

List of Publications 2021

- [1] J. Agil, R. Battesti, and C. Rizzo, "Monte Carlo study of the BMV vacuum linear magnetic birefringence experiment," *The European Physical Journal D* **75**, 90 (2021).
- [2] Andrea Albino, Stefano Benci, Matteo Atzori, Laura Chelazzi, Samuele Ciattini, Andrea Taschin, Paolo Bartolini, Alessandro Lunghi, Roberto Righini, Renato Torre, Federico Totti, and Roberta Sessoli, "Temperature Dependence of Spin-Phonon Coupling in [VO(acac)₂]: A Computational and Spectroscopic Study," *J. Phys. Chem. C* **125**, 22100–22110 (2021).
- [3] Stephan Allenspach, Pascal Puphal, Joosep Link, Ivo Heinmaa, Ekaterina Pomjakushina, Cornelius Krellner, Jakob Lass, Gregory S. Tucker, Christof Niedermayer, Shusaku Imajo, Yoshimitsu Kohama, Koichi Kindo, Steffen Krämer, Mladen Horvatić, Marcelo Jaime, Alexander Madsen, Antonietta Mira, Nicolas Laforencie, Frédéric Mila, Bruce Normand, Christian Rüegg, Raivo Stern, and Franziska Weickert, "Revealing three-dimensional quantum criticality by Sr substitution in Han purple," *Physical Review Research* **3**, 023177 (2021).
- [4] Dai Aoki, Motoi Kimata, Yoshiki J. Sato, Georg Knebel, Fuminori Honda, Ai Nakamura, Dexin Li, Yoshiya Homma, Yusei Shimizu, William Knafo, Daniel Braithwaite, Michal Vališka, Alexandre Pourret, Jean-Pascal Brison, and Jacques Flouquet, "Field-Induced Superconductivity near the Superconducting Critical Pressure in UTe₂," *Journal of the Physical Society of Japan* **90**, 074705 (2021).
- [5] Matteo Atzori, Kais Dhbaibi, Häiet Douib, Maxime Grasser, Vincent Dorcet, Ivan Breslavetz, Kévin Paillot, Olivier Cador, Geert L. J. A. Rikken, Boris Le Guennic, Jeanne Crassous, Fabrice Pointillart, and Cyrille Train, "Helicene-Based Ligands Enable Strong Magneto-Chiral Dichroism in a Chiral Ytterbium Complex," *Journal of the American Chemical Society* **143**, 2671–2675 (2021), pMID: 33577302.
- [6] Matteo Atzori, Elena Garlatti, Giuseppe Allodi, Simone Chicco, Alessandro Chiesa, Andrea Albino, Roberto De Renzi, Enrico Salvadori, Mario Chiesa, Stefano Carretta, and Lorenzo Sorace, "Radiofrequency to Microwave Coherent Manipulation of an Organometallic Electronic Spin Qubit Coupled to a Nuclear Qudit," *Inorg. Chem.* **60**, 11273–11286 (2021).
- [7] M. Atzori, H. D. Ludowieg, Á. Valentin-Pérez, M. Cortijo, I. Breslavetz, K. Paillot, P. Rosa, C. Train, J. Autschbach, E. A. Hillard, and G. L. J. A. Rikken, "Validation of microscopic magnetochiral dichroism theory," *Science Advances* **7**, eabg2859 (2021).
- [8] Matteo Atzori, Cyrille Train, Elizabeth A. Hillard, Narcis Aavarvari, and Geert L. J. A. Rikken, "Magneto-chiral anisotropy: From fundamentals to perspectives," *Chirality* **33**, 844–857 (2021).
- [9] Michał Baranowski, Alessandro Surrenti, and Paulina Plochocka, "Two Dimensional Perovskites/Transition Metal Dichalcogenides Heterostructures: Puzzles and Challenges," *Israel Journal of Chemistry*, e202100120 (2021).
- [10] M. Barbier, M. Sundermann, A. Poux, A. Rogalev, D. Braithwaite, J.-P. Sanchez, and F. Wilhelm, "Absence of magnetic field effect on the cerium valence in CeCu₂Si₂ at its optimum superconducting critical temperature," *Phys. Rev. B* **104**, 205136 (2021).
- [11] J. Béard, J. Agil, R. Battesti, and C. Rizzo, "A novel pulsed magnet for magnetic linear birefringence measurements," *Review of Scientific Instruments* **92**, 104710 (2021).
- [12] S. Benhabib, C. Lupien, I. Paul, L. Berges, M. Dion, M. Nardone, A. Zitouni, Z. Q. Mao, Y. Maeno, A. Georges, L. Taillefer, and C. Proust, "Ultrasound evidence for a two-component superconducting order parameter in Sr₂RuO₄," *Nature Physics* **17**, 194–198 (2021).
- [13] Alexeï Bosak, Sofia-Michaela Souliou, Clément Faugeras, Rolf Heid, Maciej R. Molas, Rong-Yan Chen, Nan-Lin Wang, Marek Potemski, and Matthieu Le Tacon, "Evidence for nesting-driven charge density wave instabilities in the quasi-two-dimensional material LaAgSb₂," *Phys. Rev. Research* **3**, 033020 (2021).
