flexible Embedded Nanowire Electrodes in Organic Light-Emitting Diodes*, Phys. Status Solidi RRL **14**, 2000305/1-6 (2020), 10.1002/pssr.202000305

Kirchartz, T.; Márquez, J.A.; Stolterfoht, M.; Unold, T., *Photoluminescence-Based Characterization of Halide Perovskites for Photovoltaics*, Adv. Energy Mat. **10**, 1904134/1-21 (2020), 10.1002/aenm.201904134

Klicpera, M.; Vlášková, K.; Colman, R.H.; Proschek, P.; Hoser, A., *Spin-Glass State in Defect-Fluorite Er<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>*, Acta Phys. Pol. A **137**, 750-752 (2020), 10.12693/aphyspola.137.750

Klimovskikh, I.I.; Otrokov, M.M.; Estyunin, D.; Eremeev, S.V.; Filnov, S.O.; Koroleva, A.; Shevchenko, E.; Voroshnin, V.; Rybkin, A.G.; Rusinov, I.P.; Blanco-Rey, M.; Hoffmann, M.; Aliev, Z.S.; Babanly, M.B.; Amiraslanov, I.R.; Abdullayev, N.A.; Zverev, V., *Tunable 3D/2D magnetism in the (MnBi<sub>2</sub>Te<sub>4</sub>)(Bi<sub>2</sub>Te<sub>3</sub>)(m) topological insulators family*, npj Quant. Mat. **5**, 54/1-9 (2020), 10.1038/s41535-020-00255-9

Kluza, A.; Wojdyla, Z.; Mrugala, B.; Kurpiewska, K.; Porebski, P.J.; Niedzialkowska, E.; Minor, W.; Weiss, M.S.; Borowski, T., *Regioselectivity of hyoscyamine 6 beta-hydroxylase-catalysed hydroxylation as revealed by high-resolution structural information and QM/MM calculations*, Dalton Trans. **49**, 4454-4469 (2020), 10.1039/d0dt00302f

Knafllic, T.; Jeglic, P.; Komelj, M.; Zorko, A.; Biswas, P. K.; Ponomaryov, A. N.; Zvyagin, S. A.; Reehuis, M.; Hoser, A.; Geiss, M.; Janek, J.; Adler, P.; Felser, C.; Jansen, M.; Arcon, D., *Spin-dimer ground state driven by consecutive charge and orbital ordering transitions in the anionic mixed-valence compound Rb<sub>4</sub>O<sub>6</sub>*, Phys. Rev. B **101**, 024419/1-13 (2020), 10.1103/PhysRevB.101.024419

Knittel, P.; Buchner, F.; Hadzifejzovic, E.; Giese, C.; Quellmalz, P.; Seidel, R.; Petit, T.; Iliev, B.; Schubert, T.J.S.; Nebel, C.E.; Foord, J.S., *Nanostructured Boron Doped Diamond Electrodes with Increased Reactivity for Solar-Driven CO<sub>2</sub> Reduction in Room Temperature Ionic Liquids*, ChemCatChem **12**, 5548-5557 (2020), 10.1002/cctc.202000938

Kochovski, Z.; Chen, G.; Yuan, J.; Lu, Y., *Cryo-Electron microscopy for the study of self-assembled poly(ionic liquid) nanoparticles and protein supramolecular structures*, Colloid Polym. Sci. **298**, 707–717 (2020), 10.1007/s00396-020-04657-w

Kodalle, T.; Yetkin, H.A.; Bertram, T.; Schlatmann, R.; Kaufmann, C.A., *Setting up a Device Model for Rb-Conditioned Chalcopyrite Solar Cells*, **0**, 1156-1162 (2020), 10.1109/pvsc45281.2020.9301015

Koelbach, M.; Harbauer, K.; Ellmer, K.; van de Krol, R., *Elucidating the Pulsed Laser Deposition Process of BiVO<sub>4</sub> Photoelectrodes for Solar Water Splitting*, J. Phys. Chem. C **124**, 4438-4447 (2020), 10.1021/acs.jpcc.9b11265

Kohlmann, H.; Rauchmaul, A.; Keilholz, S.; Franz, A., *Crystal structure and thermal behavior of SbC<sub>2</sub>O<sub>4</sub>OH and SbC<sub>2</sub>O<sub>4</sub>OD*, Inorg. **8**, 21.01.2010 (2020), 10.3390/inorganics8030021

Kölbach, M.; Hempel, H.; Harbauer, K.; Schleuning, M.; Petsiuk, A.; Höflich, K.; Deinhart, V.; Friedrich, D.; Eichberger, R.; Abdi, F.F.; van de Krol, R., *Grain Boundaries Limit the Charge Carrier Transport in Pulsed Laser Deposited alpha-SnWO<sub>4</sub> Thin Film Photoabsorbers*, ACS Appl. En. Mat. **3**, 4320-4330 (2020), 10.1021/acs.aem.0c00028

Koopman, W.; Sarhan, R.M.; Stete, F.; Schmitt, C.N.Z.; Bargheer, M., *Decoding the kinetic limitations of plasmon catalysis: the case of 4-nitrothiophenol dimerization*, Nanoscale **12**, 24411-24418 (2020), 10.1039/d0nr06039a

Korzhovska, I.; Deng, H.; Zhao, L.; Chen, Z.; Konczykowski, M.; Zhao, S.; Raoux, S.; Krusin-Elbaum, L., *Spin memory of the topological material under strong disorder*, npj Quant. Mat. **5**, 39/1-7 (2020), 10.1038/s41535-020-0241-5

Kot, M.; Kegelmann, L.; Köbler, H.; Vorokhta, M.; Escudero, C.; Kús, P.; Smíd, B.; Tallarida, M.; Albrecht, S.; Abate, A.; Matolínová, I.; Schmeißer, D.; Flege, J.I., *In situ Near-Ambient Pressure X-ray Photoelectron Spectroscopy Reveals the Influence of Photon Flux and Water on the Stability of Halide Perovskite*, ChemSusChem **13**, 5722-5730 (2020), 10.1002/cssc.202001527

Kovalchuk, S.; Harats, M.; López-Polín, G.; Kirchhof, J.N.; Höflich, K.; Bolotin, K., *Neutral and charged excitons interplay in non-uniformly strain-engineered WS<sub>2</sub>*, 2D Mat. **7**, 035024/1-7 (2020), 10.1088/2053-1583/ab8caa

Kramer, F.; Kugeler, O.; Köszegi, J.-M.; Knobloch, J., *Impact of geometry on flux trapping and the related surface resistance in a superconducting cavity*, Phys. Rev Accel. Beams **23**, 123101/1-11 (2020), 10.1103/PhysRevAccelBeams.23.123101

Krasikov, K.; Glushkov, V.; Demishev, S.; Khoroshilov, A.; Bogach, A.; Voronov, V.; Shitsevalova, N.; Filipov, V.; Gabáni, S.; Flachbart, K.; Siemensmeyer, K.; Sluchanko, N., *Suppression of indirect exchange and symmetry breaking in the antiferromagnetic metal HoB<sub>12</sub> with dynamic charge stripes*, Phys. Rev. B **102**, 214435/1-6 (2020), 10.1103/physrevb.102.214435

Kratz, C.; Furchner, A.; Sun, G.; Rappich, J.; Hinrichs, K., *Sensing and structure analysis by in situ IR spectroscopy: from mL flow cells to microfluidic application*, J. Phys.: Condens. Matter **32**, 393002/1-16 (2020), 10.1088/1361-648X/ab8523

Krause, M.; Nikolaeva, A.; Maiberg, M.; Jackson, P.; Hariskos, D.; Witte, W.; Márquez, J.A.; Levchenko, S.; Unold, T.; Scheer, R.; Abou-Ras, D., *Microscopic origins of performance losses in highly efficient Cu(In, Ga)Se<sub>2</sub> thin-film solar cells*, Nat. Commun. **11**, 10.01.4189 (2020), 10.1038/s41467-020-17507-8

Krause, S.; Evans, J.D.; Bon, V.; Senkovska, I.; Ehrling, S.; Iacomi, P.; Többens, D.M.; Wallacher, D.; Weiss, M.S.; Zheng, B.; Yot, P.G.; Maurin, G.; Llewellyn, P.L.; Coudert, F.X.; Kaskel, S., *Engineering micromechanics of soft porous crystals for negative gas adsorption*, Chem. Sci. **11**, 9468-9479 (2020), 10.1039/d0sc03727c

Krempaský, J.; Fanciulli, M.; Nicolaï, L.; Minár, J.; Volfová, H.; Caha, O.; Volobuev, V.V.; Sánchez-Barriga, J.; Gmitra, M.; Yaji, K.; Kuroda, K.; Shin, S.; Komori, F.; Springholz, G.; Dil, J.H., *Fully spin-polarized bulk states in ferroelectric GeTe*, Phys. Rev. Res. **2**, 013107 /1-7 (2020), 10.1103/PhysRevResearch.2.013107

Krzystek, J.; Schnegg, A.; Aliabadi, A.; Holldack, K.; Stoian, S.A.; Ozarowski, A.; Hicks, S.D.; Abu-Omar, M.M.; Thomas, K.E.; Ghosh, A.; Caulfield, P.K.; Tonzeitch, Z.J.; Telser, J., *Advanced Paramagnetic Resonance Studies on Manganese and Iron Corroles with a Formal d<sub>4</sub> Electron Count*, Inorg. Chem. **59**, 1075-1090 (2020), 10.1021/acs.inorgchem.9b02635

Kshetrimayum, A.; Eisert, J.; Kennes, D.M., *Stark time crystals: Symmetry breaking in space and time*, Phys. Rev. B **102**, 195116/1-8 (2020), 10.1103/physrevb.102.195116

Kshetrimayum, A.; Goihl, M.; Eisert, J., *Time evolution of many-body localized systems in two spatial dimensions*, Phys. Rev. B **102**, 235132/1-12 (2020), 10.1103/physrevb.102.235132

Kshetrimayum, A.; Balz, C.; Lake, B.; Eisert, J., *Tensor network investigation of the double layer Kagome compound Ca<sub>10</sub>Cr<sub>7</sub>O<sub>28</sub>*, Ann. d. Phy. **421**, 168292/1-11 (2020), 10.1016/j.aop.2020.168292

Kube, S.A.; Turke, K.; Ellinghaus, R.; Wallacher, D.; Thommes, M.; Smarsly, B., *Pore size gradient effect in monolithic silica mesopore networks revealed by in-situ-SAXS-physisorption*, Langmuir **36**, 11996-12009 (2020), 10.1021/acs.langmuir.0c02183

Kumar, V.; Kumar, N.; Reehuis, M.; Gayles, J.; Sukhanov, A.; Hoser, A.; Damay, F.; Shekhar, C.; Adler, P.; Felser, C., *Detection of antiskyrmions by topological Hall effect in Heusler compounds*, Phys. Rev. B **101**, 014424/1-9 (2020), 10.1103/PhysRevB.101.014424

Kumari, S.; Khare, C.; Xi, F.; Nowak, M.; Sljozberg, K.; Gutkowski, R.; Bassi, P.; Fiechter, S.; Schuhmann, W.; Ludwig, A., *Combinatorial Search for New Solar Water Splitting Photoanode Materials in the Thin-Film System Fe-Ti-W-O*, Z. Phys. Chem. **234**, 867–885 (2020), 10.1515/zpch-2019-1462

Kumberg, I.; Golias, E.; Pontius, N.; Hosseinifar, R.; Frischmuth, K.; Gelen, I.; Shinwari, T.; Thakur, S.; Schüßler-Langeheine, C.; Oppeneer, PM..; Kuch, W., *Accelerating the laser-induced demagnetization of a ferromagnetic film by antiferromagnetic order in an adjacent layer*, Phys. Rev. B **102**, 214418/1-8 (2020), 10.1103/physrevb.102.214418

Kunz, P.; Paulisch, M.C.; Osenberg, M.; Bischof, B.; Manke, I.; Nieken, U., *Prediction of Electrolyte Distribution in Technical Gas Diffusion Electrodes: From Imaging to SPH Simulations*, Transp. Porous Media **132**, 381-403 (2020), 10.1007/s11242-020-01396-y

La Francesca, E.; Angelucci, M.; Liedl, A.; Spallino, L.; Gonzalez, L.A.; Bellafont, I.; Siewert, F.; Sertsu, M.G.; Sokolov, A.; Schäfers, F.; Cimino, R., *Reflectivity and photoelectron yield from copper in*

*accelerators*, Phys. Rev Accel. Beams **23**, 083101/1-15 (2020),  
10.1103/physrevaccelbeams.23.083101

Lamers, M.; Sahre, M.; Müller, M.J.; Abou-Ras, D.; van de Krol, R.; Abdi, F.F., *Influence of post-deposition annealing on the photoelectrochemical performance of CuBi<sub>2</sub>O<sub>4</sub> thin films*, APL Mater. **8**, 061101/1-6 (2020), 10.1063/5.0003005

Landolt, F.; Bettler, S.; Yan, Z.; Gvasaliya, S.; Zheludev, A.; Mishra, S.; Sheikin, I.; Krämer, S.; Horvatic, M.; Gazizulina, A.; Prokhnenco, O., *Presaturation phase in the frustrated ferro-antiferromagnet Pb<sub>2</sub>VO(PO<sub>4</sub>)<sub>2</sub>*, Phys. Rev. B **102**, 094414/1-10 (2020), 10.1103/physrevb.102.094414

Lang, F.; Jost, M.; Frohna, K.; Köhnen, E.; Al-Ashouri, A.; Bowman, A.R.; Bertram, T.; Morales-Viches, A.B.; Koushik, D.; Tennyson, E.M.; Galkowski, K.; Landi, G.; Cratore, M.; Stannowski, B.; Kaufmann, C.A.; Bundesmann, J.; Rappich, J.; Rech, B.; Denker,, *Proton Radiation Hardness of Perovskite Tandem Photovoltaics*, Joule **4**, 1054-1069 (2020), 10.1016/j.joule.2020.03.006

Lang, J.; Häußler, S.; Fuhrmann, J.; Waltrich, R.; Laddha, S.; Scharpf, J.; Kubanek, A.; Naydenov, B.; Jelezko, F., *Long optical coherence times of shallow-implanted, negatively charged silicon vacancy centers in diamond*, Appl. Phys. Lett. **116**, 064001/1-5 (2020), 10.1063/1.5143014

Lass, J.; Røhl Andersen, Ch.; Leerberg, H. K.; Birkemose, S.; Toth, S.; Stuhr, U.; Bartkowiak, M.; Niedermayer, Ch.; Lu, Z.; Toft-Petersen, R.; Retuerto, M.; Okkels Birk, J.; Lefmann, K., *Field-induced magnetic incommensurability in multiferroic Ni<sub>3</sub>TeO<sub>6</sub>*, Phys. Rev. B **101**, 054415/1-9 (2020), 10.1103/PhysRevB.101.054415

Le Houx, J.; Osenberg, M.; Neumann, M.; Binder, J.R.; Schmidt, V.; Manke, I.; Carraro, T.; Kramer, D., *Effect of Tomography Resolution on Calculation of Microstructural Properties for Lithium Ion Porous Electrodes*, ECS Trans. **97**, 255/1-12 (2020), 10.1149/09707.0255ecst

Le, P.T.P.; Hofhuis, K.; Rana, A.; Huijben, M.; Hilgenkamp, H.; Rijnders, G.A.J.H.M.; ten Elshof, J.E.; Koster, G.; Gauquelin, N.; Lumbeeck, G.; Schüßler-Langeheine, C.; Popescu, H.; Fortuna, F.; Smit, S.; Verbeek, X.H.; Araizi-Kanoutas, G.; Mishra, S.; V, *Tailoring Vanadium Dioxide Film Orientation Using Nanosheets: a Combined Microscopy, Diffraction, Transport, and Soft X-Ray in Transmission Study*, Adv. Funct. Mater. **30**, 1900028/1-10 (2020), 10.1002/adfm.201900028

Lee, J.; Prokes, K.; Park, S.; Zaliznyak, I.; Dissanayake, S.; Matsuda, M.; Frontzek, M.; Stoupin, S.; Chappell, G.L.; Baumbach, R.E.; Park, C.; Mydosh, J.A.; Granroth, G.E.; Ruff, J.P.C., *Charge density wave with anomalous temperature dependence in UPt<sub>2</sub>Si<sub>2</sub>*, Phys. Rev. B **102**, 041112(R)/1-6 (2020), 10.1103/physrevb.102.041112

Leutenegger, M.A.; Kühn, S.; Micke, P.; Steinbrügge, R.; Stierhof, J.; Shah, C.; Hell, N.; Bissinger, M.; Hirsch, M.; Ballhausen, R.; Lang, M.; Gräfe, C.; Wipf, S.; Cumbee, R.; Betancourt-Martinez, G.L.; Park, S.; Yerokhin, V.A.; Surzhykov, A.; Stolte, W., *High-Precision Determination of Oxygen K\_alpha Transition Energy Excludes Incongruent Motion of Interstellar Oxygen*, Phys. Rev. Lett. **125**, 243001/1-7 (2020), 10.1103/PhysRevLett.125.243001

Levcenko, S.; Stange, H.; Choubrac, L.; Greiner, D.; Heinemann, M.D.; Mainz, R.; Unold, T., *Investigation of near-stoichiometric polycrystalline CuInSe<sub>2</sub> thin films by photoreflectance spectroscopy*, J. Appl. Phys. **127**, 125701/1-6 (2020), 10.1063/1.5145208

Levcenko, S.; Stange, H.; Choubrac, L.; Greiner, D.; Heinemann, M.D.; Mainz, R.; Unold, T., *Radiative recombination properties of near-stoichiometric CuInSe<sub>2</sub> thin films*, Phys. Rev. Mat. **4**, 64605 (2020), 10.1103/physrevmaterials.4.064605