- [14] I. Breslavetz, A. Delhomme, T. Pelini, A. Pawbake, D. Vaclavkova, M. Orlita, M. Potemski, M.-A. Measson, and C. Faugeras, "Spatially resolved optical spectroscopy in extreme environment of low temperature, high magnetic fields and high pressure," *Review of Scientific Instruments* **92**, 123909 (2021).
- [15] Burdonov, K., Bonito, R., Giannini, T., Aidakina, N., Argiroff, C., Béard, J., Chen, S. N., Ciardi, A., Ginzburg, V., Gubskiy, K., Gundorin, V., Gushchin, M., Kochetkov, A., Korobkov, S., Kuzmin, A., Kuznetsov, A., Pikuz, S., Revet, G., Ryazantsev, S., Shaykin, A., Shaykin, I., Soloviev, A., Starodubtsev, M., Strikovskiy, A., Yao, W., Yakovlev, I., Zemskov, R., Zudin, I., Khazanov, E., Orlando, S., and Fuchs, J., "Inferring possible magnetic field strength of accreting inflows in EXor-type objects from scaled laboratory experiments," *Astronomy & Astrophysics* **648**, A81 (2021).
- [16] F. Buta, M. Bonura, D. Matera, G. Bovone, A. Ballarino, S. C. Hopkins, B. Bordini, X. Chaud, and C. Senatore, "Very high upper critical fields and enhanced critical current densities in Nb₃Sn superconductors based on Nb-Ta-Zr alloys and internal oxidation," *J. Phys. Mater.* **4**, 025003 (2021).
- [17] José M. Caridad, Christos Tserkezis, Jaime E. Santos, Paulina Plochocka, Munuswamy Venkatesan, J. M. D. Coey, N. Asger Mortensen, Geert L. J. A. Rikken, and Vojislav Krstić, "Detection of the Faraday Chiral Anisotropy," *Phys. Rev. Lett.* **126**, 177401 (2021).
- [18] Clément Collignon, Yudai Awashima, Ravi, Xiao Lin, Carl Willem Rischau, Anissa Acheche, Baptiste Vignolle, Cyril Proust, Yuki Fuseya, Kamran Behnia, and Benoit Fauqué, "Quasi-isotropic orbital magnetoresistance in lightly doped SrTiO₃," *Phys. Rev. Materials* **5**, 065002 (2021).

- [19] Ni Deng, Jun Wang, Jiaxiang Wang, Yixuan He, Eric Beaugnon, and Jinshan Li, "Effect of high magnetic field assisted heat treatment on microstructure and properties of AlCoCrCuFeNi high-entropy alloy," *Materials Letters* **303**, 130540 (2021).
- [20] L.V.B. Diop, O. Prokhnenco, O. Isnard, G. Ballon, and J.P. Itié, "Investigation of the itinerant metamagnetic system Hf_{0.75}Ta_{0.25}Fe₂ under extreme conditions of pressure or magnetic field," *Intermetallics* **129**, 107054 (2021).
- [21] Diana Dragancea, Ghenadie Novitchi, Augustin M. Madalan, and Marius Andruh, "New Cyanido-Bridged Heterometallic 3d-4f 1D Coordination Polymers: Synthesis, Crystal Structures and Magnetic Properties," *Magnetochemistry* **7**, 57 (2021).
- [22] Mateusz Dyksik, Herman Duim, Duncan K. Maude, Michal Baranowski, Maria Antonietta Loi, and Paulina Plochocka, "Brightening of dark excitons in 2D perovskites," *Science Advances* **7**, eabk0904 (2021).
- [23] Mateusz Dyksik, Shuli Wang, Watcharaphol Paritmongkol, Duncan K. Maude, William A. Tisdale, Michal Baranowski, and Paulina Plochocka, "Tuning the Excitonic Properties of the 2D (PEA)₂(MA)_{n-1}Pb_nI_{3n+1} Perovskite Family via Quantum Confinement," *J. Phys. Chem. Lett.* **12**, 1638–1643 (2021).
- [24] Evgeny D. Filippov, Sergey S. Makarov, Konstantin F. Burdonov, Weipeng Yao, Guilhem Revet, Jerome Béard, Simon Bolaños, Sophia N. Chen, Amira Guediche, Jack Hare, Denis Romanovsky, Igor Yu. Skobelev, Mikhail Starodubtsev, Andrea Ciardi, Sergey A. Pikuz, and Julien Fuchs, "Enhanced X-ray emission arising from laser-plasma confinement by a strong transverse magnetic field," *Scientific Reports* **11**, 8180 (2021).
- [25] M. Frachet, S. Benhabib, I. Vinograd, S.-F. Wu, B. Vignolle, H. Mayaffre, S. Krämer, T. Kurosawa, N. Momono, M. Oda, J. Chang, C. Proust, M.-H. Julien, and D. LeBoeuf, "High magnetic field ultrasound study of spin freezing in La_{1.88}Sr_{0.12}CuO₄," *Physical Review B* **103**, 115133 (2021).
- [26] Alsu Gazizulina, Diana Lucia Quintero-Castro, Zhe Wang, Fabienne Duc, Frederic Bourdarot, Karel Prokes, Wolfgang Schmidt, Ramzy Daou, Sergei Zherlitsyn, Nazmul Islam, Nils Henrik Kolnes, Abhijit Bhat Kademanne, Andreas Schilling, and Bella Lake, "Neutron diffraction of field-induced magnon condensation in the spin-dimerized anti-ferromagnet Sr₃Cr₂O₈," *Physical Review B* **104**, 064430 (2021).
- [27] I. F. Gilmutdinov, R. Schönemann, D. Vignolles, C. Proust, I. R. Mukhamedshin, L. Balicas, and H. Alloul, "Interplay between strong correlations and electronic topology in the underlying kagome lattice of Na_{2/3}CoO₂," *Physical Review B* **104**, L201103 (2021).
- [28] C. Girod, D. LeBoeuf, A. Demuer, G. Seyfarth, S. Imajo, K. Kindo, Y. Kohama, M. Lizaire, A. Legros, A. Gourgout, H. Takagi, T. Kurosawa, M. Oda, N. Momono, J. Chang, S. Ono, G.-q. Zheng, C. Marcenat, L. Taillefer, and T. Klein, "Normal state specific heat in the cuprate superconductors La_{2-x}Sr_xCuO₄ and Bi_{2+y}Sr_{2-x-y}La_xCuO_{6+δ} near the critical point of the pseudogap phase," *Physical Review B* **103**, 214506 (2021).
- [29] K. Götze, I. Kraft, J. Klotz, T. Förster, M. Uhlarz, V. Lorenz, C. Bergmann, Y. Prots, J. A. N. Bruin, A. McCollam, I. Sheikin, J. Wosnitza, C. Geibel, and H. Rosner, "Highly sensitive band structure of the Stoner-enhanced Pauli paramagnet SrCo₂P₂," *Physical Review B* **104**, 085148 (2021).
- [30] M. Grzeszczyk, J. Szpakowski, A. O. Slobodeniuk, T. Kazimierczuk, M. Bhatnagar, T. Taniguchi, K. Watanabe, P. Kossacki, M. Potemski, A. Babinski, and M. R. Molas, "The optical response of artificially twisted MoS₂ bilayers," *Scientific Reports* **11**, 17037 (2021).
- [31] Thilo Hahn, Diana Vaclavkova, Miroslav Bartos, Karol Nogajewski, Marek Potemski, Kenji Watanabe, Takashi Taniguchi, Paweł Machnikowski, Tilmann Kuhn, Jacek Kasprzak, and Daniel Wigger, "Destructive Photon Echo Formation in Six-Wave Mixing Signals of a MoSe₂ Monolayer," *Advanced Science* , 2103813 (2021).
- [32] Yixuan He, Yuhao Wu, Fan Bu, Chengxiong Zou, Zhangchi Bian, Qiliang Huang, Tie Liu, Qiang Wang, Jun Wang, Jinshan Li, and Eric Beaugnon, "Effects of an ultra-high magnetic field up to 25 T on the phase transformations of undercooled Co-B eutectic alloy," *Journal of Materials Science & Technology* **93**, 79–88 (2021).
- [33] J. Hornung, S. Mishra, J. Stirnat, M. Raba, B. V. Schwarze, J. Klotz, D. Aoki, J. Wosnitza, T. Helm, and I. Sheikin, "Anomalous quantum oscillations of CeCoIn₅ in high magnetic fields," *Physical Review B* **104**, 235155 (2021).
- [34] V. P. Jovanović, H. Raffy, Z. Z. Li, G. Reményi, and P. Monceau, "High magnetic-field evolution of the in-plane angular magnetoresistance of electron-doped Sr_{1-x}La_xCuO₂ in the normal state," *Physical Review B* **103**, 014520 (2021).
- [35] Simon Kahmann, Herman Duim, Hong-Hua Fang, Mateusz Dyksik, Sampson Adjokatse, Martha Rivera Medina, Matteo Pitaro, Paulina Plochocka, and Maria A. Loi, "Photophysics of Two-Dimensional Perovskites-Learning from Metal Halide Substitution," *Advanced Functional Materials* **31**, 2103778 (2021).
- [36] Piotr Kapuściński, Alex Delhomme, Diana Vaclavkova, Artur O. Slobodeniuk, Magdalena Grzeszczyk, Miroslav Bartos, Kenji Watanabe, Takashi Taniguchi, Clément Faugeras, and Marek Potemski, "Rydberg series of dark excitons and the conduction band spin-orbit splitting in monolayer WSe₂," *Communications Physics* **4**, 186 (2021).
- [37] Miriam Karpinska, Minpeng Liang, Roman Kempt, Kati Finzel, Machteld Kamminga, Mateusz Dyksik, Nan Zhang, Catherine Knoldseeder, Duncan K. Maude, Michal Baranowski, Lukasz Kłopotowski, Jianting Ye, Agnieszka Kuc, and Paulina Plochocka, "Nonradiative Energy Transfer and Selective Charge Transfer in a WS₂/(PEA)₂PbI₄ Heterostructure," *ACS Appl. Mater. Interfaces* **13**, 33677–33684 (2021).