- Levine, I.; Gamov, I.; Rusu, M.; Irmscher, K.; Merschjann, C.; Richter, E.; Weyers, M.; Dittrich, T., *Bulk photovoltaic effect in carbon-doped gallium nitride revealed by anomalous surface photovoltaic spectroscopy*, Phys. Rev. B **101**, 245205/1-7 (2020), 10.1103/PhysRevB.101.245205
- Levitan, A.L.; Keskinbora, K.; Sanli, U.T.; Weigand, M.; Comin, R., *Single-frame far-field diffractive imaging with randomized illumination*, Opt. Express **28**, 37103-37117 (2020), 10.1364/oe.397421
- Li, C.; Simsek Sanli, E.; Barragan-Yani, D.; Stange, H.; Heinemann, M.-D.; Greiner, D.; Sigle, W.; Mainz, R.; Albe, K.; Abou-Ras, D.; van Aken, P.A., *Secondary-phase-assisted grain boundary migration in CuInSe<sub>2</sub>*, Phys. Rev. Lett. **124**, 095702/1-6 (2020), 10.1103/PhysRevLett.124.095702
- Li, G.; Yu, J.; Yu, W.; Yang, L.; Zhang, X.; Liu, X.; Liu, H.; Zhou, W., *Phosphorus-Doped Iron Nitride Nanoparticles Encapsulated by Nitrogen-Doped Carbon Nanosheets on Iron Foam In Situ Derived from Saccharomyces Cerevisiae for Electrocatalytic Overall Water Splitting*, Small **16**, 2001980/1-11 (2020), 10.1002/smll.202001980
- Li, J.; He, X.; Ostendorp, S.; Zhang, L.; Hou, X.; Zhou, D.; Yan, B.; Meira, D.M.; Yang, Y.; Jia, H.; Schumacher, G.; Wang, J.; Paillard, E.; Wilde, G.; Winter, M.; Li, J., *Tin modification of sodium manganese hexacyanoferrate as a superior cathode material for sodium ion batteries*, Electrochim. Acta **342**, 135928/1- (2020), 10.1016/j.electacta.2020.135928
- Li, J.; Cao, H.-L.; Jiao, W.-B.; Wang, Q.; Wei, M.; Cantone, I.; Lü, J.; Abate, A., *Biological impact of lead from halide perovskites reveals the risk of introducing a safe threshold*, Nat. Commun. **11**, 310/1-5 (2020), 10.1038/s41467-019-13910-y
- Li, M.; Zuo, W.; Wang, Z.; Li, Y.; Wang, Q.; Wang, K.; Zhou, M.; Köbler, H.; Halbig, E. C.; Eigler, S.; Yang, Y.; Gao, X.; Wang, Z.; Li, Y.; Abate, A., *Ultrathin nanosheets of oxo-functionalized graphene inhibit the ion migration in perovskite solar cells*, Adv. Energy Mat. **10**, 1902653/1-8 (2020), 10.1002/aenm.201902653
- Li, M.; Zuo, W.-W.; Ricciardulli, A.G.; Yang, Y.-G.; Liu, Y.-H.; Wang, Q.; Wang, K.-L.; Li, G.-X.; Saliba, M.; Di Girolamo, D.; Abate, A.; Wang, Z.-K., *Embedded Nickel-Mesh Transparent Electrodes for Highly Efficient and Mechanically Stable Flexible Perovskite Photovoltaics: Toward a Portable Mobile Energy Source*, Adv. Mat. **32**, 2003422/1-9 (2020), 10.1002/adma.202003422
- Li, M.; Zuo, W.-w.; Yang, Y.-G.; Aldamasy, M.H.; Wang, Q.; Turren Cruz, S.H.; Feng, S.-L.; Saliba, M.; Wang, Z.-K.; Abate, A., *Tin Halide Perovskite Films Made of Highly Oriented 2D Crystals Enable More Efficient and Stable Lead-free Perovskite Solar Cells*, ACS En. Lett. **5**, 1923-1929 (2020), 10.1021/acsenergylett.0c00782
- Li, Q.; Ning, D.; Zhou, D.; Ke, A.; Wong, D.; Zhang, L.; Chen, Z.; Schuck, G.; Schulz, C.; Xu, Z.; Schumacher, G.; Liu, X., *The Nature of Oxygen Vacancy and Spinel Phase Integration on Both Anionic and Cationic Redox in Li-rich Cathode Material*, J. Mater. Chem. A **8**, 7733-7745 (2020), 10.1039/DOTA02517H
- Li, Q.; Ning, D.; Zhou, D.; An, K.; Schuck, G.; Wong, D.; Kong, W.; Schulz, C.; Schumacher, G.; Liu, X., *Tuning Both Anionic and Cationic Redox Chemistry of Li-Rich Li<sub>1.2</sub>Mn<sub>0.6</sub>Ni<sub>0.2</sub>O<sub>2</sub> via a “Three-in-One” Strategy*, Chem. Mater. **32**, 9404-9414 (2020), 10.1021/acs.chemmater.0c03460
- Li, Z.; Ruiz, V.G.; Kanduć, M.; Dzubiella, J., *Ion-Specific Adsorption on Bare Gold (Au) Nanoparticles in Aqueous Solutions: Double-Layer Structure and Surface Potentials*, Langmuir **36**, 13457-13468 (2020), 10.1021/acs.langmuir.0c02097

Ligorio, G.; Zorn Morales, N.; List-Kratochvil, E.J.W., *Large and continuous tuning of the work function of indium tin oxide using simple mixing of self-assembled monolayers*, Appl. Phys. Lett. **116**, 241603/1-5 (2020), 10.1063/5.0005517

Ligorio, G.; Cotella, G.F.; Bonasera, A.; Zorn Morales, N.; Carnicella, G.; Kobil, B.; Wang, Q.; Koch, N.; Hecht, S.; List-Kratochvil, E.J.W.; Cacialli, F., *Modulating the luminance of organic light-emitting diodes: Via optical stimulation of a photochromic molecular monolayer at transparent oxide electrode*, Nanoscale **12**, 5444-5451 (2020), 10.1039/d0nr00724b

Lim, J.; Kim, S.; Aymerich Armengol, R.; Kasian, O.; Choi, P.; Stephenson, L.; Gault, B.; Scheu, C., *Atomic-Scale Mapping of Impurities in Partially Reduced Hollow TiO<sub>2</sub> Nanowires*, Angew. Chem. Int. Ed. **59**, 5651–5655 (2020), 10.1002/anie.201915709

Lima, G.M.A.; Talibov, V.O.; Jagudin, E.; Sele, C.; Nyblom, M.; Knecht, W.; Logan, D.T.; Sjogren, T.; Mueller, U., *FragMAX: The fragment-screening platform at the MAX IV Laboratory*, Acta Crystallogr. D **76**, 771-777 (2020), 10.1107/s205979832000889x

Lin, Y.C.; Kim, W.K.; Dzubiella, J., *Coverage Fluctuations and Correlations in Nanoparticle-Catalyzed Diffusion-Influenced Bimolecular Reactions*, J. Phys. Chem. C **124**, 24204-24214 (2020), 10.1021/acs.jpcc.0c06898

Lin, Y.H.; Sakai, N.; Da, P.; Wu, J.; Sansom, H.C.; Ramadan, A.J.; Mahesh, S.; Liu, J.; Oliver, R.D.J.; Lim, J.; Aspitarte, L.; Sharma, K.; Madhu, P.K.; Morales-Vilches, A.B.; Nayak, P.K.; Bai, S.; Gao, F.; Grovenor, C.R.M.; Johnston, M.B.; Labram, J.G.; *A piperidinium salt stabilizes efficient metal-halide perovskite solar cells*, Science **369**, 96-102 (2020), 10.1126/science.aba1628

Lin, Z.; Zha, L.; Wang, F.; Liu, Z.; Wu, R.; Yang, J.; Xue, M.; Yang, W.; Tian, G.; Ma, X.; Qiao, L.; Franz, A.; An, Q.; Liu, W.; Wang, C.; Yang, J., *Effect of Ce substitution on the structural and magnetic properties of Nd<sub>2</sub>Fe<sub>14</sub>B*, Acta Mat. **200**, 502-509 (2020), 10.1016/j.actamat.2020.08.084

Lindblad, R.; Kjellsson, L.; Couto, R.C.; Timm, M.; Bülow, C.; Zamudio-Bayer, V.; Lundberg, M.; Von Issendorff, B.; Lau, J.T.; Sorensen, S.L.; Carravetta, V.; Ågren, H.; Rubensson, J.E., *X-Ray Absorption Spectrum of the N-2(+) Molecular Ion*, Phys. Rev. Lett. **124**, 203001/1-7 (2020), 10.1103/physrevlett.124.203001

Lindorf, M.; Mazzio, K.A.; Pflaum, J.; Nielsch, K.; Brüttig, W.; Albrecht, M., *Organic-based thermoelectrics*, J. Mater. Chem. A **8**, 7495-7507 (2020), 10.1039/c9ta11717b

Liu, M.; Guo, Q.; Zhang, X.; Wüstenhagen, M.; Cizek, J.; Banhart, J., *Clustering phenomena in quenched Al, Al-Mg, Al-Si and Al-Mg-Si alloys*, Scripta Mater. **177**, 203-207 (2020), 10.1016/j.scriptamat.2019.10.034

Liu, R.; Kochovski, Z.; Li, L.; Yin, Y.-W.; Yang, J.; Yang, G.; Tao, G.; Xu, A.; Zhang, E.; Ding, H.-M.; Lu, Y.; Chen, G.; Jiang, M., *Fabrication of Pascal-triangle Lattice of Proteins by Inducing Ligand Strategy*, Angew. Chem. Int. Ed. **59**, 9617-9623 (2020), 10.1002/anie.202000771

Liu, Z.; Sun, Q.; Ye, X.; Wang, X.; Zhou, L.; Shen, X.; Chen, K.; Nataf, L.; Baudelet, F.; Agrestini, S.; Chen, C.T.; Lin, H.J.; Vasili, H.B.; Valvidares, M.; Hu, Z.; Yang, Y.F.; Long, Y., *Quadruple perovskite oxide LaCu<sub>3</sub>Co<sub>2</sub>Re<sub>2</sub>O<sub>12</sub>: A ferrimagnetic half metal with nearly 100% B-site degree of order*, Appl. Phys. Lett. **117**, 152402/1-5 (2020), 10.1063/5.0025704

Lohmann, O.; Silvi, L.; Kadletz, P.M.; Vaytet, N.; Arnold, O.; Jones, M.D.; Nilsson, J.; Hart, M.; Richter, T.; Von Klitzing, R.; Jackson, A.J.; Arnold, T.; Woracek, R., *Wavelength frame multiplication for*

*reflectometry at long-pulse neutron sources*, Rev. Sci. Instrum. **91**, 125111/1-14 (2020), 10.1063/5.0014207

Looijmans, S. F. S. P.; Carmeli, E.; Puskar, L.; Ellis, G.; Cavallo, D.; Anderson, P.D.; Breemen, L.C. A. van, *Polarization modulated infrared spectroscopy: A pragmatic tool for polymer science and engineering*, Polymer Crys. **3**, e10138/1-9 (2020), 10.1002/pcr2.10138

López-Flores, V.; Mawass, M.-A.; Herrero-Albillos, J.; Uenal, A.A.; Valencia, S.; Kronast, F.; Boeglin, C., *A local view of the laser induced magnetic domain dynamics in CoPd stripe domains at the picosecond time scale*, J. Phys.: Condens. Matter **32**, 465801/1-8 (2020), 10.1088/1361-648X/aba1ac

Lublow, M.; Schedel-Niedrig, T., *Water Oxidation Catalysts from Waste Metal Resources: A Facile Metal-Organic Electrochemical Approach*, Z. Phys. Chem. **234**, 1097–1113 (2020), 10.1515/zpch-2019-1478

Madanat, M.; Liu, M.; Zhang, X.; Guo, Q.; Cizek, J.; Banhart, J., *Co-evolution of vacancies and solute clusters during artificial ageing of Al-Mg-Si alloys*, Phys. Rev. Mat. **4**, 063608/1-12 (2020), 10.1103/PhysRevMaterials.4.063608

Madian, M.; Wang, Z.; Gonzalez-Martinez, I.; Oswald, S.; Giebelner, L.; Mikhailova, D., *Ordered Ti-Fe-O nanotubes as additive-free anodes for lithium ion batteries*, Appl. Mat. Today **20**, 100676/1-12 (2020), 10.1016/j.apmt.2020.100676

Mahnke, H.E.; Lepper, V., *Virtual unfolding of folded papyri*, Acta Phys. Pol. B **51**, 541-549 (2020), 10.5506/aphyspolb.51.541

Mahnke, H.-E.; Arlt, T.; Baum, D.; Hege, H.; Herter, F.; Lindow, N.; Manke, I.; Siopi, T.; Menei, E.; Etienne, M.; Lepper, V., *Virtual unfolding of folded papyri*, J. Cult. Herit. **41**, 264-269 (2020), 10.1016/j.culher.2019.07.007

Maier, M.; Dodwell, J.; Ziesche, R.; Tan, C.; Heenan, T.; Majasan, J.; Kardjilov, N.; Markötter, H.; Manke, I.; Castanheira, L.; Hinds, G.; Shearing, P.R.; Brett, D.J.L., *Mass transport in polymer electrolyte membrane water electrolyser liquid-gas diffusion layers: A combined neutron imaging and X-ray computed tomography study*, J. Power Sourc. **455**, 227968/1-10 (2020), 10.1016/j.jpowsour.2020.227968

Majumdar, I.; Parvan, V.; Greiner, D.; Schlatmann, R.; Lauermann, I., *Effect of Na from soda-lime glass substrate and as post-deposition on Cu(In,Ga)Se<sub>2</sub> absorbers: A photoelectron spectroscopy study in ultra-high vacuum*, Appl. Surf. Sci. **514**, 145941/1-10 (2020), 10.1016/j.apsusc.2020.145941

Makhija, V.; Veyrinas, K.; Boguslavskiy, A.E.; Forbes, R.; Wilkinson, I.; Lausten, R.; Neville, S.P.; Pratt, S.T.; Schuurman, M.S.; Stolow, A., *Ultrafast Molecular Frame Electronic Coherences from Lab Frame Scattering Anisotropies*, J. Phys. B **53**, 114001/1-13 (2020), 10.1088/1361-6455/ab7a84

Manley, P.; Walde, S.; Hagedorn, S.ia; Hammerschmidt, M.; Burger, S.; Becker, C., *Nanopatterned sapphire substrates in deep-UV LEDs: is there an optical benefit?*, Opt. Express **28**, 3619-3635 (2020), 10.1364/OE.379438

Mansour, A.E.; Lungwitz, D.; Schultz, T.; Arvind, M.; Valencia, A.M.; Cocchi, C.; Opitz, A.; Neher, D.; Koch, N., *The optical signatures of molecular-doping induced polarons in poly(3-hexylthiophene-2,5-diyl): individual polymer chains versus aggregates*, J. Mater. Chem. C **8**, 2870-2879 (2020), 10.1039/c9tc06509a

Mansour, A.E.; Kim, H.; Park, S.; Schultz, T.; Cao, D.X.; Nguyen, T.Q.; Brütting, W.; Opitz, A.; Koch, N., *Conductive Polymer Work Function Changes due to Residual Water: Impact of Temperature-Dependent Dielectric Constant*, *Adv. El. Mat.* **6**, 2000408/1-8 (2020), 10.1002/aelm.202000408

Manzoni, A. M.; Dubois, F.; Mousa, M.S.; von Schlippenbach, C.; Többens, D.M.; Yesilcicek, Y.; Zaiser, E.; Hesse, R.; Haas, S.; Glatzel, U., *On the Formation of Eutectics in Variations of the Al<sub>10</sub>Co<sub>25</sub>Cr<sub>8</sub>Fe<sub>15</sub>Ni<sub>36</sub>Ti<sub>6</sub> Compositionally Complex Alloy*, *Metall. Mater. Trans. A* **52**, 143–150 (2020), 10.1007/s11661-020-06091-7

Manzoni, A.M.; Haas, S.; Kropf, H.; Duarte, J.; Cakir, C.T.; Dubois, F.; Többens, D.; Glatzel, U., *Temperature evolution of lattice misfit in Hf and Mo variations of the Al<sub>10</sub>Co<sub>25</sub>Cr<sub>8</sub>Fe<sub>15</sub>Ni<sub>36</sub>Ti<sub>6</sub> compositionally complex alloy*, *Scripta Mater.* **188**, 74-79 (2020), 10.1016/j.scriptamat.2020.07.013

Mao, Q.; Gao, R.; Li, Q.; Ning, D.; Zhou, D.; Schuck, G.; Schumacher, G.; Hao, Y.; Liu, X., *O<sub>3</sub>-type NaNi<sub>0.5</sub>Mn<sub>0.5</sub>O<sub>2</sub> hollow microbars with exposed {010} facets as high performance cathode materials for sodium-ion batteries*, *Chem. Eng. J.* **382**, 122978/1- (2020), 10.1016/j.cej.2019.122978

Marçal, L.A.B.; Oksenberg, E.; Dzhigaev, D.; Hammarberg, S.; Rothman, A.; Björling, A.; Unger, E.; Mikkelsen, A.; Joselevich, E.; Wallentin, J., *In situ imaging of ferroelastic domain dynamics in CsPbBr<sub>3</sub> perovskite nanowires by nanofocused scanning X-ray diffraction*, *ACS Nano* **14**, 15973-15982 (2020), 10.1021/acsnano.0c07426

Marcano, L.; Orue, I.; Garcia-Prieto, A.; Abrudan, R.; Alonso, J.; Barquin, L.; Valencia, S.; Muela, A.; Fdez-Gubieda, M.L., *Controlled Magnetic Anisotropy in Single Domain Mn-doped Biosynthesized Nanoparticles*, *J. Phys. Chem. C* **124**, 22827–22838 (2020), 10.1021/acs.jpcc.0c07018

Maron, E.; Kochovski, Z.; Zuckermann, R.N.; Börner, H.G., *Peptide-Assisted Design of Peptoid Sequences: One Small Step in Structure and Distinct Leaps in Functions*, *ACS Macr. Lett.* **9**, 233-237 (2020), 10.1021/acsmacrolett.9b00977

Márquez, J.A.; Sun, J.P.; Stange, H.; Ali, H.; Choubrac, L.; Schäfer, S.; Hages, C.J.; Leifer, K.; Unold, T.; Mitzi, D.B.; Mainz, R., *High-temperature decomposition of Cu(2)BaSnS(4)with Sn loss reveals newly identified compound Cu<sub>2</sub>Ba<sub>3</sub>Sn<sub>2</sub>S<sub>8</sub>*, *J. Mater. Chem. A* **8**, 11346-11353 (2020), 10.1039/d0ta02348e

Maskova-Cerna, S.; Klicpera, M.; Svoboda, P.; Andreev, A.V.; Skourski, Y.; Reehuis, M.; Hoffmann, J.U.; André, G.; Havela, L., *New type of magnetic structure in the R<sub>2</sub>T<sub>2</sub>X group: Tb<sub>2</sub>Pd<sub>2</sub>In*, *J. Phys.: Condens. Matter* **32**, 345801/1-9 (2020), 10.1088/1361-648x/ab8428

Massa, N.E.; del Campo, L.; Holldack, K.; Canizarès, A.; Ta Phuoc, V.; Kayser, P.; Alonso, J.A., *h-ErMnO<sub>3</sub> absorbance, reflectivity, and emissivity in the terahertz to mid-infrared from 2 to 1700 K: Carrier screening, Fröhlich resonance, small polarons, and bipolarons*, *Phys. Rev. B* **102**, 134305-134321 (2020), 10.1103/PhysRevB.102.134305

Massahi, S.; Christensen, F. E.; Ferreira, D. D. M.; Svendsen, S.; Henriksen, P. L.; Vu, L. M.; Gellert, N. C.; Jegers, A. S.; Shortt, B.; Bavdaz, M.; Ferreira, I.; Collon, M.; Landgraf, B.; Girou, D.; Sokolov, A.; Schoenberger, W., *Investigation of boron carbide and iridium thin films, an enabling technology for future x-ray telescopes*, *Appl. Optics* **59**, 10902-10911 (2020), 10.1364/AO.409453

Mathies, F.; List-Kratochvil, E.; Unger, E.L., *Advances in inkjet-printed metal-halide perovskite photovoltaic and optoelectronic devices*, *En. Techn.* **8**, 1900991/1-19 (2020), 10.1002/ente.201900991

Matos, B.R.; Goulart, C.A.; Tosco, B.; da Silva, J.S.; Isidoro, R.A.; Santiago, E.I.; Linardi, M.; Schade, U.; Puskar, L.; Fonseca, F.C.; Tavares, A.C., *Properties and DEFC tests of Nafion - Functionalized titanate*

*nanotubes composite membranes prepared by melt-extrusion*, J. Mem. Sci. **604**, 118042/1-7 (2020), 10.1016/j.memsci.2020.118042

Matsuda, M.; Dissanayake, S.E.; Hong, T.; Ozaki, Y.; Ito, T.; Tokunaga, M.; Liu, X.Z.; Bartkowiak, M.; Prokhnenko, O., *Magnetic field induced antiferromagnetic cone structure in multiferroic BiFeO<sub>3</sub>*, Phys. Rev. Mat. **4**, 034412/1-6 (2020), 10.1103/physrevmaterials.4.034412

Maudet, F.; Lacroix, B.; Santos, A.J.; Paumier, F.; Paraillous, M.; Hurand, S.; Corvisier, A.; Dupeyrat, C.; García, R.; Morales, F.M.; Girardeau, T., *On the importance of light scattering for high performances nanostructured antireflective surfaces*, Acta Mat. **188**, 386-393 (2020), 10.1016/j.actamat.2020.02.014

Maudet, F.; Lacroix, B.; Santos, A.J.; Paumier, F.; Paraillous, M.; Hurand, S.; Corvisier, A.; Marsal, C.; Giroire, B.; Dupeyrat, C.; García, R.; Morales, F.M.; Girardeau, T., *Optical and nanostructural insights of oblique angle deposited layers applied for photonic coatings*, Appl. Surf. Sci. **520**, 146312/1-9 (2020), 10.1016/j.apsusc.2020.146312

Maulerova, V.; Kanaki, K.; Kadletz, P.M.; Woracek, R.; Wilpert, T.; Fissum, K.; Laloni, A.; Mauritzson, N.; Issa, F.; Hall-Wilton, R., *Vanadium-based neutron beam monitor*, Phys. Rev Accel. Beams **23**, 072901/1-10 (2020), 10.1103/PhysRevAccelBeams.23.072901