- [38] Massine Kelai, Benjamin Cahier, Mihail Atanasov, Frank Neese, Yongfeng Tong, Luqiong Zhang, Amandine Bellec, Olga Iasco, Eric Rivière, Régis Guillot, Cyril Chacon, Yann Girard, Jérôme Lagoute, Sylvie Rousset, Vincent Repain, Edwige Otero, Marie-Anne Arrio, Philippe Saintavit, Anne-Laure Barra, Marie-Laure Boillot, and Talal Mallah, "Robust magnetic anisotropy of a monolayer of hexacoordinate Fe(ii) complexes assembled on Cu(111)," *Inorg. Chem. Front.* **8**, 2395–2404 (2021).
- [39] J. Klein, A. Hötger, M. Florian, A. Steinhoff, A. Delhomme, T. Taniguchi, K. Watanabe, F. Jahnke, A. W. Holleitner, M. Potemski, C. Faugeras, J. J. Finley, and A. V. Stier, "Controlling exciton many-body states by the electric-field effect in monolayer MoS₂," *Physical Review Research* **3**, L022009 (2021).
- [40] W. Knafo, G. Knebel, P. Steffens, K. Kaneko, A. Rosuel, J.-P. Brison, J. Flouquet, D. Aoki, G. Lapertot, and S. Raymond, "Low-dimensional antiferromagnetic fluctuations in the heavy-fermion paramagnetic ladder compound UTe₂," *Physical Review B* **104**, L100409 (2021).

- [41] W. Knafo, M. Nardone, M. Vališka, A. Zitouni, G. Lapertot, D. Aoki, G. Knebel, and D. Braithwaite, "Comparison of two superconducting phases induced by a magnetic field in UTe₂," *Communications Physics* **4**, 40 (2021).
- [42] M. Koperski, K. Pakula, K. Nogajewski, A. K. Dabrowska, M. Tokarczyk, T. Pelini, J. Binder, T. Fas, J. Suffczyński, R. Stepniewski, A. Wysmolek, and M. Potemski, "Towards practical applications of quantum emitters in boron nitride," *Scientific Reports* **11**, 15506 (2021).
- [43] N. V. Kostyuchenko, I. S. Tereshina, A. V. Andreev, M. Doerr, E. A. Tereshina-Chitrova, M. A. Paukov, D. I. Gorbunov, G. A. Politova, A. P. Pyatakov, A. Miyata, O. Drachenko, A. K. Zvezdin, and O. Portugall, "Investigation of the Field-Induced Phase Transitions in the (R,R')₂Fe₁₄B Rare-Earth Intermetallics in Ultrahigh Magnetic Fields," *IEEE Transactions on Magnetics* **57**, 1–5 (2021).
- [44] N. V. Kostyuchenko, I. S. Tereshina, E. A. Tereshina-Chitrova, L. A. Ivanov, M. Paukov, D. I. Gorbunov, A. V. Andreev, M. Doerr, G. A. Politova, A. K. Zvezdin, S. V. Veselova, A. P. Pyatakov, A. Miyata, O. Drachenko, and O. Portugall, "Drastic reduction of the R-Fe exchange in interstitially modified (Nd,Ho)₂Fe₁₄B compounds probed by megagauss magnetic fields," *Physical Review Materials* **5**, 074404 (2021).
- [45] I Leermakers, K Rubi, M Yang, B Kerdi, M Goiran, W Escoffier, A S Rana, A E M Smink, A Brinkman, H Hilgenkamp, J C Maan, and U Zeitler, "Quantum oscillations in an optically-illuminated two-dimensional electron system at the LaAlO₃/SrTiO₃ interface," *J. Phys.: Condens. Matter* **33**, 465002 (2021).
- [46] M. Lizaire, A. Legros, A. Gourgout, S. Benhabib, S. Badoux, F. Laliberté, M.-E. Boulanger, A. Ataei, G. Grissonnanche, D. LeBoeuf, S. Licciardello, S. Wiedmann, S. Ono, H. Raffy, S. Kawasaki, G.-Q. Zheng, N. Doiron-Leyraud, C. Proust, and L. Taillefer, "Transport signatures of the pseudogap critical point in the cuprate superconductor Bi₂Sr_{2-x}La_xCuO_{6+δ}," *Physical Review B* **104**, 014515 (2021).
- [47] Xiaobo Lu, Biao Lian, Gaurav Chaudhary, Benjamin A. Piot, Giulio Romagnoli, Kenji Watanabe, Takashi Taniguchi, Martino Poggio, Allan H. MacDonald, B. Andrei Bernevig, and Dmitri K. Efetov, "Multiple flat bands and topological Hofstadter butterfly in twisted bilayer graphene close to the second magic angle," *Proceedings of the National Academy of Sciences* **118**, e2100006118 (2021).
- [48] Srijani Mallik, Gerbold C. Ménard, Guilhem Saïz, Ildar Gilmutdinov, David Vignolles, Cyril Proust, Alexandre Gloter, Nicolas Bergeal, Marc Gabay, and Manuel Bibes, "From Low-Field Sondheimer Oscillations to High-Field Very Large and Linear Magnetoresistance in a SrTiO₃-Based Two-Dimensional Electron Gas," *Nano Letters* (2021), 10.1021/acs.nanolett.1c03198, PMID: 34914397.
- [49] Christophe Marcenat, Thierry Klein, David LeBoeuf, Alexandre Jaoui, Gabriel Seyfarth, Jozef Kačmarčík, Yoshimitsu Kohama, Hervé Cercellier, Hervé Aubin, Kamran Behnia, and Benoît Fauqué, "Wide Critical Fluctuations of the Field-Induced Phase Transition in Graphite," *Physical Review Letters* **126**, 106801 (2021).
- [50] G. Martinez, J. Wyzula, I. Mohelsky, C. Faugeras, M. Orlita, M. Potemski, A. Riedel, R. Hey, and K. J. Friedland, "Polaronic interaction in a single modulation-doped GaAs quantum well with the Feynman-Hellwarth-Iddings-Platzman approximation," *Physical Review B* **104**, 045312 (2021).
- [51] Edoardo Martino, Carsten Putzke, Markus König, Philip J. W. Moll, Helmuth Berger, David LeBoeuf, Maxime Leroux, Cyril Proust, Ana Akrap, Holm Kirmse, Christoph Koch, ShengNan Zhang, QuanSheng Wu, Oleg V. Yazyev, László Forró, and Konstantin Semeniuk, "Unidirectional Kondo scattering in layered NbS₂," *npj 2D Materials and Applications* **5**, 86 (2021).
- [52] Mathevet, Renaud, Labastie, Pierre, and Lahaye, Thierry, "Fizeau et l'entraînement partiel de l'éther," *Photoniques*, 25–29 (2021).
- [53] Frédéric Mentink-Vigier, Anne-Laure Barra, Johan van Tol, Sabine Hediger, Daniel Lee, and Gaël De Paëpe, "Correction: De novo prediction of cross-effect efficiency for magic angle spinning dynamic nuclear polarization," *Phys. Chem. Chem. Phys.* **23**, 13768–13769 (2021).
- [54] S. Mishra, A. Demuer, D. Aoki, and I. Sheikin, "Specific heat of CeRhIn₅ in high magnetic fields: Magnetic phase diagram revisited," *Physical Review B* **103**, 045110 (2021).
- [55] S. Mishra, D. Gorbunov, D. J. Campbell, D. LeBoeuf, J. Hornung, J. Klotz, S. Zherlitsyn, H. Harima, J. Wosnitza, D. Aoki, A. McCollam, and I. Sheikin, "Origin of the 30 T transition in CeRhIn₅ in tilted magnetic fields," *Physical Review B* **103**, 165124 (2021).
- [56] S. Mishra, J. Hornung, M. Raba, J. Klotz, T. Förster, H. Harima, D. Aoki, J. Wosnitza, A. McCollam, and I. Sheikin, "Robust Fermi-Surface Morphology of CeRhIn₅ across the Putative Field-Induced Quantum Critical Point," *Physical Review Letters* **126**, 016403 (2021).
- [57] Timo Neumann, Sascha Feldmann, Philipp Moser, Alex Delhomme, Jonathan Zerhoch, Tim van de Goor, Shuli Wang, Mateusz Dyksik, Thomas Winkler, Jonathan J. Finley, Paulina Plochocka, Martin S. Brandt, Clément Faugeras, Andreas V. Stier, and Felix Deschler, "Manganese doping for enhanced magnetic brightening and circular polarization control of dark excitons in paramagnetic layered hybrid metal-halide perovskites," *Nature Communications* **12**, 3489 (2021).
- [58] Michael I. Ojovan and Robert F. Tournier, "On Structural Rearrangements Near the Glass Transition Temperature in Amorphous Silica," *Materials* **14**, 5235 (2021).
- [59] Vaisakh C. Paingad, Jan Kunc, Martin Rejhon, Ivan Rychetsky, Ivan Mohelsky, Milan Orlita, and Petr Kuzel, "Ultrafast Plasmon Thermalization in Epitaxial Graphene Probed by Time-Resolved THz Spectroscopy," *Advanced Functional Materials* **31**, 2105763 (2021).
- [60] Yuliia P. Petrenko, Karolina Piasta, Dmytro M. Khomenko, Roman O. Doroshchuk, Sergiu Shova, Ghenadie Novitchi, Yuliya Toporivska, Elzbieta Gumienna-Kontecka, Luisa M. D. R. S. Martins, and Rostyslav D. Lampeka, "An investigation of two copper(II) complexes with a triazole derivative as a ligand: magnetic and catalytic properties," *RSC Adv.* **11**, 23442–23449 (2021).
- [61] Gaia Petrucci, Alessio Gabbani, Ihar Faniayeu, Esteban Pedrueza-Villalmanzo, Giuseppe Cucinotta, Matteo Atzori, Alexandre Dmitriev, and Francesco Pineider, "Macroscopic magneto-chiroptical metasurfaces," *Applied Physics Letters* **118**, 251108 (2021).