Mawass, M.; Niederhausen, J.; Hengge, M.; Mazzio, K.; Raoux, S.; Kronast, F., *Corrigendum : Sample cartridge with built -in miniature molecule evaporator for in-situ measurement with a photoemission electron microscope*, Ultramicroscopy **209**, 112857/1 (2020), 10.1016/j.ultramic.2019.112857

Mazzarella, L.; Morales-Vilches, A.B.; Korte, L.; Schlatmann, R.; Stannowski, B., *Versatility of Nanocrystalline Silicon Films: from Thin-Film to Perovskite/c-Si Tandem Solar Cell Applications*, Coatings **10**, 759/1-13 (2020), 10.3390/coatings10080759

Mazzio, K.A.; Kojda, D.; Rubio-Govea, R.; Niederhausen, J.; Ryll, B.; Raja-Thulasimani, M.; Habicht, K.; Raoux, S., *P-Type-to-N-Type Transition in Hybrid Ag<sub>x</sub>Te/PEDOT:PSS Thermoelectric Materials via Stoichiometric Control during Solution-Based Synthesis*, ACS Appl. En. Mat. **3**, 10734-10743 (2020), 10.1021/acsaem.0c01774

Medenbach, L.; Hartmann, P.; Janek, J.; Stettner, T.; Balducci, A.; Dirksen, C.; Schulz, M.; Stelter, M.; Adelhelm, P., *A Sodium Polysulfide Battery with Liquid/Solid Electrolyte: Improving Sulfur Utilization Using P2S5 as Additive and Tetramethylurea as Catholyte Solvent*, En. Techn. **8**, 1901200/1-10 (2020), 10.1002/ente.201901200

Mei, S.; Xu, X.; Priestley, R.D.; Lu, Y., *Polydopamine-based nanoreactors: synthesis and applications in bioscience and energy materials*, Chem. Sci. **11**, 12269-12281 (2020), 10.1039/DOSC04486E

Meier, D.; Hartmann, G.; Völker, J.; Viehaus, J.; Sick, B., *Reconstruction of offsets of an electron gun using deep learning and an optimization algorithm*, , 114930E (2020), 10.1117/12.2568001

Melder, J.; Bogdanoff, P.; Zaharieva, I.; Fiechter, S.; Dau, H.; Kurz, P., *Water-Oxidation Electrocatalysis by Manganese Oxides: Syntheses, Electrode Preparations, Electrolytes and Two Fundamental Questions*, Z. Phys. Chem. **234**, 925-978 (2020), 10.1515/zpch-2019-1491

Meng, X.; Xu, Y.; Cao, H.; Xiao, L.; Pengge, N.; Zhang, Y.; Gonzales Garcia, Y.; Sun, Z., *Internal failure of anode materials for lithium-ion batteries – a critical review*, Green Ene. Env. **5**, 22-36 (2020), 10.1016/j.gee.2019.10.003

Menzel, D.; Korte, L., *Evolution of Optical, Electrical, and Structural Properties of Indium Tungsten Oxide upon High Temperature Annealing*, Phys. Status Solidi A **218**, 2000165/1-8 (2020), 10.1002/pssa.202000165

Merdasa, A.; Tsarev, S.; Akbulatov, A.F.; Troshin, P.; Unger, E.L., *Microscopic insight into the reversibility of photodegradation in MAPbI<sub>3</sub> thin films*, J. of Lumin. **219**, 116916/1-7 (2020), 10.1016/j.jlumin.2019.116916

Mesa, C.A.; Francàs, L.; Yang, K.R.; Garrido-Barros, P.; Pastor, E.; Ma, Y.; Kafizas, A.; Rosser, T.E.; Mayer, M.T.; Reisner, E.; Grätzel, M.; Batista, V.S.; Durrant, J.R., *Multihole water oxidation catalysis on haematite photoanodes revealed by operando spectroelectrochemistry and DFT*, Nat. Chem. **12**, 82–89 (2020), 10.1038/s41557-019-0347-1

Mihalik, M.; Roupcová, P.; Tarasenko, R.; Rams, M.; Hoser, A.; Mihalik, M., *Magnetism in NdMn<sub>0.1</sub>Fe<sub>0.9</sub>O<sub>3</sub> compound*, J. Magn. Magn. Mater. **502**, 166539/1-6 (2020), 10.1016/j.jmmm.2020.166539

Mikoushkin, V.M.; Makarevskaya, E.A.; Solonitsyna, A.P.; Brzhezinskaya, M., *The Diagram of p–n Junction Formed on the n-GaAs Surface by 1.5 keV Ar+ Ion Beam*, Semicon. **54**, 1702-1705 (2020), 10.1134/s1063782620120222

Miletic, M.; Palczynski, K.; Dzubiella, J., *Quantifying entropic barriers in single-molecule surface diffusion*, J. Chem. Phys. **153**, 164713/1-11 (2020), 10.1063/5.0024178

Mindarava, Y.; Blinder, R.; Laube, C.; Knolle, W.; Abel, B.; Jentgens, C.; Isoya, J.; Scheuer, J.; Lang, J.; Schwartz, I.; Naydenov, B.; Jelezko, F., *Efficient conversion of nitrogen to nitrogen-vacancy centers in diamond particles with high-temperature electron irradiation*, Carbon **170**, 182-190 (2020), 10.1016/j.carbon.2020.07.077

Mindarava, Y.; Blinder, R.; Liu, Y.; Scheuer, J.; Lang, J.; Agafonov, V.; Davydov, V.A.; Laube, C.; Knolle, W.; Abel, B.; Naydenov, B.; Jelezko, F., *Synthesis and coherent properties of <sup>13</sup>C enriched sub-micron diamond particles with nitrogen vacancy color centers*, Carbon **165**, 395-403 (2020), 10.1016/j.carbon.2020.04.071

Mishra, K.K.; Afshar, A.; Thariat, J.; Shih, H.A.; Scholey, J.E.; Daftari, I.K.; Kacperek, A.; Pica, A.; Hrbacek, J.; Dendale, R.; Mazal, A.; Heufelder, J.; Char, D.H.; Sauerwein, W.A.G.; Weber, D.C.; Damato, B.E., *Practice Considerations for Proton Beam Radiation Therapy of Uveal Melanoma During the Coronavirus Disease Pandemic Particle Therapy Co-Operative Group Ocular Experience*, Adv. in Rad. Onc. **5**, 682-686 (2020), 10.1016/j.adro.2020.04.010

Mishurova, T.; Artzt, K.; Haubrich, J.; Evsevlev, S.; Evans, A.; Meixner, M.; Munoz, I.S.; Sevostianov, I.; Requena, G.; Bruno, G., *Connecting Diffraction-Based Strain with Macroscopic Stresses in Laser Powder Bed Fused Ti-6Al-4V*, Metall. Mater. Trans. A **51**, 3194-3204 (2020), 10.1007/s11661-020-05711-6

Mohseninia, A.; Kartouzian, D.; Schlumberger, R.; Markötter, H.; Wilhelm, F.; Scholta, J.; Manke, I., *Enhanced Water Management in PEMFCs: Perforated Catalyst Layer and Microporous Layers*, ChemSusChem **13**, 2931-2934 (2020), 10.1002/cssc.202000542

Mohseninia, A.; Kartouzian, D.; Eppler, M.; Langner, P.; Markötter, H.; Wilhelm, F.; Scholta, J.; Manke, I., *Influence of Structural Modification of Micro-Porous Layer and Catalyst Layer on Performance and Water Management of PEM Fuel Cells: Hydrophobicity and Porosity*, Fuel Cells **20**, 469-476 (2020), 10.1002/fuce.201900203

Morales, D.M.; Kazakova, M.A.; Purcel, M.; Masa, J.; Schuhmann, W., *The sum is more than its parts: stability of MnFe oxide nanoparticles supported on oxygen-functionalized multi-walled carbon nanotubes at alternating oxygen reduction reaction and oxygen evolution reaction conditions*, *J. of Solid St. Electroch.* **24**, 2901-2906 (2020), 10.1007/s10008-020-04667-2

Morales-Vilches, A.B.; Wang, E.-C.; Henschel, T.; Kubicki, M.; Cruz, A.; Janke, S.; Korte, L.; Schlatmann, R.; Stannowski, B., *Improved Surface Passivation by Wet Texturing, Ozone-Based Cleaning, and Plasma-Enhanced Chemical Vapor Deposition Processes for High-Efficiency Silicon Heterojunction Solar Cells*, *Phys. Status Solidi A* **217**, 1900518/1-7 (2020), 10.1002/pssa.201900518

Mudryk, K.D.; Robert, S.; Bernd, W.; Wilkinson, I., *The electronic structure of the aqueous permanganate ion: aqueous-phase energetics and molecular bonding studied using liquid jet photoelectron spectroscopy*, *Phys. Chem. Chem. Phys.* **22**, 20311-20330 (2020), 10.1039/d0cp04033a

Muechler, L.; Topp, A.; Queiroz, R.; Krivenkov, M.; Varykhlov, A.; Cano, J.; Ast, C.R.; Schoop, L.M., *Modular Arithmetic with Nodal Lines: Drumhead Surface States in ZrSiTe*, *Phys. Rev. X* **10**, 011026/1-10 (2020), 10.1103/physrevx.10.011026

Mulyaningsih, S.; Klemke, B.; Siemensmeyer, K.; Fritz, M.; Kurniawan, M.; Ispas, A.; Bund, A., *Influence of thermal treatment on the magnetic properties and morphology of electrodeposited Fe-Co films*, *J. Magn. Magn. Mater.* **513**, 167204/1- (2020), 10.1016/j.jmmm.2020.167204

Mutz, N.; Park, S.; Schultz, T.; Sadofev, S.; Dalgleish, S.; Reissig, L.; Koch, N.; List-Kratochvil, E.J.W.; Blumstengel, S., *Excited-State Charge Transfer Enabling MoS<sub>2</sub>/Phthalocyanine Photodetectors with Extended Spectral Sensitivity*, *J. Phys. Chem. C* **124**, 2837-2843 (2020), 10.1021/acs.jpcc.9b10877

Nagano, S.; Guan, K.; Shenkutie, S.M.; Feiler, C.; Weiss, M.; Kraskov, A.; Buhrke, D.; Hildebrandt, P.; Hughes, J., *Structural insights into photoactivation and signalling in plant phytochromes*, *Nature plants* **6**, 581-588 (2020), 10.1038/s41477-020-0638-y

Nässström, H.; Becker, P.; Márquez, J.A.; Shargaieva, O.; Mainz, R.; Unger, E.; Unold, T., *Dependence of phase transitions on halide ratio in inorganic CsPb(BrxI<sub>1-x</sub>)<sub>3</sub> perovskite thin films obtained from high-throughput experimentation*, *J. Mater. Chem. A* **8**, 22626-22631 (2020), 10.1039/DOTA08067E

Navarro-Senent, C.; Quintana, A.; Isarain-Chávez, E.; Weschke, E.; Yu, P.; Coll, M.; Pellicer, E.; Menéndez, E.; Sort, J., *Enhancing Magneto-Ionic Effects in Magnetic Nanostructured Films via Conformal Deposition of Nanolayers with Oxygen Acceptor/Donor Capabilities*, *ACS Appl. Mat. Interfaces* **12**, 14484-14494 (2020), 10.1021/acsami.9b19363

Neubert, T.J.; Wehrhold, M.; Kaya, N.S.; Balasubramanian, K., *Faradaic effects in electrochemically gated graphene sensors in the presence of redox active molecules*, *Nanotechnology* **31**, 405201/1-15 (2020), 10.1088/1361-6528/ab98bc

Nguyen, T.H.; Zhang, M.; Septina, W.; Ahmed, M.G.; Tay, Y.F.; Abdi, F.F.; Wong, L.H., *High Throughput Discovery of Effective Metal Doping in FeVO<sub>4</sub> for Photoelectrochemical Water Splitting*, *Sol. RRL* **4**, 2000437/1-8 (2020), 10.1002/solr.202000437

Niavol, S.S.; Budde, M.; Papadogianni, A.; Heilmann, M.; Moghaddam, H.M.; Aldao, C.M.; Ligorio, G.; List-Kratochvil, E.J.W.; Lopes, J.M.J.; Barsan, N.; Bierwagen, O.; Schipani, F., *Conduction mechanisms in epitaxial NiO/Graphene gas sensors*, *Sens. Act. B* **325**, 128797/1-10 (2020), 10.1016/j.snb.2020.128797

Nichols, C.I.O.; Bryson, J.F.J.; Blukis, R.; Herrero-Albillos, J.; Kronast, F.; Rüffer, R.; Chumakov, A.I.; Harrison, R.J., *Variations in the Magnetic Properties of Meteoritic Cloudy Zone*, *Geochem. Geophys. Geosyst.* **21**, e2019GC008798/1-14 (2020), 10.1029/2019gc008798

Nickel, N. H.; Geilert, K., *Monatomic hydrogen diffusion in b-Ga<sub>2</sub>O<sub>3</sub>*, *Appl. Phys. Lett.* **116**, 242102/1-3 (2020), 10.1063/5.0007134

Niederhausen, J.; Franco-Cañellas, A.; Erker, S.; Schultz, T.; Broch, K.; Hinderhofer, A.; Duhm, S.; Thakur, P.K.; Duncan, D.A.; Gerlach, A.; Lee, T.L.; Hofmann, O.T.; Schreiber, F.; Koch, N., *X-ray standing waves reveal lack of OH termination at hydroxylated ZnO(0001) surfaces*, *Phys. Rev. Mat.* **4**, 020602/1-6 (2020), 10.1103/physrevmaterials.4.020602

Niederhausen, J.; Macqueen, R.W.; Lips, K.; Aldahhak, H.; Schmidt, W.G.; Gerstmann, U., *Tetracene Ultrathin Film Growth on Hydrogen-Passivated Silicon*, *Langmuir* **36**, 9099-9113 (2020), 10.1021/acs.langmuir.0c01154

Niederhausen, J.; MacQueen, R.W.; Özkol, E.; Gersmann, C.; Futscher, M.H.; Liebhaber, M.; Friedrich, D.; Borgwardt, M.; Mazzio, K.A.; Amsalem, P.; Nguyen, M.H.; Daiber, B.; Mews, M.; Rappich, J.; Ruske, F.; Eichberger, R.; Ehrler, B.; Lips, K., *Energy-level Alignment Tuning at Tetracene/c-Si Interfaces*, *J. Phys. Chem. C* **124**, 27867–27881 (2020), 10.1021/acs.jpcc.0c08104

Nielsen, M.R.; Moss, A.B.; Bjørnlund, A.S.; Liu, X.; Knop-Gericke, A.; Klyushin, A.Y.; Grunwaldt, J.D.; Sheppard, T.L.; Doronkin, D.E.; Zimina, A.; Smitshuysen, T.E.L.; Damsgaard, C.D.; Wagner, J.B.; Hansen, T.W., *Reduction and carburization of iron oxides for Fischer-Tropsch synthesis*, *J. of Energy Chem.* **51**, 48-61 (2020), 10.1016/j.jechem.2020.03.026

Niessen, F.; Apel, D.; Danoix, F.; Hald, J.; Somers, M.A.J., *Evolution of substructure in low-interstitial martensitic stainless steel during tempering*, *Mat. Character.* **167**, 110494/1-11 (2020), 10.1016/j.matchar.2020.110494

Nietner, A.; Vanhecke, B.; Verstraete, F.; Eisert, J.; Vanderstraeten, L., *Efficient variational contraction of two-dimensional tensor networks with a non-trivial unit cell*, *Quant.* **4**, 328/1-23 (2020), 10.22331/q-2020-09-21-328

Nikam, R.; Xu, X.; Kanduc, M.; Dzubiella, J., *Competitive sorption of monovalent and divalent ions by highly charged globular macromolecules*, *J. Chem. Phys.* **153**, 044904/1-15 (2020), 10.1063/5.0018306

Nikitin, S.E.; Franco, D.G.; Kwon, J.; Bewley, R.; Podlesnyak, A.; Hoser, A.; Koza, M.M.; Geibel, C.; Stockert, O., *Gradual pressure-induced enhancement of magnon excitations in CeCoSi*, *Phys. Rev. B* **101**, 214426/1-11 (2020), 10.1103/physrevb.101.214426

Nikolaeva, A.; Krause, M.; Schäfer, N.; Witte, W.; Hariskos, D.; Kodalle, T.; Kaufmann, C.A.; Barreau, N.; Abou-Ras, D., *Electrostatic potential fluctuations and light&#8208;soaking effects in Cu(In,Ga)Se<sub>2</sub> solar cells*, *Progr. Photovolt.* **28**, 919–934 (2020), 10.1002/pip.3299

Nomura, T.; Skourski, Y.; Quintero-Castro, D.L.; Zvyagin, A.A.; Suslov, A.V.; Gorbunov, D.; Yasin, S.; Wosnitza, J.; Kindo, K.; Islam, A.T.M.N.; Lake, B.; Kohama, Y.; Zherlitsyn, S.; Jaime, M., *Enhanced spin correlations in the Bose-Einstein condensate compound Sr<sub>3</sub>Cr<sub>2</sub>O<sub>8</sub>*, *Phys. Rev. B* **102**, 165144/1-9 (2020), 10.1103/physrevb.102.165144

Novakovic-Marinkovic, N.; Mawass, M.A.; Volkov, O.; Makushko, P.; Engel, W.D.; Makarov, D.; Kronast, F., *From stripes to bubbles: Deterministic transformation of magnetic domain patterns in*

*Co/Pt multilayers induced by laser helicity*, Phys. Rev. B **102**, 174412/1-8 (2020),  
10.1103/physrevb.102.174412

Obata, K.; van de Krol, R.; Schwarze, M.; Schomäcker, R.; Abdi, F.F., *In-situ Observation of pH Change during Water Splitting in Neutral pH Conditions*, En. Envir. Science **13**, 5104-5116 (2020),  
10.1039/D0EE01760D

Oksenberg, E.; Merdasa, A.; Houben, L.; Kaplan-Ashiri, I.; Rothman, A.; Scheblykin, I.G.; Unger, E. L.; Joselevich, E., *Large lattice distortions and size-dependent bandgap modulation in epitaxial halide perovskite nanowires*, Nat. Commun. **11**, 489/1-11 (2020), 10.1038/s41467-020-14365-2

Opitz, A.; Peter, C.; Wegner, B.; Matte, H.S.S.R.; Röttger, A.; Florian, T.; Xu, X.; Beyer, P.; Grubert, L.; Hecht, S.; Belova, V.; Hinderhofer, A.; Schreiber, F.; Kasper, C.; Pflaum, J.; Zhang, Y.; Barlow, S.; Marder, S.R.; Koch, N., *Ordered Donor-Acceptor Complex Formation and Electron Transfer in Co-deposited Films of Structurally Dissimilar Molecules*, J. Phys. Chem. C **124**, 11023-11031 (2020),  
10.1021/acs.jpcc.0c02465

Oponewicz, A.; Marciszko-Wiackowska, M.; Baczmanski, A.; Klaus, M.; Genzel, C.; Wronski, S.; Kollbek, K.; Wróbel, M., *Gradient of Residual Stress and Lattice Parameter in Mechanically Polished Tungsten Measured Using Classical X-rays and Synchrotron Radiation*, Metall. Mater. Trans. A **51**, 5945-5957 (2020), 10.1007/s11661-020-05967-y

Orendáč, M.; Farkasovský, P.; Regeciová, L.; Gabáni, S.; Pristás, G.; Gazo, E.; Backai, J.; Diko, P.; Dukhnenko, A.; Shitsevalova, N.; Siemensmeyer, K.; Flachbart, K., *Tuning the magnetocaloric effect in the Lu-doped frustrated Shastry-Sutherland system TmB4*, Phys. Rev. B **102**, 174422/1-7 (2020),  
10.1103/physrevb.102.174422

Orendáč, M.; Farkasovský, P.; Regeciová, L.; Flachbart, K.; Gabáni, S.; Gao, E.; Pristás, G.; Dukhnenko, A.; Shitsevalova, N.; Siemensmeyer, K., *Microscopic Description of Rotating Magnetocaloric Effect in Frustrated Antiferromagnetic System TmB4*, Acta Phys. Pol. A **137**, 764-766 (2020),  
10.12693/aphyspola.137.764