- [62] Lorenzo Poggini, Erik Tancini, Chiara Danieli, Andrea Luigi Sorrentino, Giulia Serrano, Alessandro Lunghi, Luigi

- Malavolti, Giuseppe Cucinotta, Anne-Laure Barra, Amélie Juhin, Marie-Anne Arrio, Weibin Li, Edwige Otero, Philippe Ohresser, Loïc Joly, Jean Paul Kappler, Federico Totti, Philippe Saintavit, Andrea Caneschi, Roberta Sessoli, Andrea Cornia, and Matteo Mannini, “Engineering Chemisorption of Fe₄ Single-Molecule Magnets on Gold,” *Advanced Materials Interfaces*, **21**01182 (2021).
- [63] Oliver Portugall, Steffen Krämer, and Yurii Skourski, “Magnetic Fields and Measurements,” in *Handbook of Magnetism and Magnetic Materials*, edited by Michael Coey and Stuart Parkin (Springer International Publishing, 2021) pp. 1–70.
- [64] Tatiana Prikhna, Alexander Kasatkin, Michael Eisterer, Viktor Moshchil, Andrii Shapovalov, Jacques Rabier, Anne Jouline, Xavier Chaud, Matthew Rindfleisch, Michael Tomsic, and Semyon Ponomaryov, “Critical Current Density, Pinning and Nanostructure of MT-YBCO and MgB₂-based Materials,” *IEEE Transactions on Applied Superconductivity* **31**, 1–5 (2021).
- [65] Carsten Putzke, Siham Benhabib, Wojciech Tabis, Jake Ayres, Zhaosheng Wang, Liam Malone, Salvatore Licciardello, Jianming Lu, Takeshi Kondo, Tsunehiro Takeuchi, Nigel E. Hussey, John R. Cooper, and Antony Carrington, “Reduced Hall carrier density in the overdoped strange metal regime of cuprate superconductors,” *Nature Physics* **17**, 826–831 (2021).
- [66] Stéphane Raymond, William Knafo, Georg Knebel, Koji Kaneko, Jean-Pascal Brison, Jacques Flouquet, Dai Aoki, and Gérard Lapertot, “Feedback of Superconductivity on the Magnetic Excitation Spectrum of UTe₂,” *Journal of the Physical Society of Japan* **90**, 113706 (2021).
- [67] G. Revet, B. Khiar, E. Filippov, C. Argiroffi, J. Béard, R. Bonito, M. Cerchez, S. N. Chen, T. Gangolf, D. P. Higginson, A. Mignone, B. Olmi, M. Ouillé, S. N. Ryazantsev, I. Yu. Skobelev, M. I. Safranova, M. Starodubtsev, T. Vinci, O. Willi, S. Pikuz, S. Orlando, A. Ciardi, and J. Fuchs, “Laboratory disruption of scaled astrophysical outflows by a misaligned magnetic field,” *Nature Communications* **12**, 762 (2021).
- [68] Aleksander Rodek, Thilo Hahn, Jacek Kasprzak, Tomasz Kazimierczuk, Karol Nogajewski, Karolina Ewa Polczyńska, Kenji Watanabe, Takashi Taniguchi, Tilmann Kuhn, Paweł Machnikowski, Marek Potemski, Daniel Wigger, and Piotr Kossacki, “Local field effects in ultrafast light-matter interaction measured by pump-probe spectroscopy of monolayer MoSe₂,” *Nanophotonics* **10**, 2717–2728 (2021).
- [69] Km Rubi, Shengwei Zeng, Femke Bangma, Michel Goiran, A. Ariando, Walter Escoffier, and Uli Zeitler, “Electronic subbands in the a -LaAlO₃/KTaO₃ interface revealed by quantum oscillations in high magnetic fields,” *Physical Review Research* **3**, 033234 (2021).
- [70] Marcos Rubin-Osanz, Francois Lambert, Feng Shao, Eric Rivière, Régis Guillot, Nicolas Suaud, Nathalie Guihéry, David Zueco, Anne-Laure Barra, Talal Mallah, and Fernando Luis, “Chemical tuning of spin clock transitions in molecular monomers based on nuclear spin-free Ni(ii),” *Chem. Sci.* **12**, 5123–5133 (2021).
- [71] Vladimir V. Rumyantsev, Anna A. Razova, Leonid S. Bovkun, Dmitriy A. Tatarskiy, Vladimir Y. Mikhailovskii, Maksim S. Zholudev, Anton V. Ikonnikov, Tatyana A. Uaman Svetikova, Kirill V. Maremyanin, Vladimir V. Utochkin, Mikhail A. Fadeev, Vladimir G. Remesnik, Vladimir Y. Aleshkin, Nikolay N. Mikhailov, Sergey A. Dvoretsky, Marek Potemski, Milan Orlita, Vladimir I. Gavrilenko, and Sergey V. Morozov, “Optical Studies and Transmission Electron Microscopy of HgCdTe Quantum Well Heterostructures for Very Long Wavelength Lasers,” *Nanomaterials* **11**, 1855 (2021).
- [72] David Santos-Cottin, Michele Casula, Luca de' Medici, F. Le Mardelé, J. Wyzula, M. Orlita, Yannick Klein, Andrea Gauzzi, Ana Akrap, and R. P. S. M. Lobo, “Optical conductivity signatures of open Dirac nodal lines,” *Phys. Rev. B* **104**, L201115 (2021).
- [73] Souvik Sasmal, Vikas Saimi, Nicolas Bruyant, Rajib Mondal, Ruta Kulkarni, Bahadur Singh, Vikram Tripathi, and A. Thamizhavel, “Weak antilocalization and Shubnikov-de Haas oscillations in single crystal CaCuSb,” *Physical Review B* **104**, 205135 (2021).
- [74] F. G. Silva, J. Depeyrot, Yu. L. Raikher, V. I. Stepanov, I. S. Poperechny, R. Aquino, G. Ballon, J. Geshev, E. Dubois, and R. Perzynski, “Exchange-bias and magnetic anisotropy fields in core-shell ferrite nanoparticles,” *Scientific Reports* **11**, 5474 (2021).
- [75] T Smołński, T Kazimierczuk, M Goryca, K Nogajewski, M Potemski, and P Kossacki, “Valley pseudospin relaxation of charged excitons in monolayer MoTe₂,” *J. Phys.: Condens. Matter* **33**, 025701 (2021).
- [76] Alessandro Surrente, Michał Baranowski, and Paulina Płochocka, “Perspective on the physics of two-dimensional perovskites in high magnetic field,” *Appl. Phys. Lett.* **118**, 170501 (2021).
- [77] M. Szymura, A. A. Mitioglu, P. Wojnar, D. K. Maude, P. Płochocka, and L. Kłopotowski, “Giant enhancement of second harmonic light intensity in waveguiding core/shell ZnTe/ZnMgTe nanowires,” *Appl. Phys. Lett.* **118**, 192106 (2021).
- [78] Simon Tardieu, David Mesguich, Antoine Lonjon, Florence Lecouturier-Dupouy, Nelson Ferreira, Geoffroy Chevalier, Arnaud Proietti, Claude Estournès, and Christophe Laurent, “Influence of alloying on the tensile strength and electrical resistivity of silver nanowire: copper composites macroscopic wires,” *Journal of Materials Science* **56**, 4884–4895 (2021).
- [79] Kristupas Kazimieras Tikuišis, Jan Wyzula, Lukáš Ohnoutek, Petr Cejpek, Klára Uhlířová, Michael Hakl, Clément Faugeras, Karel Výborný, Akihiro Ishida, Martin Veis, and Milan Orlita, “Landau level spectroscopy of the PbSnSe topological crystalline insulator,” *Physical Review B* **103**, 155304 (2021).
- [80] Alexandru Topor, Dan Liu, Catalin Maxim, Ghenadie Novitchi, Cyrille Train, Zeid A. AlOthman, Abdullah A. S. Al-Kahtani, Liviu Ungur, Le Tuan Anh Ho, Liviu F. Chibotaru, and Marius Andruh, “Design of Fe^{III}-Ln^{III} binuclear complexes using compartmental ligands: synthesis, crystal structures, magnetic properties, and ab initio analysis,” *J. Mater. Chem. C* **9**, 10912–10926 (2021).
- [81] Robert F. Tournier, “Validation of non-classical homogeneous nucleation model for G-glass and L-glass formations in liquid elements with recent molecular dynamics simulations,” *Scripta Materialia* **199**, 113859 (2021).
- [82] Robert F. Tournier and Michael I. Ojovan, “Prediction of Second Melting Temperatures Already Observed in Pure Elements by Molecular Dynamics Simulations,” *Materials* **14**, 6509 (2021).

- [83] Robert F. Tournier and Michael I. Ojovan, "Building and Breaking Bonds by Homogenous Nucleation in Glass-Forming Melts Leading to Transitions in Three Liquid States," *Materials* **14**, 2287 (2021).
- [84] Robert F. Tournier and Michael I. Ojovan, "Comments about a recent publication entitled "Improving glass forming ability of off-eutectic metallic glass formers by manipulating primary crystallization reactions"," *Scripta Materialia* **205**, 114039 (2021).
- [85] Robert F. Tournier and Michael I. Ojovan, "Dewetting temperatures of prefrozen and grafted layers in solid ultrathin films viewed as melt-memory effects," *Physica B: Condensed Matter* **611**, 412796 (2021).
- [86] D. Vaclavkova, M. Palit, J. Wyzula, S. Ghosh, A. Delhomme, S. Maity, P. Kapuscinski, A. Ghosh, M. Veis, M. Grzeszczyk, C. Faugeras, M. Orlita, S. Datta, and M. Potemski, "Magnon polarons in the van der Waals antiferromagnet FePS₃," *Physical Review B* **104**, 134437 (2021).
- [87] M. Vališka, W. Knafo, G. Knebel, G. Lapertot, D. Aoki, and D. Braithwaite, "Magnetic reshuffling and feedback on superconductivity in UTe₂ under pressure," *Phys. Rev. B* **104**, 214507 (2021).
- [88] Aiswarya Chalikunnath Venu, Rami Nasser Din, Thomas Rudszuck, Pierre Picchetti, Papri Chakraborty, Annie K. Powell, Steffen Krämer, Gisela Guthausen, and Masooma Ibrahim, "NMR Relaxivities of Paramagnetic Lanthanide-Containing Polyoxometalates," *Molecules* **26**, 7481 (2021).