Özkol, E.; Procel, P.; Zhao, Y.; Mazzarella, L.; Medlin, R.; Sutta, P.; Isabella, O.; Zeman, M., *Effective Passivation of Black Silicon Surfaces via Plasma-Enhanced Chemical Vapor Deposition Grown Conformal Hydrogenated Amorphous Silicon Layer*, Phys. Status Solidi RRL **14**, 1900087/1-7 (2020),  
10.1002/pssr.201900087

Pamidi, V.; Mohan Muralikrishna, G.; Bhogi, S.; Georgy, K.; Muduli, F.; García-Moreno, F.; Mukherjee, M., *Visualisation of stabilising particles at the gas-solid interface of metalfoams*, Mater. Lett. **278**, 128371/1-5 (2020), 10.1016/j.matlet.2020.128371

Panchenko, O.; Carmo, M.; Rasinski, M.; Arlt, T.; Manke, I.; Müller, M.; Lehnert, W., *Non-destructive in-operando investigation of catalyst layer degradation for water electrolyzers using synchrotron radiography*, Mat. Today En. **16**, 100394/1-9 (2020), 10.1016/j.mtener.2020.100394

Panchenko, U.; Arlt, T.; Manke, I.; Müller, M.; Stolten, D.; Lehnert, W., *Synchrotron Radiography for a Proton Exchange Membrane (PEM) Electrolyzer*, Fuel Cells **20**, 300-306 (2020),  
10.1002/fuce.201900055

Panepinto, A.; Cornil, D.; Guttmann, P.; Bittencourt, C.; Cornil, J.; Snyders, R., *Fine Control of the Chemistry of Nitrogen Doping in TiO<sub>2</sub>: A Joint Experimental and Theoretical Study*, J. Phys. Chem. C **124**, 17401–17412 (2020), 10.1021/acs.jpcc.0c05003

Pareek, D.; Taskesen, T.; Márquez, J.A.; Stange, H.; Levcenco, S.; Simsek, I.; Nowak, D.; Pfeiffelmann, T.; Chen, W.; Stroth, C.; Sayed, M.H.; Mikolajczak, U.; Parisi, J.; Unold, T.; Mainz, R.; Gütay, L., *Reaction Pathway for Efficient Cu<sub>2</sub>ZnSnSe<sub>4</sub> Solar Cells from Alloyed Cu-Sn Precursor via a Cu-Rich Selenization Stage*, Sol. RRL **4**, 2000124/1-8 (2020), 10.1002/solr.202000124

Parinova, E.V.; Pisliaruk, A.K.; Schleusener, A.; Koyuda, D.A.; Chumakov, R.G.; Lebedev, A.M.; Ovsyannikov, R.; Makarova, A.; Smirnov, D.; Sivakov, V.; Turishchev, S.Y., *Peculiarities of electronic structure and composition in ultrasound milled silicon nanowires*, Res. Phys. **19**, 103332/1-3 (2020), 10.1016/j.rinp.2020.103332

Parinova, E.V.; Marchenko, D.; Fedotov, A.K.; Koyuda, D.A.; Fedotova, Y.A.; Ovsyannikov, R.; Turishchev, S.Y., *Spectromicroscopic studies of porous silicon oxide on silicon using synchrotron radiation*, Kondens. sred. **22**, 89-96 (2020), 10.17308/kcmf.2020.22/2532

Pasanen, H.; Vivo, P.; Canil, L.; Hempel, H.; Unold, T.; Abate, A.; Tkachenko, N., *Monitoring Charge Carrier Diffusion across a Perovskite Film with Transient Absorption Spectroscopy*, J. Phys. Chem. Lett. **11**, 445-450 (2020), 10.1021/acs.jpclett.9b03427

Pavlov, A.A.; Nehrkorn, J.; Zubkevich, S.V.; Fedin, M.V.; Holdack, K.; Schnegg, A.; Novikov, V.V., *A Synergy and Struggle of EPR, Magnetometry and NMR: A Case Study of Magnetic Interaction Parameters in a Six-Coordinate Cobalt(II) Complex*, Inorg. Chem. **59**, 10746-10755 (2020), 10.1021/acs.inorgchem.0c01191

Pei, H.H.; Hilal, T.; Chen, Z.A.; Huang, Y.H.; Gao, Y.; Said, N.; Loll, B.; Rappaport, J.; Belogurov, G.A.; Artsimovitch, I.; Wahl, M.C., *The delta subunit and NTPase Held institute a two-pronged mechanism for RNA polymerase recycling*, Nat. Commun. **11**, 14.01.6418 (2020), 10.1038/s41467-020-20159-3

Penã-Camargo, F.; Caprioglio, P.; Zu, F.; Gutierrez-Partida, E.; Wolff, C.M.; Brinkmann, K.; Albrecht, S.; Riedl, T.; Koch, N.; Neher, D.; Stolterfoht, M., *Halide Segregation versus Interfacial Recombination in Bromide-Rich Wide-Gap Perovskite Solar Cells*, ACS En. Lett. **5**, 2728-2736 (2020), 10.1021/acsenergylett.0c01104

Penc, B.; Baran, S.; Hoser, A.; Przewoznik, J.; Szytula, A., *Magnetic properties and magnetic structures of R<sub>2</sub>PdGe<sub>6</sub> (R = Pr, Nd, Gd-Er) and R<sub>2</sub>PtGe<sub>6</sub> (R = Tb, Ho, Er)*, J. Magn. Magn. Mater. **514**, 167152/1-10 (2020), 10.1016/j.jmmm.2020.167152

Pescara, B.; Mazzio, K.A., *Morphological and Surface-State Challenges in Ge Nanoparticle Applications*, Langmuir **36**, 11685-11701 (2020), 10.1021/acs.langmuir.0c01891

Peter, K.; Ji, L.; Masamitsu, A., *Longitudinal acceptance measurement at an electron storage ring*, Phys. Rev Accel. Beams **23**, 030701/1-8 (2020), 10.1103/PhysRevAccelBeams.23.030701

Petzoldt, A.G.; Goetz, T.W.B.; Driller, J.H.; Luetzkendorf, J.; Reddy-Alla, S.; Matkovic-Rachid, T.; Liu, S.; Knoche, E.; Mertel, S.; Ugorets, V.; Lehmann, M.; Ramesh, N.; Beuschel, C.B.; Kuropka, B.; Freund, C.; Stelzl, U.; Loll, B.; Liu, F.; Wahl, M.C., *RIM-binding protein couples synaptic vesicle recruitment to release sites*, J. of Cell Biol. **219**, e201902059/1-33 (2020), 10.1083/jcb.201902059

Pfrommer, J.; Steigert, A.; Göbel, C.; Lauermann, I.; Calvet, W.; Klenk, R.; Mikhailov, S.; Azarpira, A.; Lublow, M.; Selve, S.; Driess, M.; Schedel-Niedrig, T., *Novel, large area scalable polycrystalline Zn<sub>1-x</sub>CoxO films RF sputtered from a single mixed target for electrochemical water oxidation*, Int. J. Hydrogen Energ. **45**, 9380-9385 (2020), 10.1016/j.ijhydene.2020.01.216

Phung, N.; Félix, R.; Meggiolaro, D.; Al-Ashouri, A.; Sousa e Silva, G.; Hartmann, C.; Hidalgo, J.; Köbler, H.; Mosconi, E.; Lai, B.; Gunder, R.; Li, M.; Wang, K.-L.; Wang, Z.-K.; Nie, K.; Handick, E.; Wilks, R.G.;

Marquez, J.A.; Rech, B.; Unold, T.; Corr, *The doping mechanism of halide perovskite unveiled by alkaline earth metals*, J. Am. Chem. Soc. **142**, 2364-2374 (2020), 10.1021/jacs.9b11637

Phung, N.; Al-Ashouri, A.; Meloni, S.; Mattoni, A.; Albrecht, S.; Unger, E.L.; Merdasa, A.; Abate, A., *The Role of Grain Boundaries on Ionic Defect Migration in Metal Halide Perovskites*, Adv. Energy Mat. **10**, 1903735/1-10 (2020), 10.1002/aenm.201903735

Pohlmann, T.; Kuschel, T.; Rodewald, J.; Thien, J.; Ruwisch, K.; Bertram, F.; Weschke, E.; Shafer, P.; Wollschläger, J.; Küpper, K., *Cation- and lattice-site-selective magnetic depth profiles of ultrathin Fe<sub>3</sub>O<sub>4</sub>(001) films*, Phys. Rev. B **102**, 220411(R)/1-6 (2020), 10.1103/physrevb.102.220411

Polushkin, N.I.; Kravtsov, E.A.; Vdovichev, S.N.; Tatarskiy, D.A.; Drozdov, M.N.; Weschke, E.; Fraerman, A.A., *Thermomagnetic switching in strong/weak/strong ferromagnet stack detected with resonant X-ray magnetic reflectometry*, J. Magn. Magn. Mater. **497**, 165930/1-4 (2020), 10.1016/j.jmmm.2019.165930

Portnichenko, P.Y.; Akbari, A.; Nikitin, S. E.; Cameron, A. S.; Dukhnenko, A. V.; Filipov, V. B.; Shitsevalova, N. Yu.; Cermák, P.; Radelytskyi, I.; Schneidewind, A.; Ollivier, J.; Podlesnyak, A.; Huesges, Z.; Xu, J.; Ivanov, A.; Sidis, Y.; Petit, S.; Mig, *Field-Angle-Resolved Magnetic Excitations as a Probe of Hidden-Order Symmetry in CeB<sub>6</sub>*, Phys. Rev. X **10**, 021010/1-19 (2020), 10.1103/PhysRevX.10.021010

Pramanik, P.; Joshi, D.C.; Reehuis, M.; Hoser, A.; Hoffmann, J.U.; Manna, R.S.; Sarkar, T.; Thota, S., *Neutron diffraction evidence for local spin canting, weak Jahn-Teller distortion, and magnetic compensation in Ti<sub>1-x</sub>M<sub>x</sub>Co<sub>2</sub>O<sub>4</sub> spinel*, J. Phys.: Condens. Matter **32**, 245803/1-17 (2020), 10.1088/1361-648x/ab71a6

Prashanthan, K.; Naydenov, B.; Lips, K.; Unger, E.; MacQueen, R.W., *Interdependence of photon upconversion performance and antisolvent processing in thin-film halide perovskite-sensitized triplet-triplet annihilators*, J. Chem. Phys. **153**, 164711/1-9 (2020), 10.1063/5.0026564

Probst, J.; Braig, C.; Langlotz, E.; Rahneberg, I.; Kühnel, M.; Zeschke, T.; Siewert, F.; Krist, T.; Erko, A., *Conception of diffractive wavefront correction for XUV and soft x-ray spectroscopy*, Appl. Optics **59**, 2580-2590 (2020), 10.1364/ao.384782

Prokes, K.; Fabelo, O.; Süllow, S.; Lee, J.; Mydosh, J.A., *High temperature tetragonal crystal structure of UPt<sub>2</sub>Si<sub>2</sub>*, Z. Kristallogr. **235**, 175-181 (2020), 10.1515/zkri-2020-0018

Pudell, J.E.; Mattern, M.; Hehn, M.; Malinowski, G.; Herzog, M.; Bargheer, M., *Heat Transport without Heating? - An Ultrafast X-Ray Perspective into a Metal Heterostructure*, Adv. Funct. Mater. **30**, 2004555/1-8 (2020), 10.1002/adfm.202004555

Putz, B.; Wurster, S.; Edwards, T.E.J.; Völker, B.; Milassin, G.; Többens, D.M.; Semprimschnig, C.O.A.; Cordill, M.J., *Mechanical and optical degradation of flexible optical solar reflectors during simulated low earth orbit thermal cycling*, Acta Astron. **175**, 277-289 (2020), 10.1016/j.actaastro.2020.05.032

Qiao, L.; Zizak, I.; Zaslansky, P.; Ma, Y., *The Crystallization Process of Vaterite Microdisc Mesocrystals via Proto-Vaterite Amorphous Calcium Carbonate Characterized by Cryo-X-ray Absorption Spectroscopy*, Cryst. **10**, 750/1-12 (2020), 10.3390/crust10090750

Rabchinskii, M.K.; Ryzhkov, S.A.; Kirilenko, D.A.; Ulin, N.V.; Baidakova, M.V.; Shnitov, V.V.; Pavlov, S.I.; Chumakov, R.G.; Stolyarova, D.Y.; Besedina, N.A.; Shvidchenko, A.V.; Potorochin, D.V.; Roth, F.; Smirnov, D.A.; Gudkov, M.V.; Brzhezinskaya, M.; L, *From graphene oxide towards aminated*

*graphene: facile synthesis, its structure and electronic properties*, Sci. Rep. **10**, 12.01.6902 (2020), 10.1038/s41598-020-63935-3

Rabchinskii, M.K.; Ryzhkov, S.A.; Gudkov, M.V.; Baidakova, M.V.; Saveliev, S.D.; Pavlov, S.I.; Shnitov, V.V.; Kirilenko, D.A.; Stolyarova, D.Yu.; Lebedev, A.M.; Chumakov, R.; Brzhezinskaya, M.; Shiyanova, K.A.; Makarova, A.; Pavlov, S.V.; Kislenko, V.A.; *Unraveling the GO nitrogen doping during the Hummers oxidation, conversion and effect of nitrogen species on the electrical conductivity after thermal annealing*, 2D Mat. **7**, 045001/1-14 (2020), 10.1088/2053-1583/ab9695

Raju, R.R.; Liebig, F.; Klemke, B.; Koetz, J., *Ultralight magnetic aerogels from Janus emulsions*, RSC Adv. **10**, 7492-7499 (2020), 10.1039/c9ra10247g

Ramadan, A.J.; Ralaiarisoa, M.; Zu, F.; Rochford, L.A.; Wenger, B.; Koch, N.; Snaith, H.J., *Revealing the Stoichiometric Tolerance of Lead Trihalide Perovskite Thin Films*, Chem. Mater. **32**, 114-120 (2020), 10.1021/acs.chemmater.9b02639

Ramasubramanian, L.; Kákay, A.; Fowley, C.; Yildirim, O.; Matthes, P.; Sorokin, S.; Titova, A.; Hilliard, D.; Böttger, R.; Hübner, R.; Gemming, S.; Schulz, S.E.; Kronast, F.; Makarov, D.; Fassbender, J.; Deac, A., *Tunable Magnetic Vortex Dynamics in Ion-Implanted Permalloy Disks*, ACS Appl. Mat. Interfaces **12**, 27812-27818 (2020), 10.1021/acsami.0c08024

Rams, M.; Jochim, A.; Böhme, M.; Lohmiller, T.; Ceglarska, M.; Rams, M.M.; Schnegg, A.; Plass, W.; Näther, C., *Single-Chain Magnet Based on Cobalt(II) Thiocyanate as XXZ Spin Chain*, Chem. - a Eur. J. **26**, 2837-2851 (2020), 10.1002/chem.201903924

Rams, M.; Jochim, A.; Böhme, M.; Lohmiller, T.; Ceglarska, M.; Rams, M.M.; Schnegg, A.; Plass, W.; Näther, C., *Cover: Single-Chain Magnet Based on Cobalt(II) Thiocyanate as XXZ Spin Chain*, Chem. - a Eur. J. **26**, Coverpicture 2765 (2020), 10.1002/chem.202000371

Raoufi, M.; Hörmann, U.; Ligorio, G.; Hildebrandt, J.; Pätzelt, M.; Schultz, T.; Perdigon, L.; Koch, N.; List-Kratochvil, E.; Hecht, S.; Neher, D., *Simultaneous Effect of Ultraviolet Radiation and Surface Modification on the Work Function and Hole Injection Properties of ZnO Thin Films*, Phys. Status Solidi A **217**, 1900876/1-6 (2020), 10.1002/pssa.201900876

Rappich, J.; Lang, F.; Brus, V.V.; Shargaieva, O.; Dittrich, T.; Nickel, N.H., *Light-induced defect generation in CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> thin films and single crystals*, Sol. RRL **4**, 1900216/1-6 (2020), 10.1002/solr.201900216

Regue, M.; Ahmet, I.Y.; Bassi, P.S.; Johnson, A.L.; Fiechter, S.; van de Krol, R.; Abdi, F.F.; Eslava, S., *Zn-Doped Fe<sub>2</sub>TiO<sub>5</sub> Pseudobrookite-Based Photoanodes Grown by Aerosol-Assisted Chemical Vapor Deposition*, ACS Appl. En. Mat. **3**, 12066–12077 (2020), 10.1021/acsael.0c02190

Rehermann, C.; Merdasa, A.; Suchan, K.; Schröder, V.; Mathies, F.; Unger, E.L., *Origin of Ionic Inhomogeneity in MAPb(IxBr1-x)3 Perovskite Thin Films Revealed by In-Situ Spectroscopy during Spin Coating and Annealing*, ACS Appl. Mat. Interfaces **12**, 30343-30352 (2020), 10.1021/acsami.0c05894

Reike, H.-P.; Alexeev, V.; Gröhn, C.; Arlt, T.; Manke, I., *First extinct species of the genus Holoparamecus (Coleoptera: Merophysiidae: Holoparamecinae) from Eocene amber deposits*, Studies Rep. **16**, 241-255 (2020),

Renfrew, S.E.; Starr, D.E.; Strasser, P., *Electrochemical Approaches toward CO<sub>2</sub> Capture and Concentration*, ACS Catal. **10**, 13058-13074 (2020), 10.1021/acscatal.0c03639

Revoju, S.; Matuhina, A.; Canil, L.; Salonen, H.; Hiltunen, A.; Abate, A.; Vivo, P., *Structure-induced optoelectronic properties of phenothiazine-based materials*, J. Mater. Chem. C **8**, 15486-15506 (2020), 10.1039/d0tc03421e

Rhim, S.Y.; Ligorio, G.; Hermerschmidt, F.; Hildebrandt, J.; Pätzelt, M.; Hecht, S.; List-Kratochvil, E.J.W., *Using Active Surface Plasmons in a Multibit Optical Storage Device to Emulate Long-Term Synaptic Plasticity*, Phys. Status Solidi A **217**, 2000354/1-5 (2020), 10.1002/pssa.202000354

Riechardt, A.I.; Stroux, A.; Seibel, I.; Heufelder, J.; Zeitz, O.; Böhmer, D.; Joussen, A. M.; Gollrad, J., *Side effects of proton beam therapy of choroidal melanoma in dependence of the dose to the optic disc and the irradiated length of the optic nerve*, Gr. Arch. for Cl. and Exp. Opht. **258**, 2523-2533 (2020), 10.1007/s00417-020-04780-y

Ries, L.K.; Liess, A.K.L.; Feiler, C.G.; Spratt, D.E.; Lowe, E.D.; Lorenz, S., *Crystal structure of the catalytic C-lobe of the HECT-type ubiquitin ligase E6AP*, Prot. Sc. **29**, 1550-1554 (2020), 10.1002/pro.3832

Risse, S.; Juhl, A.; Mascotto, S.; Arlt, T.; Markoetter, H.; Hilger, A.; Manke, I.; Froeba, M., *Detailed and Direct Observation of Sulfur Crystal Evolution During Operando Analysis of a Li-S Cell with Synchrotron Imaging*, J. Phys. Chem. Lett. **11**, 5674–5679 (2020), 10.1021/acs.jpclett.0c01284

Ritzer, M.; Schönherr, S.; Schöppé, P.; Wisniewski, W.; Giraldo, S.; Gurieva, G.; Johannes, A.; Plass, C.; Ritter, K.; Martínez-Criado, G.; Schorr, S.; Saucedo, E.; Ronning, C.; Schnohr, C., *On the Germanium Incorporation in Cu<sub>2</sub>ZnSnSe<sub>4</sub> Kesterite Solar Cells Boosting Their Efficiency*, ACS Appl. En. Mat. **3**, 558-564 (2020), 10.1021/acs.aem.9b01784

Ritzer, M.; Schönherr, S.; Schöppé, P.; Laramona, G.; Choné, C.; Gurieva, G.; Johannes, A.; Ritter, K.; Martínez-Criado, G.; Schorr, S.; Ronning, C.; Schnohr, C.S., *Interplay of Performance-Limiting Nanoscale Features in Cu<sub>2</sub>ZnSn(S,Se)<sub>4</sub> Solar Cells*, Phys. Status Solidi A **217**, 2000456/1-9 (2020), 10.1002/pssa.202000456