- [89] Igor Vinograd, Rui Zhou, Michihiro Hirata, Tao Wu, Hadrien Mayaffre, Steffen Krämer, Ruixing Liang, W. N. Hardy, D. A. Bonn, and Marc-Henri Julien, "Locally commensurate charge-density wave with three-unit-cell periodicity in YBa₂Cu₃O_y," *Nature Communications* **12**, 3274 (2021).
- [90] Chen Wei, Jun Wang, Yixuan He, Jinshan Li, and Eric Beaugnon, "Solidification of Immiscible Alloys under High Magnetic Field: A Review," *Metals* **11**, 525 (2021).
- [91] Paul Wiecki, Rui Zhou, Marc-Henri Julien, Anna E. Böhmer, and Jörg Schmalian, "Edwards-Anderson parameter and local Ising nematicity in FeSe revealed via NMR spectral broadening," *Physical Review B* **104**, 125134 (2021).
- [92] Shuigang Xu, Mohammed M. Al Ezzi, Nilanthy Balakrishnan, Aitor Garcia-Ruiz, Bonnie Tsim, Ciaran Mulvan, Julien Barrier, Na Xin, Benjamin A. Piot, Takashi Taniguchi, Kenji Watanabe, Alexandra Carvalho, Artem Mishchenko, A. K. Geim, Vladimir I. Fal'ko, Shaffique Adam, Antonio Helio Castro Neto, Kostya S. Novoselov, and Yanmeng Shi, "Tunable van Hove singularities and correlated states in twisted monolayer-bilayer graphene," *Nature Physics* **17**, 619–626 (2021).
- [93] Xitong Xu, Yiyuan Liu, Gabriel Seyfarth, Alexandre Pourret, Wenlong Ma, Huibin Zhou, Guangqiang Wang, Zhe Qu, and Shuang Jia, "Thermoelectric transport and phonon drag in Weyl semimetal monochalcogenides," *Physical Review B* **104**, 115164 (2021).
- [94] W. Yao, A. Fazzini, S. N. Chen, K. Burdonov, P. Antici, J. Béard, S. Bolaños, A. Ciardi, R. Diab, E. D. Filippov, S. Kisiov, V. Lelasseux, M. Miceli, Q. Moreno, V. Nastasa, S. Orlando, S. Pikuz, D. C. Popescu, G. Revet, X. Ribeyre, E. d'Humières, and J. Fuchs, "Laboratory evidence for proton energization by collisionless shock surfing," *Nature Physics* **17**, 1177–1182 (2021).
- [95] W. Yao, A. Fazzini, S. N. Chen, K. Burdonov, P. Antici, J. Béard, S. Bolaños, A. Ciardi, R. Diab, E. D. Filippov, S. Kisiov, V. Lelasseux, M. Miceli, Q. Moreno, V. Nastasa, S. Orlando, S. Pikuz, D. C. Popescu, G. Revet, X. Ribeyre, E. d'Humières, and J. Fuchs, "Detailed characterization of a laboratory magnetized supercritical collisionless shock and of the associated proton energization," *Matter and Radiation at Extremes* (2021), 10.1063/5.0055071.
- [96] V. Železný, V. Goian, J. Navrátil, Č. Drašar, M. Orlita, B. A. Piot, J. Prokleska, M. Míšek, J. Kaštíl, and S. Kamba, "Anomalous temperature dependence of the effective mass in *p*-type Bi₂Te₃," *Physical Review B* **104**, 165203 (2021).
- [97] Chendong Zhao, Jinshan Li, Yudong Liu, William Yi Wang, Hongchao Kou, Eric Beaugnon, and Jun Wang, "Tailoring mechanical and magnetic properties of AlCoCrFeNi high-entropy alloy via phase transformation," *Journal of Materials Science & Technology* **73**, 83–90 (2021).
- [98] Bangfei Zhou, Wenhao Lin, Zhe Shen, Tianxiang Zheng, Yunbo Zhong, Eric Beaugnon, Francois Debray, Lei Zhang, Hui Wang, and Qiliang Wang, "Growth dynamics of the segregated phase in Zn-6 wt%Bi immiscible alloy superheated in super high static magnetic field," *Journal of Alloys and Compounds* **879**, 160410 (2021).
- [99] Małgorzata Zinkiewicz, Tomasz Wozniak, Tomasz Kazimierczuk, Piotr Kapuscinski, Kacper Oreszczuk, Magdalena Grzeszczyk, Miroslav Bartos, Karol Nogajewski, Kenji Watanabe, Takashi Taniguchi, Clement Faugeras, Piotr Kosacki, Marek Potemski, Adam Babinski, and Maciej R. Molas, "Excitonic Complexes in n-Doped WS₂ Monolayer," *Nano Lett.* **21**, 2519–2525 (2021).
- [100] S. A. Zvyagin, A. N. Ponomaryov, M. Ozerov, E. Schulze, Y. Skourski, R. Beyer, T. Reimann, L. I. Zviagina, E. L. Green, J. Wosnitza, I. Sheikin, P. Bouillot, T. Giamarchi, J. L. Wikara, M. M. Turnbull, and C. P. Landee, "Magnetic properties of a quantum spin ladder in proximity to the isotropic limit," *Physical Review B* **103**, 205131 (2021).