Romanyuk, O.; Supplie, O.; Paszuk, A.; Stoeckmann, J.P.; Wilks, R.G.; Bombsch, J.; Hartmann, C.; Garcia-Diez, R.; Ueda, S.; Bartos, I.; Gordeev, I.; Houdkova, J.; Kleinschmidt, P.; Bär, M.; Jiricek, P.; Hannappel, T., *Hard X-ray photoelectron spectroscopy study of core level shifts at buried GaP/Si(001) interfaces*, Surf. Interf. Anal. **52**, 933-938 (2020), 10.1002/sia.6829

Ronneburg, A.; Osenberg, M.; Dong, K.; Hilger, A.; Härk, E.; Silvi, L.; Manke, I.; Ballauff, M.; Risse, S., *Morphological evolution of a single crystal silicon battery electrode during lithiation and delithiation: An operando phase-contrast imaging study*, En. Stor. Mat. **32**, 377-385 (2020), 10.1016/j.ensm.2020.06.007

Röseler, A.; Schade, U., *Polarizing interferometer for the unambiguous determination of the ellipsometric parameters*, Appl. Optics **59**, 6619-6624 (2020), 10.1364/AO.392538

Rosenzweig, P.; Karakachian, H.; Marchenko, D.; Küster, K.; Starke, U., *Overdoping Graphene Beyond the van Hove Singularity*, Phys. Rev. Lett. **125**, 176403/1-6 (2020), 10.1103/physrevlett.125.176403

Roshchupkin, D.; Ortega, L.; Vadilonga, S.; Zizak, I.; Emelin, E.; Plotitcyna, O.; Thiaudiere, D.; Leitenberger, W.; Formoso, V.; Fettar, F., *X-ray diffraction on La<sub>3</sub>Ga<sub>5</sub>SiO<sub>14</sub> crystal modulated by SAW near the K absorption edge of Ga*, Appl. Phys. Lett. **116**, 174101/1-4 (2020), 10.1063/5.0002388

Roshchupkin, D.; Emelin, E.; Plotitcyna, O.; Rashid, F.; Irzhak, D.; Karandashev, V.; Orlova, T.; Targonskaya, N.; Sakharov, S.; Mololkin, A.; Redkin, B.; Fritze, H.; Suhak, Y.; Kovalev, D.; Vadilonga, S.; Ortega, L.; Leitenberger, W., *Single crystals of ferroelectric lithium niobate-tantalate LiNb<sub>1-x</sub>Ta<sub>x</sub>O<sub>3</sub>*

*solid solutions for high-temperature sensor and actuator applications*, Acta Crystallogr. B **76**, 1071-1076 (2020), 10.1107/s2052520620014390

Ross, A.; Lebrun, R.; Gomonay, O.; Grave, D.A.; Kay, A.; Baldrati, L.; Becker, S.; Qaiumzadeh, A.; Ulloa, C.; Jakob, G.; Kronast, F.; Sinova, J.; Duine, R.; Brataas, A.; Rothschild, A.; Kläui, M., *Propagation Length of Antiferromagnetic Magnons Governed by Domain Configurations*, Nano Lett. **20**, 306-313 (2020), 10.1021/acs.nanolett.9b03837

Ross, A.; Lebrun, R.; Ulloa, C.; Grave, D.A.; Kay, A.; Baldrati, L.; Kronast, F.; Valencia, S.; Rothschild, A.; Kläui, M., *Structural sensitivity of the spin Hall magnetoresistance in antiferromagnetic thin films*, Phys. Rev. B **102**, 094415/1-6 (2020), 10.1103/PhysRevB.102.094415

Roß, M.; Gil-Escríg, L.; Al-Ashouri, A.; Tockhorn, P.; Jost, M.; Rech, B.; Albrecht, S., *Co-Evaporated p-i-n Perovskite Solar Cells beyond 20% Efficiency: Impact of Substrate Temperature and Hole-Transport Layer*, ACS Appl. Mat. Interfaces **12**, 39261-39272 (2020), 10.1021/acsami.0c10898

Ruiz-Perona, A.; Sánchez, Y.; Guc, M.; Khelifi, S.; Kodalle, T.; Placidi, M.; Merino, J.M.; León, M.; Caballero, R., *Effect of Na and the back contact on Cu<sub>2</sub>Zn(Sn,Ge)Se<sub>4</sub> thin-film solar cells: Towards semi-transparent solar cells*, Sol. Energy **206**, 555-563 (2020), 10.1016/j.solener.2020.06.044

Rybkin, A.G.; Rybkina, A.A.; Tarasov, A.V.; Pudikov, D.A.; Klimovskikh, I.I.; Vilkov, O.Yu.; Petukhov, A.E.; Usachov, D.Yu.; Estyunin, D.A.; Voroshnin, V.Yu.; Varykhalov, A.; Di Santo, G.; Petaccia, L.; Schwier, E.F.; Shimada, K.; Kimura, A.; Shikin, A.M., *A new approach for synthesis of epitaxial nano-thin Pt<sub>5</sub>Gd alloy via intercalation underneath a graphene*, Appl. Surf. Sci. **526**, 146687/1-8 (2020), 10.1016/j.apsusc.2020.146687

Sajedi, M.; Krivenkov, M.; Marchenko, D.; Varykhalov, A.; Sánchez-Barriga, J.; Rienks, E.D.L.; Rader, O., *Absence of a giant Rashba effect in the valence band of lead halide perovskites*, Phys. Rev. B **102**, 081116(R)/1-6 (2020), 10.1103/physrevb.102.081116

Salis, E.; Gerber, A.; Andreasen, J.W.; Gevorgyan, S.A.; Betts, T.; Mihaylov, B.; Gottschalg, R.; Kodolbas, A.O.; Yilmaz, O.; Leidl, R.; Rennhofer, M.; Zamini, S.; Acciarri, M.; Binetti, S.; Lotter, E.; Bakker, K.; Kroon, J.; Soppe, W.; Razongles, G.; Mer, *A European proficiency test on thin-film tandem photovoltaic devices*, Progr. Photovolt. **28**, 1258-1276 (2020), 10.1002/pip.3322

Salvemini, F.; Grazzi, F.; Kardjilov, N.; Manke, I.; Scherillo, A.; Roselli, M.G.; Zoppi, M., *Non-invasive characterization of ancient Indonesian Kris through neutron methods*, EPJ Plus **135**, 402/1-25 (2020), 10.1140/epjp/s13360-020-00452-2

Samothrakitis, S.; Raventós, M.; Capek, J.; Larsen, C.B.; Grünzweig, C.; Tovar, M.; Garcia-Gonzalez, M.; Kopecek, J.; Schmidt, S.; Strobl, M., *Grain morphology reconstruction of crystalline materials from Laue three-dimensional neutron diffraction tomography*, Sci. Rep. **10**, 07.01.3724 (2020), 10.1038/s41598-020-60330-w

Samothrakitis, S.; Larsen, C.B.; Woracek, R.; Heller, L.; Kopecek, J.; Gerstein, G.; Maier, H.J.; Rames, M.; Tovar, M.; Sittner, P.; Schmidt, S.; Strobl, M., *A multiscale study of hot-extruded CoNiGa ferromagnetic shape-memory alloys*, Mater. Design **196**, 109118/1-10 (2020), 10.1016/j.matdes.2020.109118

Saveleva, V.A.; Wang, L.; Kasian, O.; Batuk, M.; Hadermann, J.; Gallet, J.J.; Bournel, F.; Alonso-Vante, N.; Ozouf, G.; Beauger, C.; Mayrhofer, K.J.J.; Cherevko, S.; Gago, A.S.; Friedrich, K.A.; Zafeiratos, S.; Savinova, E.R., *Insight into the Mechanisms of High Activity and Stability of Iridium Supported on*

*Antimony-Doped Tin Oxide Aerogel for Anodes of Proton Exchange Membrane Water Electrolyzers*, ACS Catal. **10**, 2508-2516 (2020), 10.1021/acscatal.9b04449

Sayre, L.; Lang, F.; Bundesmann, J.; Denker, A.; Pearce, P.; Johnson, A.; Hirst, L., *Ultra-thin Single-junction GaAs Solar Cells for Extreme Space Environments*, **0**, 1621-1625 (2020), 10.1109/pvsc45281.2020.9300596

Schade, U.; Cao, D.; Puskar, L.; Ritter, E.; Beckmann, J., *Removal of Etalon Features in the Far-infrared/THz Transmittance Spectra of Thin Polymer Films*, Appl. Spectr. **74**, 1530-1539 (2020), 10.1177/0003702820922295

Schäfer, S.; Stange, H.; Márquez, J.A.; Genzel, C.; Mainz, R., *Stress Formation During In-Ga Interdiffusion in Thin-Film CuIn<sub>1-x</sub>GaxSe<sub>2</sub> Absorber Layers Leads to Stable Ga Gradients*, Phys. Rev. Appl. **14**, 024063/1-17 (2020), 10.1103/physrevapplied.14.024063

Scherb, T.; Fantin, A.; Checchia, S.; Stephan-Scherb, C.; Escolastico, S.; Franz, A.; Seeger, J.; Meulenberg, W.A.; d'Acapito, F.; Serra, J.M., *Unravelling the crystal structure of Nd5.8WO<sub>12-delta</sub> and Nd5.7WO<sub>7.75</sub>Mo<sub>0.25</sub>O<sub>12-delta</sub> mixed ionic electronic conductors*, J. Appl. Crystallogr. **53**, 1471-1483 (2020), 10.1107/S1600576720012698

Scheuer, J.; Naydenov, B., *Dynamic nuclear polarization (DNP) in diamond*, , Volume 103, p. 316 (277-293) (2020), 10.1016/bs.semsem.2020.03.009

Schierle, E., *A promising birthplace for skyrmions*, Nat. Mat. **19**, 369-370 (2020), 10.1038/s41563-020-0642-7

Schlegel, M.C.; Grzimek, V.; Guenther, G.; Svetogorov, R.; Veziri, C.M.; Kapsi, M.; Karanikolos, G.N.; Prokhnenko, O.; Bewley, R.; Russina, M., *Explaining water adsorption in one-dimensional channels in AlPO<sub>4-5</sub> on molecular scale*, Microporous Mesoporous Mater. **304**, 109201/1-8 (2020), 10.1016/j.micromeso.2018.11.025

Schmidt, N.Y.; Mondal, R.; Donges, A.; Hintermayr, J.; Luo, C.; Ryll, H.; Radu, F.; Szunyogh, L.; Nowak, U.; Albrecht, M., *L1(0)-ordered (Fe100-xCrx)Pt thin films: Phase formation, morphology, and spin structure*, Phys. Rev. B **102**, 214436/1-10 (2020), 10.1103/physrevb.102.214436

Schmising, C.K.; Willems, F.; Sharma, S.; Yao, K.; Borchert, M.; Hennecke, M.; Schick, D.; Radu, I.; Strüber, C.; Engel, D.W.; Shokeen, V.; Buck, J.; Bagschik, K.; Viefhaus, J.; Hartmann, G.; Manschwetus, B.; Grunewald, S.; Düsterer, S.; Jal, E.; Vodungbo, *Element-Specific Magnetization Dynamics of Complex Magnetic Systems Probed by Ultrafast Magneto-Optical Spectroscopy*, App. Sci. **10**, 15.01.7580 (2020), 10.3390/app10217580

Schmitt, S.; Schwarzbürg, K.; Sarau, G.; Christiansen, S.; Wiesner, S.; Dubourdieu, C., *All-silicon polarized light source based on electrically excited whispering gallery modes in inversely tapered photonic resonators*, APL Mater. **8**, 061110/1-8 (2020), 10.1063/5.0007759

Schmitz, D.; Schmitz-Antoniak, C.; Radu, F.; Ryll, H.; Luo, C.; Bhandary, S.; Biermann, S.; Siemensmeyer, K.; Wende, H.; Ivanov, S.; Eriksson, O., *Soft X-Ray Magnetic Circular Dichroism of Vanadium in the Metal-Insulator Two-Phase Region of Paramagnetic V<sub>2</sub>O<sub>3</sub> Doped with 1.1% Chromium*, Phys. Status Solidi B **257**, 1900456/1-7 (2020), 10.1002/pssb.201900456

Schmitz-Antoniak, C.; Izarova, N.V.; Stuckart, M.; Smekhova, A.; Schmitz, D.; Shams, S.F.; Siemensmeyer, K.; Giesen, M.; Kögerler, P., *Sensing alterations of the local environment of 3d, 4d, and 4f central ions in polyoxopalladates with soft X-ray magnetic dichroisms*, J. Magn. Magn. Mater. **514**, 167063/1-9 (2020), 10.1016/j.jmmm.2020.167063

Schneider, L.; Wehmeier, J.; Wiedwald, U.; Rodewald, J.; Galakhov, V.R.; Udintseva, M.S.; Mesilov, V.; Radu, F.; Luo, C.; Klare, J.P.; Steinhoff, H.J.; Haase, M.; Kuepper, K., *Magnetic and Electronic Properties of Highly Mn-Doped beta-NaGdF<sub>4</sub> and beta-NaEuF<sub>4</sub> Nanoparticles with a Narrow Size Distribution*, *J. Phys. Chem. C* **124**, 18194-18202 (2020), 10.1021/acs.jpcc.0c04639

Schneider, M.; Pfau, B.; Günther, C.M.; Von Korff Schmising, C.; Weder, D.; Geilhufe, J.; Perron, J.; Capotondi, F.; Pedersoli, E.; Manfredda, M.; Hennecke, M.; Vodungbo, B.; Lüning, J.; Eisebitt, S., *Ultrafast Demagnetization Dominates Fluence Dependence of Magnetic Scattering at Co M Edges*, *Phys. Rev. Lett.* **125**, 127201/1-5 (2020), 10.1103/physrevlett.125.127201

Schubnell, J.; Pontner, P.; Wimpory, R.; Farajian, M.; Schulze, V., *The influence of work hardening and residual stresses on the fatigue behavior of high frequency mechanical impact treated surface layers*, *Int. J. of Fatigue* **134**, 105450/1-14 (2020), 10.1016/j.ijfatigue.2019.105450

Schubnell, J.; Carl, E.; Farajian, M.; Gkatzogiannis, S.; Knödel, P.; Ummenhofer, T.; Wimpory, R.C.; Eslami, H., *Residual stress relaxation in HFMI-treated fillet welds after single overload peaks*, *Weld. World* **64**, 1107–1117 (2020), 10.1007/s40194-020-00902-6

Schultz, C.; Fenske, M.; Dagar, J.; Zeiser, A.; Bartelt, A.; Schlatmann, R.; Unger, E.; Stegemann, B., *Ablation mechanisms of nanosecond and picosecond laser scribing for metal halide perovskite module interconnection – An experimental and numerical analysis*, *Sol. Energy* **198**, 410-418 (2020), 10.1016/j.solener.2020.01.074

Schultz, T.; Kneiß, M.; Storm, P.; Splith, D.; Von Wenckstern, H.; Grundmann, M.; Koch, N., *Band Offsets at kappa-([Al,In](x)Ga1-x)(2)O<sub>3</sub>/MgO Interfaces*, *ACS Appl. Mat. Interfaces* **12**, 8879-8885 (2020), 10.1021/acsami.9b21128

Schulz, C.; Lieutenant, K.; Xiao, J.; Hofmann, T.; Wong, D.; Habicht, K., *Characterization of the soft X-ray spectrometer PEAXIS at BESSY II*, *J. Synchrot. Radiat.* **27**, 238-249 (2020), 10.1107/S1600577519014887

Schwarzmüller, S.; Hoelzel, M.; Fritsch, K.; Evenson, Z.; Habicht, K.; Oeckler, O., *Lithium atom mobility in lithium germanium antimony tellurides elucidated by neutron diffraction and quasielastic neutron scattering*, *J. Alloy. Compd.* **827**, 154346/1-8 (2020), 10.1016/j.jallcom.2020.154346

Schweinar, K.; Beeg, S.; Hartwig, C.; Rajamathi, C.R.; Kasian, O.; Piccinin, S.; Prieto, M.J.; Tanase, L.C.; Gottlob, D.M.; Schmidt, T.; Raabe, D.; Schlögl, R.; Gault, G.; Jones, T.E.; Greiner, M.T., *Formation of a 2D Meta-stable Oxide by Differential Oxidation of AgCu Alloys*, *ACS Appl. Mat. Interfaces* **12**, 23595–23605 (2020), 10.1021/acsami.0c03963

Schweinar, K.; Gault, B.; Mouton, I.; Kasian, O., *Lattice Oxygen Exchange in Rutile IrO<sub>2</sub> during the Oxygen Evolution Reaction*, *J. Phys. Chem. Lett.* **11**, 5008-5014 (2020), 10.1021/acs.jpclett.0c01258

Schwob, L.; Dörner, S.; Atak, K.; Schubert, K.; Timm, M.; Bülow, C.; Zamudio-Bayer, V.; von Issendorff, B.; Lau, J.T.; Techert, S.; Bari, S., *Site-Selective Dissociation upon Sulfur L-Edge X-ray Absorption in a Gas-Phase Protonated Peptide*, *J. Phys. Chem. Lett.* **11**, 1215-1221 (2020), 10.1021/acs.jpclett.0c00041

Seabrook, E.; Baez, M.L.; Reuther, J., *Z2 vortices in the ground states of classical Kitaev-Heisenberg models*, *Phys. Rev. B* **101**, 174443/1-13 (2020), 10.1103/physrevb.101.174443

Seidel, K.F.; Lungwitz, D.; Opitz, A.; Krüger, T.; Behrends, J.; Marder, S.R.; Koch, N., *Single-Step Formation of a Low Work Function Cathode Interlayer and n-type Bulk Doping from Semiconducting*

*Polymer/Polyethylenimine Blend Solution*, ACS Appl. Mat. Interfaces **12**, 28801-28807 (2020), 10.1021/acsami.0c05857

Shams, S.F.; Ghazanfari, M.R.; Pettinger, S.; Tavabi, A.H.; Siemensmeyer, K.; Smekhova, A.; Dunin-Borkowski, R.E.; Westmeyer, G.G.; Schmitz-Antoniak, C., *Structural perspective on revealing heat dissipation behavior of CoFe<sub>2</sub>O<sub>4</sub>-Pd nanohybrids: great promise for magnetic fluid hyperthermia*, Phys. Chem. Chem. Phys. **22**, 26728-26741 (2020), 10.1039/d0cp02076a

Shargaieva, O.; Kuske, L.; Rappich, J.; Unger, E.; Nickel, N.H., *Building Blocks of Hybrid Perovskites: A Photoluminescence Study of Lead-Iodide Solution Species*, ChemPhysChem **21**, 2327-2333 (2020), 10.1002/cphc.202000479

Shen, C.; Raza, M.H.; Amsalem, P.; Schultz, T.; Koch, N.; Pinna, N., *Morphology-controlled MoS<sub>2</sub> by low-temperature atomic layer deposition*, Nanoscale **12**, 20404-20412 (2020), 10.1039/d0nr03863f

Shevelev, V.O.; Bokai, K.A.; Makarova, A.A.; Marchenko, D.; Vilkov, O.Y.; Mikhailovskii, V.Y.; Vyalikh, D.V.; Usachov, D.Y., *Highly Ordered and Polycrystalline Graphene on Co(0001) Intercalated by Oxygen*, J. Phys. Chem. C **124**, 17103-17110 (2020), 10.1021/acs.jpcc.0c04830

Shilova, A.; Lebrette, H.; Aurelius, O.; Nan, J.; Welin, M.; Kovacic, R.; Ghosh, S.; Safari, C.; Friel, R.J.; Milas, M.; Matej, Z.; Hogbom, M.; Branden, G.; Kloos, M.; Shoeman, R.L.; Doak, B.; Ursby, T.; Hakansson, M.; Logan, D.T.; Mueller, U., *Current status and future opportunities for serial crystallography at MAX IV Laboratory*, J. Synchrot. Radiat. **27**, 1095-1102 (2020), 10.1107/s1600577520008735

Shokr, M.; Kirchlechner, C.; Malyar, N.; Ariunbold, U.; Hartmann, R.; Strüder, L.; Genzel, C.; Klaus, M.; Pietsch, U., *In situ observations of single grain behaviour during plastic deformation in polycrystalline Ni using energy dispersive Laue diffraction*, Mater. Sci. Eng. A **772**, 138778/1-9 (2020), 10.1016/j.msea.2019.138778

Siebentritt, S.; Avancini, E.; Bär, M.; Bombsch, J.; Bourgeois, E.; Buecheler, S.; Carron, R.; Castro, C.; Duguay, S.; Félix, R.; Handick, E.; Hariskos, D.; Havu, V.; Jackson, P.; Komsa, H.-P.; Kunze, T.; Malitckaya, M.; Menozzi, R.; Nesladek, M.; Nicoara,, *Heavy Alkali Treatment of Cu(In,Ga)Se<sub>2</sub> Solar Cells: Surface versus Bulk Effects*, Adv. Energy Mat. **10**, 1903752/1-15 (2020), 10.1002/aenm.201903752

Siemensmeyer, K.; Peebles, C.A.; Tholen, P.; Schmitt, F.J.; Çosut, B.; Hanna, G.; Yücesan, G., *Phosphonate Metal-Organic Frameworks: A Novel Family of Semiconductors*, Adv. Mat. **32**, 2000474/1-7 (2020), 10.1002/adma.202000474

Sikolenko, V.V.; Efimov, V.V.; Karpinsky, D.V.; Bushinsky, M.V.; Tiutiunnikov, S.I.; Schorr, S., *Neutron Diffraction Study of Magnetic and Structural Transitions in Complex Nb-Doped Cobalt Oxides*, J. Surf. Invest. **14**, S218-S220 (2020), 10.1134/s1027451020070447

Silva, J. S. da; Carvalho, S. G. M.; Silva, R. P. da; Tavares, A. C.; Schade, U.; Puskar, L.; Fonseca, F. C.; Matos, B. R., *SAXS signature of the lamellar ordering of ionic domains of perfluorinated sulfonic-acid ionomers by electric and magnetic field-assisted casting*, Phys. Chem. Chem. Phys. **22**, 13764-13779 (2020), 10.1039/D0CP01864C

Simmendinger, J.; Bihler, M.; Ionescu, A.M.; Weigand, M.; Schütz, G.; Albrecht, J., *Bound and stable vortex–antivortex pairs in high-T<sub>c</sub> superconductors*, New J. Phys. **22**, 123035/1-7 (2020), 10.1088/1367-2630/abd123

- Sinha, R.; Friedrich, D.; Zafeiropoulos, G.; Zoethout, E.; Parente, M.; van de Sanden, M. C. M.; Bieberle-Hutter, A., *Charge carrier dynamics and photocatalytic activity of {111} and {100} faceted Ag<sub>3</sub>PO<sub>4</sub> particles*, J. Chem. Phys. **152**, 244710 (2020), 10.1063/5.0006865
- Siouris, I.M.; Katsavounis, S.; Kontopou, V.; Hoser, A.; Kremer, R.K., *Cluster glass transition in the ternary Dy<sub>2</sub>AgIn<sub>3</sub> system determined by neutron diffraction and Ac-Dc magnetization measurements*, J. Magn. Magn. Mater. **514**, 167123/1-10 (2020), 10.1016/j.jmmm.2020.167123
- Sloboda, T.; Svanström, S.; Johansson, F.O.L.; Andruszkiewicz, A.; Zhang, X.; Giangrisostomi, E.; Ovsyannikov, R.; Föhlisch, A.; Svensson, S.; Martensson, N.; Johansson, E.M.J.; Lindblad, A.; Rensmo, H.; Cappel, U.B., *A method for studying pico to microsecond time-resolved core-level spectroscopy used to investigate electron dynamics in quantum dots*, Sci. Rep. **10**, 22438/1-14 (2020), 10.1038/s41598-020-79792-z
- Sluchanko, N.; Khoroshilov, A.; Krasnorussky, V.; Krasikov, K.; Bogach, A.; Demishev, S.; Shitsevalova, N.; Filipov, V.; Gabáni, S.; Siemensmeyer, K.; Gavrilkin, S.; Flachbart, K., *Maltese Cross Anisotropy in Antiferromagnetic State of Metallic Ho<sub>0.5</sub>Lu<sub>0.5</sub>B<sub>12</sub> with Dynamic Charge Stripes*, Acta Phys. Pol. A **137**, 756-759 (2020), 10.12693/aphyspola.137.756
- Smaali, A.; Abdelli-Messaci, S.; Lafane, S.; Mavlonov, A.; Lenzner, J.; Richter, S.; Kechouane, M.; Nemraoui, O.; Ellmer, K., *Pulsed laser deposited transparent and conductive V-doped ZnO thin films*, Thin Solid Films **700**, 137892/1-8 (2020), 10.1016/j.tsf.2020.137892
- Smekhova, A.; Schmitz, D.; Izarova, N.V.; Stuckart, M.; Shams, S.F.; Siemensmeyer, K.; de Groot, F.M.F.; Kögerler, P.; Schmitz-Antoniak, C., *Intramolecular crossover from unconventional diamagnetism to paramagnetism of palladium ions probed by soft X-ray magnetic circular dichroism*, Comm. Chem. **3**, 96/1-10 (2020), 10.1038/s42004-020-0327-9
- Smith, J.A.; Game, O.S.; Bishop, J.E.; Spooner, E.L.K.; Kilbride, R.C.; Greenland, C.; Jayaprakash, R.; Alanazi, T.I.; Cassella, E.J.; Tejada, A.; Chistiakova, G.; Wong-Stringer, M.; Routledge, T.J.; Parnell, A.J.; Hammond, D.B.; Lidzey, D.G., *Rapid Scalable Processing of Tin Oxide Transport Layers for Perovskite Solar Cells*, ACS Appl. En. Mat. **3**, 5552-5562 (2020), 10.1021/acsadm.0c00525
- Soderstrom, J.; Stefanuk, R.; Hennies, F.; Schmitt, T.; Strocov, V.N.; Andersson, J.; Kennedy, B.; Schlappa, J.; Foehlisch, A.; Pietzsch, A.; Rubensson, J.-E., *Resonant inelastic x-ray scattering on CO<sub>2</sub>: Parity conservation in inversion-symmetric polyatomics*, Phys. Rev. A **101**, 062501/1-9 (2020), 10.1103/physreva.101.062501
- Soh, J.R.; Schierle, E.; Yan, D.Y.; Su, H.; Prabhakaran, D.; Weschke, E.; Guo, Y.F.; Shi, Y.G.; Boothroyd, A.T., *Resonant x-ray scattering study of diffuse magnetic scattering from the topological semimetals EuCd<sub>2</sub>As<sub>2</sub> and EuCd<sub>2</sub>Sb<sub>2</sub>*, Phys. Rev. B **102**, (2020), 10.1103/physrevb.102.014408
- Soldera, M.; Wang, Q.; Soldera, F.; Lang, V.; Abate, A.; Lasagni, A.F., *Toward High-Throughput Texturing of Polymer Foils for Enhanced Light Trapping in Flexible Perovskite Solar Cells Using Roll-to-Roll Hot Embossing*, Adv. Eng. Mater. **22**, 1901217/1-9 (2020), 10.1002/adem.201901217
- Song, A.; Levine, I.; van de Krol, R.; Dittrich, T.; Berglund, S.P., *Revealing the relationship between photoelectrochemical performance and interface hole trapping in CuBi<sub>2</sub>O<sub>4</sub> heterojunction photoelectrodes*, Chem. Sci. **11**, 11195-11204 (2020), 10.1039/d0sc03030a
- Song, A.; Berglund, S.P.; Chemseddine, A.; Friedrich, D.; Abdi, F.F.; van de Krol, R., *Elucidating the optical, electronic, and photoelectrochemical properties of p-type copper vanadate (p-Cu<sub>5</sub>V<sub>2</sub>O<sub>10</sub>) photocathodes*, J. Mater. Chem. A **8**, 12538-12547 (2020), 10.1039/d0ta04250a

- Song, A.; Bogdanoff, P.; Esau, A.; Ahmet, I.Y.; Levine, I.; Dittrich, T.; Unold, T.; van de Krol, R.; Berglund, S.P., *Assessment of a W:BiVO<sub>4</sub>-CuBi<sub>2</sub>O<sub>4</sub> Tandem Photoelectrochemical Cell for Overall Solar Water Splitting*, ACS Appl. Mat. Interfaces **12**, 13959-13970 (2020), 10.1021/acsami.0c00696
- Song, A.; Chemseddine, A.; Ahmet, I.Y.; Bogdanoff, P.; Friedrich, D.; Abdi, F.F.; Berglund, S.P.; van de Krol, R., *Evaluation of Copper Vanadate (*beta*-Cu<sub>2</sub>V<sub>2</sub>O<sub>7</sub>) as a Photoanode Material for Photoelectrochemical Water Oxidation*, Chem. Mater. **32**, 2408-2419 (2020), 10.1021/acs.chemmater.9b04909
- Song, J.; Ning, D.; Bouwmeester, H.J.M., *Influence of alkaline-earth metal substitution on structure, electrical conductivity and oxygen transport properties of perovskite-type oxides La(0.6)A(0.4)FeO(3-delta) (A = Ca, Sr and Ba)*, Phys. Chem. Chem. Phys. **22**, 11984-11995 (2020), 10.1039/d0cp00247j
- Song, J.; Ning, D.; Boukamp, B.; Bassat, J.M.; Bouwmeester, H.J.M., *Structure, electrical conductivity and oxygen transport properties of Ruddlesden-Popper phases Ln(n+1)Ni(n)O(3n+1) (Ln = La, Pr and Nd; n=1, 2 and 3)*, J. Mater. Chem. A **8**, 22206-22221 (2020), 10.1039/d0ta06731h
- Sonnenschein, J.; Chauhan, A.; Iqbal, Y.; Reuther, J., *Projective symmetry group classifications of quantum spin liquids on the simple cubic, body centered cubic, and face centered cubic lattices*, Phys. Rev. B **102**, 125140/1-22 (2020), 10.1103/physrevb.102.125140
- Soria, S.R.; Li, X.H.; Schulz, M.; Boin, M.; Hofmann, M., *Determination of martensite content and mapping phase distribution on Austempered Ductile Iron using energy-selective neutron imaging*, Mat. Character. **166**, 110453/1-7 (2020), 10.1016/j.matchar.2020.110453
- Soundharajan, V.; Alfaruqi, M.H.; Lee, S.; Sambandam, B.; Kim, S.; Kim, S.; Mathew, V.; Pham, D.T.; Hwang, J.-Y.; Sun, Y.-K.; Kim, J., *Multidimensional Na<sub>4</sub>VMn<sub>0.9</sub>Cu<sub>0.1</sub>(PO<sub>4</sub>)<sub>3</sub>/C cotton-candy cathode materials for high energy Na-ion batteries*, J. Mater. Chem. A **8**, 12055-12068 (2020), 10.1039/d0ta03767b
- Speck, F.D.; Ali, F.S.M.; Paul, M.T.Y.; Singh, R.K.; Böhm, T.; Hofer, A.; Kasian, O.; Thiele, S.; Bachmann, J.; Dekel, D.R.; Kallio, T.; Cherevko, S., *Improved Hydrogen Oxidation Reaction Activity and Stability of Buried Metal-Oxide Electrocatalyst Interfaces*, Chem. Mater. **32**, 7716-7724 (2020), 10.1021/acs.chemmater.0c02048
- Stellmach, D.; Xi, F.; Bloeck, U.; Bogdanoff, P.; Fiechter, S., *Catalytic Behavior of Molybdenum Sulfide for the Hydrogen Evolution Reaction as a Function of Crystallinity and Particle Size Using Carbon Multiwall Nanotubes as Substrates*, Z. Phys. Chem. **234**, 1021-1043 (2020), 10.1515/zpch-2019-1490
- Stocker, M.; Krahl, R.; Darroch, L.; Habermann, T.; Devaraju, A.; Schwardmann, U.; D'Onofrio, C.; Häggström, I., *Persistent Identification of Instruments*, Data Sci. J. **19**, 18.01.2012 (2020), 10.5334/dsj-2020-018
- Stockert, O.; Hoffmann, J.-U.; Mühlbauer, M.; Senyshyn, A.; Koza, M.M.; Tsirlin, A.A.; Wolf, F.M.; Bachus, S.; Gegenwart, P.; Movshovich, R.; Bobev, S.; Fritsch, V., *Magnetic frustration in a metallic fcc lattice*, Phys. Rev. Res. **2**, 013183/1-12 (2020), 10.1103/PhysRevResearch.2.013183
- Stolterfoht, M.; Grischek, M.; Caprioglio, P.; Wolff, C.M.; Gutierrez-Partida, E.; Peña-Camargo, F.; Rothhardt, D.; Zhang, S.; Raoufi, M.; Wolansky, J.; Abdi-Jalebi, M.; Stranks, S.D.; Albrecht, S.; Kirchartz, T.; Neher, D., *How To Quantify the Efficiency Potential of Neat Perovskite Films Perovskite Semiconductors with an Implied Efficiency Exceeding 28%*, Adv. Mat. **32**, 2000080/1-10 (2020), 10.1002/adma.202000080

Stüsser, N.; Reehuis, M.; Tovar, M.; Klemke, B.; Hoser, A.; Hoffmann, J.U., *Spin reorientation by Ni doping in Cu<sub>1-x</sub>Ni<sub>x</sub>Cr<sub>2</sub>O<sub>4</sub> spinels with x = 0 and 0.1, and evidence for canted magnetic Cr order above the onset of a ferromagnetic Cu*, *J. Magn. Magn. Mater.* **506**, 166683/1-7 (2020), 10.1016/j.jmmm.2020.166683

Suchan, K.; Just, J.; Becker, P.; Unger, E.; Unold, T., *Optical in situ monitoring during the synthesis of halide perovskite solar cells reveals formation kinetics and evolution of optoelectronic properties*, *J. Mater. Chem. A* **8**, 10439-10449 (2020), 10.1039/D0TA01237H

Suchan, K.; Merdasa, A.; Rehermann, C.; Unger, E.L.; Scheblykin, I.G., *Complex evolution of photoluminescence during phase segregation of MAPb(I<sub>1-x</sub>B<sub>x</sub>)<sub>3</sub> mixed halide perovskite*, *J. of Lumin.* **221**, 117073/1-7 (2020), 10.1016/j.jlumin.2020.117073

Sun, F.; Zhou, D.; He, X.; Osenberg, M.; Dong, K.; Chen, L.; Mei, S.; Hilger, A.; Markötter, H.; Lu, Y.; Dong, S.; Marathe, S.; Rau, C.; Hou, X.; Li, J.; Stan, M.; Winter, M.; Dominko, R.; Manke, I., *Morphological Reversibility of Modified Li-Based Anodes for Next-Generation Batteries*, *ACS En. Lett.* **5**, 152-161 (2020), 10.1021/acsenergylett.9b02424

Sun, F.; Yang, C.; Manke, I.; Chen, L.; Dong, S., *Li-based anode: Is dendrite-free sufficient?*, *Mater. Today* **38**, 07.Sep (2020), 10.1016/j.mattod.2020.04.011

Sutter, J.; Eisenhauer, D.; Wagner, P.; Morales Vilches, A.B.; Rech, B.; Stannowski, B.; Becker, C., *Tailored Nanostructures for Light Management in Silicon Heterojunction Solar Cells*, *Sol. RRL* **4**, 2000484/1-8 (2020), 10.1002/solr.202000484

Svechnikov, M.; Chkhalo, N.; Lopatin, A.; Pleshkov, R.; Polkovnikov, V.; Salashchenko, N.; Schäfers, F.; Sertsu, M.G.; Sokolov, A.; Tsybin, N., *Optical constants of sputtered beryllium thin films determined from photoabsorption measurements in the spectral range 20.4–250 eV*, *J. Synchrot. Radiat.* **27**, 75-82 (2020), 10.1107/S1600577519014188

Sweke, R.; Wilde, F.; Meyer, J.J.; Schuld, M.; Fährmann, P.K.; Meynard-Piganeau, B.; Eisert, J., *Stochastic gradient descent for hybrid quantum-classical optimization*, *Quant.* **4**, 314/1-29 (2020), 10.22331/q-2020-08-31-314

Szekeres, G.P.; Werner, S.; Guttmann, P.; Spedalieri, C.; Drescher, D.; Montes-Bayon, M.; Bettmer, J.; Kneipp, J., *Relating the composition and interface interactions in the hard corona of gold nanoparticles to the induced response mechanisms in living cells*, *Nanoscale* **12**, 17450-17461 (2020), 10.1039/d0nr03581e

Szwedowski-Rammert, V.; Hönicke, P.; Wu, M.; Waldschläger, U.; Gross, A.; Baumann, J.; Goetzke, G.; Delmotte, F.; Meltschakov, E.; Kanngießer, B.; Jonnard, P.; Mantouvalou, I., *Laboratory grazing-incidence X-ray fluorescence spectroscopy as an analytical tool for the investigation of sub-nanometer CrSc multilayer water window optics*, *Spectrochim. Acta B* **174**, 105995/1-6 (2020), 10.1016/j.sab.2020.105995

Tampieri, F.; Tommasini, M.; Agnoli, S.; Favaro, M.; Barbon, A., *N-Doped Graphene Oxide Nanoparticles Studied by EPR*, *Appl. Magn. Res.* **51**, 1481-1495 (2020), 10.1007/s00723-020-01276-0

Tarasov, A.V.; Klyushin, A.Y.; Friedrich, M.; Girgsdies, F.; Schlögl, R.; Frei, E., *Oxygen diffusion in Cu-based catalysts: A probe for metal support interactions*, *Appl. Catal. A* **594**, 117460/1-10 (2020), 10.1016/j.apcata.2020.117460

Taylor, J.M.; Markou, A.; Lesne, E.; Sivakumar, P.K.; Luo, C.; Radu, F.; Werner, P.; Felser, C.; Parkin, S.S.P., *Anomalous and topological Hall effects in epitaxial thin films of the noncollinear antiferromagnet Mn<sub>3</sub>Sn*, Phys. Rev. B **101**, 094404/1-7 (2020), 10.1103/physrevb.101.094404

Tcakaev, A.; Zabolotnyy, V.B.; Fornari, C.I.; Rüßmann, P.; Peixoto, T.R.F.; Stier, F.; Dettbarn, M.; Kagerer, P.; Weschke, E.; Schierle, E.; Bencok, P.; Rappl, P.H.O.; Abramof, E.; Bentmann, H.; Goering, E.; Reinert, F.; Hinkov, V., *Incipient antiferromagnetism in the Eu-doped topological insulator Bi<sub>2</sub>Te<sub>3</sub>*, Phys. Rev. B **102**, 184401/1-13 (2020), 10.1103/physrevb.102.184401

Teppor, P.; Jäger, R.; Häck, E.; Sepp, S.; Kook, M.; Volobujeva, O.; Paiste, P.; Kochovski, Z.; Tallo, I.; Lust, E., *Exploring Different Synthesis Parameters for the Preparation of Metal-Nitrogen-Carbon Type Oxygen Reduction Catalysts*, J. Electrochem. Soc. **167**, 054513/1-11 (2020), 10.1149/1945-7111/ab7093

Teppor, P.; Jäger, R.; Paalo, M.; Palm, R.; Volobujeva, O.; Häck, E.; Kochovski, Z.; Romann, T.; Härmas, R.; Aruväli, J.; Kikas, A.; Lust, E., *Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions*, Electrochim. Commun. **113**, 106700/1-7 (2020), 10.1016/j.elecom.2020.106700

Terhal, B.M.; Conrad, J.; Vuillot, C., *Towards scalable bosonic quantum error correction*, Quant. Sci. Techn. **5**, 043001/1-37 (2020), 10.1088/2058-9565/ab98a5

Tichter, T.; Andrae, D.; Schneider, J.; Gebhard, M.; Hilger, A.; Manke, I.; Roth, C., *Real-space simulation of cyclic voltammetry in carbon felt electrodes by combining micro X-ray CT data, digital simulation and convolutive modeling*, Electrochim. Acta **353**, 136487 (2020), 10.1016/j.electacta.2020.136487

Tillmann, P.; Jäger, K.; Becker, C., *Minimising levelised cost of electricity of bifacial solar panel arrays using Bayesian optimisation*, Sustain. Energ. Fuels **4**, 254-264 (2020), 10.1039/C9SE00750D

Tillmann, W.; Grisales, D.; Marin Tovar, C.; Contreras, E.; Apel, D.; Nienhaus, A.; Stangier, D.; Lopes Dias, N.F., *Tribological behaviour of low carbon-containing TiAlCN coatings deposited by hybrid (DCMS/HIPIMS) technique*, Tribol. Intern. **151**, 106528/1-11 (2020), 10.1016/j.triboint.2020.106528

Timpel, M.; Nardi, M.V.; Wegner, B.; Ligorio, G.; Pasquali, L.; Hildebrandt, J.; Pätzelt, M.; Hecht, S.; Ohta, H.; Koch, N., *Oligothiophene-Based Phosphonates for Surface Modification of Ultraflat Transparent Conductive Oxides*, Adv. Mater. Interfaces **7**, 1902114/1-8 (2020), 10.1002/admi.201902114

Többens, D.M.; Gurieva, G.; Niedenzu, S.; Schuck, G.; Zizak, I.; Schorr, S., *Cation distribution in Cu<sub>2</sub>ZnSnSe<sub>4</sub>, Cu<sub>2</sub>FeSnS<sub>4</sub> and Cu<sub>2</sub>ZnSiSe<sub>4</sub> by multiple-edge anomalous diffraction*, Acta Crystallogr. B **76**, 1027-1035 (2020), 10.1107/s2052520620013384

Tockhorn, P.; Wagner, P.; Kegelmann, L.; Stang, J.-C.; Mews, M.; Albrecht, S.; Korte, L., *Three-Terminal Perovskite/Silicon Tandem Solar Cells with Top and Interdigitated Rear Contacts*, ACS Appl. En. Mat. **3**, 1381-1392 (2020), 10.1021/acsaem.9b01800

Tockhorn, P.; Sutter, J.; Colom, R.; Kegelmann, L.; Al-Ashouri, A.; Roß, M.; Jäger, K.; Unold, T.; Burger, S.; Albrecht, S.; Becker, C., *Improved Quantum Efficiency by Advanced Light Management in Nanotextured Solution-Processed Perovskite Solar Cells*, ACS Phot. **7**, 2589–2600 (2020), 10.1021/acsphtronics.0c00935

Tolod, K.R.; Saboo, T.; Hernández, S.; Guzmán, H.; Castellino, M.; Irani, R.; Bogdanoff, P.; Abdi, F.F.; Quadrelli, E.A.; Russo, N., *Insights on the surface chemistry of BiVO<sub>4</sub> photoelectrodes and the role of*

Al overlayers on its water oxidation activity, Appl. Catal. A **605**, 117796/1-9 (2020), 10.1016/j.apcata.2020.117796

Topic, M.; Lipovsek, B.; Glazar, B.; Brecl, K.; Albrecht, S.; Jost, M., *From the lab to roof top applications: Outdoor performance, temperature behavior and energy yield of perovskite solar cells*, , 0599-0602 (2020), 10.1109/pvsc45281.2020.9300419

Traeger, N.; Gross, F.; Foerster, J.; Baumgaertl, K.; Stoll, H.; Weigand, M.; Schuetz, G.; Grundler, D.; Graefe, J., *Single shot acquisition of spatially resolved spin wave dispersion relations using X-ray microscopy*, Sci. Rep. **10**, 18146/1-6 (2020), 10.1038/s41598-020-74785-4

Traeger, N.; Gruszecki, P.; Lisiecki, F.; Gross, F.; Foerster, J.; Weigand, M.; Glowinski, H.; Kuswik, P.; Dubowik, J.; Krawczyk, M.; Graefe, J., *Demonstration of k-vector selective microscopy for nanoscale mapping of higher order spin wave modes*, Nanoscale **12**, 17238-17244 (2020), 10.1039/d0nr02132f

Träger, N.; Gruszecki, P.; Lisiecki, F.; Förster, J.; Weigand, M.; Wintz, S.; Stoll, H.; Glowinski, H.; Piotr, K.; Krawczyk, M.; Gräfe, J., *Direct imaging of high-frequency multimode spin wave propagation in cobalt-iron waveguides using X-ray microscopy beyond 10 GHz*, Phys. Status Solidi RRL **14**, 2000373/1-5 (2020), 10.1002/pssr.202000373

Triandafyllidis, D.P.; Parthenios, N.; Spiliopoulou, M.; Valmas, A.; Kosinas, C.; Gozzo, F.; Reinle-Schmitt, M.; Beckers, D.; Degen, T.; Pop, M.; Fitch, A.N.; Wollenhaupt, J.; Weiss, M.S.; Karavassili, F.; Margiolaki, I., *Insulin polymorphism induced by two polyphenols: New crystal forms and advances in macromolecular powder diffraction*, Acta Crystallogr. D **76**, 1065-1079 (2020), 10.1107/s205979832001195x

Turishchev, S.Yu.; Marchenko, D.; Sivakov, V.; Belikov, E.A.; Chuvenkova, O.A.; Parinova, E.V.; Koyuda, D.A.; Chumakov, R.G.; Lebedev, A.M.; Kulikova, T.V.; Berezhnoy, A.A.; Valiakhmedova, I.V.; Praslova, N.V.; Preobrazhenskaya, E.V.; Antipov, S.S., *On the possibility of PhotoEmission Electron Microscopy for E. coli advanced studies*, Res. Phys. **16**, 102821/1-3 (2020), 10.1016/j.rinp.2019.102821

Tutueanu, A.E.; Sales, M.; Eliasen, K.L.; Lacatusu, M.-E.; Grivel, J.-C.; Kardjilov, N.; Manke, I.; Krzyzagorski, M.; Sassa, Y.; Andersson, M.S.; Schmidt, S.; Lefmann, K., *Non-destructive characterisation of dopant spatial distribution in cupratesuperconductors*, Phy. C **575**, 1353691/1-6 (2020), 10.1016/j.physc.2020.1353691

Unger, E.; Paramasivam, G.; Abate, A., *Perovskite solar cell performance assessment*, J Phys Energy **2**, 044002/1-8 (2020), 10.1088/2515-7655/abaec8

Ursby, T.; Ahnberg, K.; Appio, R.; Aurelius, O.; Barczyk, A.; Bartalesi, A.; Bjelcic, M.; Bolmsten, F.; Cerenius, Y.; Doak, R. B.; Eguiraun, M.; Eriksson, T.; Friel, R.J.; Gorgisyan, I.; Gross, A.; Haghightat, V.; Hennies, F.; Jagudin, E.; Jensen, B.N.; Je, *BioMAX - the first macromolecular crystallography beamline at MAX IV Laboratory*, J. Synchrot. Radiat. **27**, 1415-1429 (2020), 10.1107/s1600577520008723

Usachov, D.Yu.; Nechaev, I.A.; Poelchen, G.; Guettler, M.; ICrasovskii, E.E.; Schulz, S.; Generalov, A.; Kliemt, K.; Kraiker, A.; Krellner, C.; Kummer, K.; Danzenbaecher, S.; Laubschat, C.; Weber, A.P.; Sanchez-Barriga, J.; Chulkov, E.; Santander-Syro, A., *Cubic Rashba Effect in the Surface Spin Structure of Rare-Earth Ternary Materials*, Phys. Rev. Lett. **124**, 237202/1-6 (2020), 10.1103/physrevlett.124.237202

Usenko, S.; Schwickert, D.; Przystawik, A.; Baev, K.; Baev, I.; Braune, M.; Bocklage, L.; Czwalinna, M.K.; Deinert, S.; Düsterer, S.; Hans, A.; Hartmann, G.; Haunhorst, C.; Kuhlmann, M.; Palutke, S.; Röhlsberger, R.; Rönsch-Schulenburg, J.; Schmidt, P.; S, *Auger electron wave packet interferometry on*

*extreme timescales with coherent soft x-rays*, J. Phys. B **53**, 244008/1-7 (2020), 10.1088/1361-6455/abc661

Vainer, Y.A.; Garakhin, S.A.; Zuev, S.Y.; Nechay, A.N.; Pleshkov, R.S.; Polkovnikov, V.N.; Salashchenko, N.N.; Svechnikov, M.V.; Sertsu, M.G.; Smertin, R.M.; Sokolov, A.; Chkhalo, N.I.; Schäfers, F., *Beryllium-Based Multilayer Mirrors for the Soft X-Ray and Extreme Ultraviolet Wavelength Ranges*, J. Surf. Invest. **14**, 124-134 (2020), 10.1134/s10274510200020160

Valero, S.; Cabrera-Espinoza, A.; Collavini, S.; Pascual, J.; Marinova, N.; Kosta, I.; Delgado, J.L., *Naphthalene Diimide-Based Molecules for Efficient and Stable Perovskite Solar Cells*, Eur. J. Org. Chem. **2020**, 5329-5339 (2020), 10.1002/ejoc.202000287

Varykhalov, A.; Freyse, F.; Aguilera, I.; Battiato, M.; Krivenkov, M.; Marchenko, D.; Bihlmayer, G.; Blügel, S.; Rader, O.; Sánchez-Barriga, J., *Effective mass enhancement and ultrafast electron dynamics of Au(111) surface state coupled to a quantum well*, Phys. Rev. Res. **2**, 013343 /1-9 (2020), 10.1103/PhysRevResearch.2.013343

Vester, K.; Santos, K.F.; Kuropka, B.; Weise, C.; Wahl, M.C., *The inactive C-terminal cassette of the dual-cassette RNA helicase BRR2 both stimulates and inhibits the activity of the N-terminal helicase unit*, J. Biol. Chem. **295**, 2097-2112 (2020), 10.1074/jbc.ra119.010964

Viciano-Chumillas, M.; Blondin, G.; Clémancey, M.; Krzystek, J.; Ozerov, M.; Armentano, D.; Schnegg, A.; Lohmiller, T.; Telser, J.; Lloret, F.; Cano, J., *Single-Ion Magnetic Behaviour in an Iron(III) Porphyrin Complex: A Dichotomy Between High Spin and 5/2-3/2 Spin Admixture*, Chem. - a Eur. J. **26**, 14242-14251 (2020), 10.1002/chem.202003052

Vidas, L.; Schick, D.; Martínez, E.; Perez-Salinas, D.; Ramos-Álvarez, A.; Cichy, S.; Batlle-Porro, S.; Johnson, A.; Hallman, K.; Haglund, R.; Wall, S., *Does VO<sub>2</sub> Host a Transient Monoclinic Metallic Phase?*, Phys. Rev. X **10**, 031047/1-12 (2020), 10.1103/PhysRevX.10.031047

Vilaõ, R.C.; Alberto, H.V.; Vieira, R.B.L.; Gil, J.M.; Weidinger, A., *Reply to Comment on 'Role of the transition state in muon implantation' and 'Thermal spike in muon implantation'*, Phys. Rev. B **101**, 077202/1-3 (2020), 10.1103/physrevb.101.077202

Villanueva-Tovar, A.; Kodalle, T.; Kaufmann, C.A.; Schlatmann, R.; Klenk, R., *Limitation of Current Transport across the Heterojunction in Cu(In,Ga)Se<sub>2</sub> Solar Cells Prepared with Alkali Fluoride Postdeposition Treatment*, Sol. RRL **4**, 1900560/1-7 (2020), 10.1002/solr.201900560

von Oertzen, W.; Nasirov, A.K., *A new radioactive decay mode, true ternary fission, the decay of heavy nuclei into three comparable fragments*, EPJ A **56**, 299/1-24 (2020), 10.1140/epja/s10050-020-00286-7

Von Reppert, A.; Willig, L.; Pudell, J.E.; Rössle, M.; Leitenberger, W.; Herzog, M.; Ganss, F.; Hellwig, O.; Bargheer, M., *Erratum: Ultrafast laser generated strain in granular and continuous FePt thin films*, Appl. Phys. Lett. **117**, 049902/1 (2020), 10.1063/5.0022340

Von Reppert, A.; Mattern, M.; Pudell, J.E.; Zeuschner, S.P.; Dumesnil, K.; Bargheer, M., *Unconventional picosecond strain pulses resulting from the saturation of magnetic stress within a photoexcited rare earth layer*, Str. Dyn. **7**, 024303/1-12 (2020), 10.1063/1.5145315

Von Reppert, A.; Willig, L.; Pudell, J.E.; Zeuschner, S.P.; Sellge, G.; Ganss, F.; Hellwig, O.; Arregi, J.A.; Uhlíř, V.; Crut, A.; Bargheer, M., *Spin stress contribution to the lattice dynamics of FePt*, Sci. Adv. **6**, eaba1142/1-8 (2020), 10.1126/sciadv.aba1142

- Vozda, V.; Burian, T.; Hajkova, V.; Juha, L.; Enkisch, H.; Faatz, B.; Hermann, M.; Jacyna, I.; Jurek, M.; Keitel, B.; Klinger, D.; Loch, R.; Louis, E.; Makhotkin, I.A.; Plönjes, E.; Saksl, K.; Siewert, F.; Sobierajski, R.; Strobel, S.; Tiedtke, K.; Toleik, *Characterization of megahertz X-ray laser beams by multishot desorption imprints in PMMA*, Opt. Express **28**, 25664-25681 (2020), 10.1364/OE.396755
- Vysochanskaya, O.N.; Brotsman, V.A.; Goryunkov, A.A.; Feiler, C.G.; Troyanov, S.I., *Fused-Pentagon Isomers of C-60 Fullerene Isolated as Chloro and Trifluoromethyl Derivatives*, Chem. - a Eur. J. **26**, 2338-2341 (2020), 10.1002/chem.201905229
- Wagner, P.; Tockhorn, P.; Kegelmann, L.; Albrecht, S.; Korte, L., *Three-Terminal Perovskite/Silicon Tandem Solar Cells with Top and Interdigitated Back-Contacts*, , 457-459 (2020), 10.1109/pvsc45281.2020.9300785
- Walkowiak, J.; Lu, Y.; Gradzielski, M.; Zauscher, S.; Ballauff, M., *Thermodynamic Analysis of the Uptake of a Protein in a Spherical Polyelectrolyte Brush*, Macromol. Rapid Comm. **41**, 1900421/1-8 (2020), 10.1002/marc.201900421
- Wang, H.; Shao, Y.; Mei, S.; Lu, Y.; Zhang, M.; Sun, J.K.; Matyjaszewski, K.; Antonietti, M.; Yuan, J., *Polymer-Derived Heteroatom-Doped Porous Carbon Materials*, ACS Chem. Rev. **120**, 9363-9419 (2020), 10.1021/acs.chemrev.0c00080
- Wang, J.; Zhou, D.; He, X.; Zhang, L.; Cao, X.; Ning, D.; Yan, B.; Qi, X.; Li, J.; Murzin, V.; Paillard, E.; Liu, X.; Schumacher, G.; Winter, M.; Li, J., *Insights into P2-Type Layered Positive Electrodes for Sodium Batteries: From Long: From Short-Range Order*, ACS Appl. Mat. Interfaces **12**, 5017-5024 (2020), 10.1021/acsami.9b18109
- Wang, J.; Wilks, R.G.; Félix, R.; Liao, X.X.; Grigoriev, A.; Bär, M., *The Pb(Zr0.2,Ti0.8)O3/ZnO/GaN Ferroelectric–Semiconductor Heterostructure: Insight into the Interfacial Energy Level Alignments*, Adv. Mater. Interfaces **7**, 2000201/1-5 (2020), 10.1002/admi.202000201
- Wang, L.; Yu, B.; Jing, R.; Luo, X.; Zeng, J.; Li, J.; Bialo, I.; Bluschke, M.; Tang, Y.; Freyermuth, J.; Yu, G.; Sutarto, R.; He, F.; Weschke, E.; Tabis, W.; Greven, M.; Li, Y., *Doping-dependent phonon anomaly and charge-order phenomena in the HgBa<sub>2</sub>CuO<sub>4+delta</sub> and HgBa<sub>2</sub>CaCu<sub>2</sub>O<sub>6+delta</sub> superconductors*, Phys. Rev. B **101**, 220509/1-6 (2020), 10.1103/physrevb.101.220509
- Wang, N.; Chen, X.; Maire, E.; Kamm, P.H.; Cheng, Y.; Li, Y.; Garcia-Moreno, F., *Study on Cell Deformation of Low Porosity Aluminum Foams under Quasi-Static Compression by X-Ray Tomography*, Adv. Eng. Mater. **22**, 2000264/1-9 (2020), 10.1002/adem.202000264
- Wang, Q.; Zu, F.; Caprioglio, P.; Wolff, C.M.; Stolterfoht, M.; Li, M.; Turren-Cruz, S.H.; Koch, N.; Neher, D.; Abate, A., *Large Conduction Band Energy Offset Is Critical for High Fill Factors in Inorganic Perovskite Solar Cells*, ACS En. Lett. **5**, 2343-2348 (2020), 10.1021/acsenergylett.0c00980
- Wang, Q.; Smith, J.A.; Skroblin, D.; Steele, J.A.; Wolff, C.M.; Caprioglio, P.; Stolterfoht, M.; Köbler, H.; Li, M.; Turren-Cruz, S.H.; Gollwitzer, C.; Neher, D.; Abate, A., *Managing Phase Purities and Crystal Orientation for High-Performance and Photostable Cesium Lead Halide Perovskite Solar Cells*, Sol. RRL **4**, 2000213/1-9 (2020), 10.1002/solr.202000213
- Wang, R.; Wang, Y.; Wu, C.; Zhai, T.; Yang, J.; Sun, B.; Duhm, S.; Koch, N., *Direct Observation of Conductive Polymer Induced Inversion Layer in n-Si and Correlation to Solar Cell Performance*, Adv. Funct. Mater. **30**, 1903440/1-10 (2020), 10.1002/adfm.201903440
- Wang, X.; Xiao, C.; Zheng, P.; Zhao, Z.; Alabsi, M.H.; Shi, Y.; Gao, D.; Duan, A.; Huang, K.W.; Xu, C., *Dendritic micro-mesoporous composites with center-radial pores assembled by TS-1 nanocrystals to*

*enhance hydrodesulfurization activity of dibenzothiophene and 4,6-dimethylbibenzothiophene*, J. Catal. **384**, 136-146 (2020), 10.1016/j.jcat.2020.02.013

Wansleben, M.; Vinson, J.; Wählisch, A.; Bzheumikhova, K.; Hönicke, P.; Beckhoff, B.; Kayser, Y., *Speciation of iron sulfide compounds by means of X-ray emission spectroscopy using a compact full-cylinder von Hamos spectrometer*, J. Anal. At. Spectr. **35**, 2679-2685 (2020), 10.1039/D0JA00244E

Wator, E.; Rutkiewicz, M.; Weiss, M.S.; Wilk, P., *Co-expression with chaperones can affect protein 3D structure as exemplified by loss-of-function variants of human prolidase*, FEBS Lett. **594**, 3045-3056 (2020), 10.1002/1873-3468.13877

Weber, F.; Tremblay, J.C.; Bande, A., *Proton-Coupled Electron-Transfer Dynamics of Water Splitting at N-doped Graphene Oxides*, J. Phys. Chem. C **124**, 26688–26698 (2020), 10.1021/acs.jpcc.0c08937

Weder, D.; von Korff Schmising, C.; Guenther, C. M.; Schneider, M.; Engel, D.; Hessing, P.; Strüber, C.; Weigand, M.; Vodungbo, B.; Jal, E.; Liu, X.; Merhe, A.; Pedersoli, E.; Capotondi, F.; Luening, J.; Pfau, B.; Eisebitt, S., *Transient magnetic gratings on the nanometer scale*, Str. Dyn. **7**, 054501/1-12 (2020), 10.1063/4.0000017

Wegner, B.; Lungwitz, D.; Mansour, A.E.; Tait, C.E.; Tanaka, N.; Zhai, T.; Duhm, S.; Forster, M.; Behrends, J.; Shoji, Y.; Opitz, A.; Scherf, U.; List-Kratochvil, E.J.W.; Fukushima, T.; Koch, N., *An Organic Borate Salt with Superior p-Doping Capability for Organic Semiconductors*, Adv. Sc. **7**, 2001322/1-15 (2020), 10.1002/advs.202001322

Wei, Y.; Ma, X.; Feng, Z.; Adroja, D.; Hillier, A.; Biswas, P.; Senyshyn, A.; Hoser, A.; Mei, J.W.; Meng, Z.Y.; Luo, H.; Shi, Y.; Li, S., *Magnetic Phase Diagram of Cu<sub>4-x</sub>Znx(OH)6FBr Studied by Neutron-Diffraction and musR Techniques*, Chin. Phys. Lett. **37**, 107503/1-5 (2020), 10.1088/0256-307x/37/10/107503

Weinberger, N.; Stock, D.; Kaufmann, C.A.; Kodalle, T.; Heinemann, M.D.; Huber, D.; Harnisch, M.; Zimmermann, A.; Strauss, G.N.; Lackner, R., *New approach for an industrial lowtemperature roll-to-roll Cl(G)Se hybrid sputter coevaporation deposition process*, J. Vacuum Sc. Techn. A **38**, 033201/1-9 (2020), 10.1116/1.5142830

Wenskat, M.; Bate, Chr.; Pandey, A.D.; Jeromin, A.; Keller, T.F.; Knobloch, J.; Köszegi, J.; Kramer, F.; Kugeler, O.; Kulkarni, S.; Reschke, D.; Schaffran, J.; Semione, G.D.L.; Sievers, S.; Steder, L.; Stierle, A.; Walker, N., *Nitrogen infusion R&D at DESY a case study on cavity cut-outs*, Supercond. Sci. Technol. **33**, 115017-115033 (2020), 10.1088/1361-6668/abb58c

Wieczerek, K.; Michler, J.; Wheeler, J.M.; Lech, S.; Chulist, R.; Gondek, L.; Czub, J.; Hoser, A.; Schell, N.; Bala, P., *An in situ and ex situ study of  $\epsilon$  phase formation in a hypoeutectic Fe-based hardfacing alloy*, Mater. Design **188**, 108438/1-14 (2020), 10.1016/j.matdes.2019.108438

Windsor, Y.W.; Ernst, A.; Kummer, K.; Kliemt, K.; Schüßler-Langeheine, C.; Pontius, N.; Staub, U.; Chulkov, E.V.; Krellner, C.; Vyalikh, D.V.; Rettig, L., *Deterministic control of an antiferromagnetic spin arrangement using ultrafast optical excitation*, Comm. Phys. **3**, 139/1-8 (2020), 10.1038/s42005-020-00407-0

Witte, R.; Sarkar, A.; Velasco, L.; Kruk, R.; Brand, R.A.; Eggert, B.; Ollefs, K.; Weschke, E.; Wende, H.; Hahn, H., *Magnetic properties of rare-earth and transition metal based perovskite type high entropy oxides*, J. Appl. Phys. **127**, 185109/1-10 (2020), 10.1063/5.0004125

Wittkämper, H.; Maisel, S.; Wu, M.; Frisch, J.; Wilks, R.G.; Grabau, M.; Spiecker, E.; Bär, M.; Görling, A.; Steinrück, H.P.; Papp, C., *Oxidation induced restructuring of Rh-Ga SCALMS model catalyst systems*, J. Chem. Phys. **153**, 104702/1-13 (2020), 10.1063/5.0021647

Wolff, C.M.; Canil, L.; Rehermann, C.; Ngoc Linh, N.; Zu, F.; Ralaiarisoa, M.; Caprioglio, P.; Fiedler, L.; Stolterfoht, M.; Kogikoski, S.; Bald, I.; Koch, N.; Unger, E.L.; Dittrich, T.; Abate, A.; Neher, D., *Perfluorinated Self-Assembled Monolayers Enhance the Stability and Efficiency of Inverted Perovskite Solar Cells*, ACS Nano **14**, 1445-1456 (2020), 10.1021/acsnano.9b03268

Wolff, N.; Schwaigert, T.; Siche, D.; Schlom, D.; Klimm, D., *Growth of CuFeO<sub>2</sub> single crystals by the optical floating-zone technique*, J. Cryst. Growth **532**, 125426/1-5 (2020), 10.1016/j.jcrysgro.2019.125426

Wollenhaupt, J.; Metz, A.; Barthel, T.; Lima, G.M.A.; Heine, A.; Mueller, U.; Klebe, G.; Weiss, M.S., *F2X-Universal and F2X-Entry: Structurally Diverse Compound Libraries for Crystallographic Fragment Screening*, Struc. **28**, 694-706.e5 (2020), 10.1016/j.str.2020.04.019

Wu, J.; Cho, J.I.S.; Whiteley, M.; Rasha, L.; Neville, T.P.; Ziesche, R.; Xu, R.; Owen, R.; Kulkarni, N.; Hack, J.; Maier, M.; Kardjilov, N.; Markötter, H.; Manke, I.; Wang, F.R.; Shearing, P.R.; Brett, D.J.L., *Characterization of water management in metal foam flow-field based polymer electrolyte fuel cells using in-operando neutron radiography*, Int. J. Hydrogen Energ. **45**, 2195-2205 (2020), 10.1016/j.ijhydene.2019.11.069

Würth, C.; Manley, P.; Voigt, R.; Ahiboz, D.; Becker, C.; Resch-Genger, U., *Metasurface enhanced sensitized photon upconversion: towards highly efficient low power upconversion applications and nano-scale E-field sensors*, Nano Lett. **20**, 6682–6689 (2020), 10.1021/acs.nanolett.0c02548

Xu, J.; Benton, O.; Islam, A.T.M.N.; Guidi, T.; Ehlers, G.; Lake, B., *Order out of a Coulomb Phase and Higgs Transition: Frustrated Transverse Interactions of Nd<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>*, Phys. Rev. Lett. **124**, 097203/1-6 (2020), 10.1103/physrevlett.124.097203

Xu, W.; Russo, P.A.; Schultz, T.; Koch, N.; Pinna, N., *Niobium-Doped Titanium Dioxide with High Dopant Contents for Enhanced Lithium-Ion Storage*, ChemElectroChem **7**, 4016-4023 (2020), 10.1002/celc.202001040

Xu, X.; Dzubiella, J., *Probing the protein corona around charged macromolecules: interpretation of isothermal titration calorimetry by binding models and computer simulations*, Colloid Polym. Sci. **298**, 747-759 (2020), 10.1007/s00396-020-04648-x

Yadav, A.; Wehrhold, M.; Neubert, T. J.; lost, R.M.; Balasubramanian, K., *Fast Electron Transfer Kinetics at an Isolated Graphene Edge Nanoelectrode with and without Nanoparticles Implications for Sensing Electroactive Species*, ACS App. Nano Mat. **3**, 11725–11735 (2020), 10.1021/acsanm.0c02171

Yahia, M.; Mei, S.; Mathew, A.P.; Yuan, J., *Linear Main-Chain 1,2,4-Triazolium Poly(ionic liquid)s: Single-Step Synthesis and Stabilization of Cellulose Nanocrystals*, ACS Macr. Lett. **8**, 1372-1377 (2020), 10.1021/acsmacrolett.9b00542

Yang, L.; del Amo, J.M.L.; Shadike, Z.; Bak, S.M.; Bonilla, F.; Galceran, M.; Nayak, P.K.; Buchheim, J.R.; Yang, X.Q.; Rojo, T.; Adelhelm, P., *A Co- and Ni-Free P<sub>2</sub>O<sub>3</sub> Biphase Lithium Stabilized Layered Oxide for Sodium-Ion Batteries and its Cycling Behavior*, Adv. Funct. Mater. **30**, 2003364/1-11 (2020), 10.1002/adfm.202003364

Yang, P.; Wilks, R.G.; Yang, W.; Bär, M., *Interface Formation between CdS and Alkali Postdeposition-Treated Cu(In,Ga)Se<sub>2</sub> Thin-Film Solar Cell Absorbers - Key to Understanding the Efficiency Gain*, ACS Appl. Mat. Interfaces **12**, 6688-6698 (2020), 10.1021/acsami.9b20327

Yang, W.; Mathies, F.; Unger, E.L.; Hermerschmidt, F.; List-Kratochvil, E.J.W., *One-pot synthesis of a stable and cost-effective silver particle-free ink for inkjet-printed flexible electronics*, J. Mater. Chem. C **8**, 16443-16451 (2020), 10.1039/D0TC03864D

Yang, Y.; Huang, Q.; Kozhevnikov, I.V.; Liao, Y.; Qi, R.; Sokolov, A.A.; Zhang, Z.; Zhang, Z.; Wang, Z., *Comparative study of single-layer, bilayer, and trilayer mirrors with enhanced x-ray reflectance in 0.5- to 8-keV energy region*, J. of Astr. Tel., Instr. and Syst. **6**, 044001 /1-12 (2020), 10.1117/1.JATIS.6.4.044001

Yao, M.; Manna, K.; Yang, Q.; Fedorov, A.; Voroshnin, V.; Schwarze, B.; Hornung, J.; Chattopadhyay, S.; Sun, Z.; Guin, S.; Wosnitza, J.; Borrmann, H.; Shekhar, C.; Kumar, N.; Fink, J.; Sun, Y.; Felser, C., *Observation of giant spin-split Fermi-arc with maximal Chern number in the chiral topological semimetal PtGa*, Nat. Commun. **11**, 07.01.2033 (2020), 10.1038/s41467-020-15865-x

Yetkin, H.A.; Kodalle, T.; Bertram, T.; Villanueva-Tovar, A.; Klenk, R.; Szyszka, B.; Schlatmann, R.; Kaufmann, C.A., *Comparison of the Thermal Stability of Differently Buffered CIGSe Solar Cells*, , 1192-1197 (2020), 10.1109/pvsc45281.2020.9300930

Yu, Y.; Kong, W.; Li, Q.; Ning, D.; Schuck, G.; Schumacher, G.; Su, C.; Liu, X., *Understanding the Multiple Effects of TiO<sub>2</sub> Coating on NaMn<sub>0.33</sub>Fe<sub>0.33</sub>Ni<sub>0.33</sub>O<sub>2</sub> Cathode Material for Na-Ion Batteries*, ACS Appl. En. Mat. **3**, 933-942 (2020), 10.1021/acsaelm.9b02021

Yusenko, K.V.; Martynov, S.A.; Khandarkhaev, S.; Fedotenko, T.; Glazyrin, K.; Koemets, E.; Bykov, M.; Hanfland, M.; Siemensmeyer, K.; Smekhova, A.; Gromilov, S.A.; Dubrovinsky, L.S., *High compressibility of synthetic analogous of binary iridium–ruthenium and ternary iridium–osmium–ruthenium minerals*, Materialia **14**, 100920/1-11 (2020), 10.1016/j.mtla.2020.100920

Zaiser, E.; Zhou, X.Y.; Manzoni, A.M.; Haas, S.; Glatzel, U.; Zhang, X.P.; Thompson, G.B.; Li, W.; Vogel, F., *Hierarchical phase separation behavior in a Ni-Si-Fe alloy*, Acta Mat. **195**, 327-340 (2020), 10.1016/j.actamat.2020.05.023

Zakay, N.; Stange, H.; Alpern, H.; Greiner, D.; Abou-Ras, D.; Mainz, R.; Balberg, I.; Millo, O.; Azulay, D., *Phototransport Properties of CuInSe<sub>2</sub> Thin Films: The Influence of Na and Planar Defects*, Phys. Rev. Appl. **14**, 024005/1-14 (2020), 10.1103/PhysRevApplied.14.024005

Zeuschner, S.P.; Pudell, J.-E.; von Reppert, A.; Deb, M.; Popova, E.; Keller, N.; Rössle, M.; Herzog, M.; Bargheer, M., *Measurement of transient strain induced by two-photon excitation*, Phys. Rev. Res. **2**, 022013(R)/1-6 (2020), 10.1103/PhysRevResearch.2.022013

Zhai, T.; Wang, R.; Katase, T.; Quigley, F.; Ohta, H.; Amsalem, P.; Koch, N.; Duham, S., *Substrate-Independent Energy-Level Pinning of an Organic Semiconductor Providing Versatile Hole-Injection Electrodes*, ACS Appl. Elect. Mat. **2**, 3994-4001 (2020), 10.1021/acsaelm.0c00823

Zhai, Y.; Yang, W.; Ning, D.; Yang, J.-B.; Sun, L.; Schuck, G.; Schumacher, G.; Xiangfeng, L., *Improving the Cycling and Air-Storage Stability of LiNi<sub>0.8</sub>Co<sub>0.1</sub>Mn<sub>0.1</sub>O<sub>2</sub> through an Integrated Surface/Interface/Doping Engineering*, J. Mater. Chem. A **8**, 5234-5245 (2020), 10.1039/C9TA13014D

Zhang, L.; Wang, J.; Li, J.; Schuck, G.; Winter, M.; Schumacher, G.; Jie, L., *Preferential Occupation of Na in P3-type Layered Cathode Material for Sodium Ion Batteries*, Nano Energy **70**, 104535/1-8 (2020), 10.1016/j.nanoen.2020.104535

Zhang, L.; Wang, J.; Schuck, G.; Xi, F.; Leilei, D.; Winter, M.; Schumacher, G.; Li, J., *Stabilizing P3-Type Oxides as Cathodes for High-Rate and Long-Life Sodium Ion Batteries by Disordered Distribution of Transition Metals*, Small Meth. **4**, 2000422/1-8 (2020), 10.1002/smtd.202000422

Zhang, S.; Ahmet, I.Y.; Kim, S.H.; Kasian, O.; Mingers, A.M.; Schnell, P.; Kölbach, M.; Lim, Y.; Fischer, A.; Mayrhofer, K.J.J.; Cherevko, S.; Gault, B.; van de Krol, R.; Scheu, C., *Different Photostability of BiVO<sub>4</sub> in Near-pH-Neutral Electrolytes*, ACS Appl. En. Mat. **3**, 9523-9527 (2020), 10.1021/acsaem.0c01904

Zhang, Y.; Qiao, L.; Yan, H.; Zizak, I.; Zaslansky, P.; Li, Y.; Qi, L.; Ma, Y., *Vaterite Microdisc Mesocrystals Exposing the (001) Facet Formed via Transformation from Proto-Vaterite Amorphous Calcium Carbonate*, Cryst. Growth Design **20**, 3482-3492 (2020), 10.1021/acs.cgd.0c00259

Zhang, Z.; Li, Y.; Frisch, J.; Bär, M.; Rappich, J.; Kneipp, J., *In situ surface-enhanced Raman scattering shows ligand-enhanced hot electron harvesting on silver, gold, and copper nanoparticles*, J. Catal. **383**, 153-159 (2020), 10.1016/j.jcat.2020.01.006

Zhao, C.; Yao, Z.; Zhou, D.; Jiang, L.; Wang, J.; Murzin, V.; Lu, Y.; Bai, X.; Aspuru-Guzik, A.; Chen, L.; Hu, Y.S., *Constructing Na-Ion Cathodes via Alkali-Site Substitution*, Adv. Funct. Mater. **30**, 1910840/1-9 (2020), 10.1002/adfm.201910840

Zhao, K.; Deng, H.; Chen, H.; Ross, K.A.; Petricek, V.; Günther, G.; Russina, M.; Hutanu, V.; Gegenwart, P., *Realization of the kagome spin ice state in a frustrated intermetallic compound*, Science **367**, 1218-1223 (2020), 10.1126/science.aaw1666

Zhao, Y.; Chen, K.; Li, N.; Ma, S.; Wang, Y.; Kong, Q.; Baudelet, F.; Wang, X.; Yang, W., *Tricolor Ho<sup>3+</sup> Photoluminescence Enhancement from Site Symmetry Breakdown in Pyrochlore Ho<sub>2</sub>Sn<sub>2</sub>O<sub>7</sub> after Pressure Treatment*, Phys. Rev. Lett. **125**, 245701/1-5 (2020), 10.1103/physrevlett.125.245701

Zhivulin, V.E.; Pesin, L.A.; Belenkov, E.A.; Greshnyakov, V.A.; Zlobina, N.; Brzhezinskaya, M., *Ageing of chemically modified poly(vinylidene fluoride) film: Evolution of triple carbon-carbon bonds infrared absorption*, Polym. Degr. Stab. **172**, 109059/1-9 (2020), 10.1016/j.polymdegradstab.2019.109059

Zhou, D.; Zhang, M.; Sun, F.; Arlt, T.; Frerichs, J.E.; Dong, K.; Wang, J.; Hilger, A.; Wilde, F.; Kolek, M.; Hansen, M.R.; Bieker, P.; Manke, I.; Stan, M.C.; Winter, M., *Performance and behavior of LLZO-based composite polymer electrolyte for lithium metal electrode with high capacity utilization*, Nano Energy **77**, 105196/1-9 (2020), 10.1016/j.nanoen.2020.105196

Zhou, D.; Wang, J.; Liu, X.; He, X.; Sun, F.; Murzin, V.; Schumacher, G.; Yao, X.; Winter, M.; Li, J., *Operando X-ray absorption spectroscopy investigations on NaxNi<sub>1/3</sub>Fe<sub>1/3</sub>Mn<sub>1/3</sub>O<sub>2</sub> positive electrode materials for sodium and sodium ion batteries*, J. Power Sourc. **473**, 228557/1-9 (2020), 10.1016/j.jpowsour.2020.228557

Zhou, Y.; Mansell, R.; Valencia, S.; Kronast, F.; van Dijken, S., *Temperature dependence of the Dzyaloshinskii-Moriya interaction in ultrathin films*, Phys. Rev. B **101**, 054433/1-5 (2020), 10.1103/PhysRevB.101.054433

Zhuang, Y.; Huang, Q.; Kozhevnikov, I.V.; Feng, J.; Qi, R.; Sokolov, A.; Senf, F.; Zhang, Z.; Wang, Z., *Theoretical analysis and development of high efficiency tender x-ray multilayer coated gratings*, , 114930R/1-10 (2020), 10.1117/12.2567578

Ziesche, R.; Robinson, J.B.; Kok, M. D. R.; Markötter, H.; Kockelmann, W.; Kardjilov, N.; Manke, I.; Brett, D.J.L.; Shearing, P.R., *4D Neutron and X-ray Tomography Studies of High Energy Density*

*Primary Batteries: Part I. Dynamic Studies of LiSOCl<sub>2</sub> during Discharge*, J. Electrochem. Soc. **167**, 130545/1-12 (2020), 10.1149/1945-7111/abbbbc

Ziesche, R.; Robinson, J.M.; Markötter, H.; Bradbury, R.; Tengattini, A.; Lenoir, N.; Helfen, L.; Kockelmann, W.; Kardjilov, N.; Manke, I.; Brett, D.J.L.; Shearing, P.R., *4D Neutron and X-ray Tomography Studies of High Energy Density Primary Batteries: Part II. Multi-Modal Microscopy of LiSOCl<sub>2</sub> Cells*, J. Electrochem. Soc. **167**, 140509/1-11 (2020), 10.1149/1945-7111/abbfd9

Ziesche, R.F.; Arlt, T.; Finegan, D.P.; Heenan, T.M.; Tengattini, A.; Baum, D.; Kardjilov, N.; Markötter, H.; Manke, I.; Kockelmann, W.; Brett, D. J. L.; Shearing, P.R., *4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique*, Nat. Commun. **11**, 777/1-11 (2020), 10.1038/s41467-019-13943-3

Zu, F.; Schultz, T.; Shin, D.; Frohloff, L.; Amsalem, P.; Wolff, C.M.; Neher, D.; Koch, N., *Position-locking of volatile reaction products by atmosphere and capping layers slows down photodecomposition of methylammonium lead triiodide perovskite*, RSC Adv. **10**, 17534-17542 (2020), 10.1039/d0ra03572f

Zwiebler, M.; Di Gennaro, E.; Hamann-Borrero, J.E.; Ritschel, T.; Green, R.J.; Sawatzky, G.A.; Schierle, E.; Weschke, E.; Leo, A.; Granozio, F.M.; Geck, J., *Transition from a uni- to a bimodal interfacial charge distribution in LaAlO<sub>3</sub>/SrTiO<sub>3</sub> upon cooling*, Sci. Rep. **10**, 18359 /1-10 (2020), 10.1038/s41598-020-74364-7