

## Subdivision 2, Publications 2018 – 2020

Creation date: 25/02/2021

### Articles in journals

- 1) 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., **Seiro, S.**, Geibel, C., Steglich, F., Tjeng, L.H., Zwicknagl, G., Severing, A., Possible multiorbital ground state in  $\text{CeCu}_2\text{Si}_2$ , *Physical Review B* 24 102 (2020), S. 245146/1-6  
<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.102.245146>.
- 2) Naidyuk, Y.G., Kvitnitskaya, O.E., **Efremov, D.V.**, **Drechsler, S.-L.**, Enhanced critical temperatures in the strongly overdoped iron-based superconductors  $\text{AFe}_2\text{As}_2$  ( $A = \text{K}, \text{Cs}, \text{Rb}$ ) observed by point contacts, *Low Temperature Physics* 11 46 (2020), S. 1261-1265  
<https://aip.scitation.org/doi/10.1063/10.0002149>.
- 3) Huh, S.S., Kim, Y.S., Kyung, W.S., Jung, J.K., **Kappenberger, R.**, **Aswartham, S.**, **Büchner, B.**, Ok, J.M., Kim, J.S., Dong, C., Hu, J.P., Cho, S.H., Shen, D.W., Denlinger, J.D., Kim, Y.K., Kim, C., Momentum dependent  $d_{xz/yz}$  band splitting in  $\text{LaFeAsO}$ , *Scientific Reports* 1 10 (2020), S. 19377/1-5 <https://www.nature.com/articles/s41598-020-75600-w>.
- 4) **Poccia, N.**, Zhao, S.Y.F., Yoo, H., Huang, X., Yan, H., Chu, Y.S., Zhong, R., Gu, G., Mazzoli, C., Watanabe, K., Taniguchi, T., Campi, G., Vinokur, V.M., Kim, P., Spatially correlated incommensurate lattice modulations in an atomically thin high-temperature  $\text{Bi}_{2.1}\text{Sr}_{1.9}\text{CaCu}_2\text{O}_{8+y}$  superconductor, *Physical Review Materials* 11 4 (2020), S. 114007/  
<https://journals.aps.org/prmaterials/abstract/10.1103/PhysRevMaterials.4.114007>.
- 5) Trugenberger, C., Diamantini, M.C., **Poccia, N.**, **de Souza Nogueira, F.**, Vinokur, V.M., Magnetic Monopoles and Superinsulation in Josephson Junction Arrays, *Quantum Reports* 3 2 (2020), S. 388-399 <https://www.mdpi.com/2624-960X/2/3/27>.
- 6) **Shipunov, G.**, **Kovalchuk, I.**, **Piening, B.R.**, **Labracherie, V.**, **Veyrat, A.**, **Wolf, D.**, **Lubk, A.**, **Subakti, S.**, **Giraud, R.**, **Dufouleur, J.**, **Shokri, S.**, **Cagliaris, F.**, **Hess, C.**, **Efremov, D.V.**, **Büchner, B.**, **Aswartham, S.**, Polymorphic  $\text{PtBi}_2$ : Growth, structure, and superconducting properties, *Physical Review Materials* 12 4 (2020), S. 124202/1-8  
<https://journals.aps.org/prmaterials/abstract/10.1103/PhysRevMaterials.4.124202>.
- 7) **Selter, S.**, **Scaravaggi, F.**, **Kappenberger, R.**, **Naumann, M.**, **Romaka, V.V.**, **Knupfer, M.**, **Aswartham, S.**, **Wolter, A.U.B.**, **Wurmehl, S.**, **Büchner, B.**, Evolution of Structure and Electronic Correlations in a Series of  $\text{BaT}_2\text{As}_2$  ( $T = \text{Cr-Cu}$ ) Single Crystals, *Inorganic Chemistry* (2020), S. 16913–16923  
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- 8) **Kushnirenko, Y.**, **Evtushinsky, D.**, Kim, T., **Morozov, I.**, **Harnagea, L.**, **Wurmehl, S.**, **Aswartham, S.**, **Büchner, B.**, Chubukov, A., **Borisenko, S.**, Nematic superconductivity in  $\text{LiFeAs}$ , *Physical Review B* 18 102 (2020), S. 184502/1-9  
<https://doi.org/10.1103/PhysRevB.102.184502>.
- 9) Nakajima, Y., Metz, T., Eckberg, C., Kirshenbaum, K., Hughes, A., Wang, R., Wang, L., Saha, S., Liu, I., Butch, N., Campbell, D., Eo, Y., Graf, D., **Liu, Z.**, **Borisenko, S.**, Zavalij, P., Paglione, J., Quantum-critical scale invariance in a transition metal alloy, *Communications Physics* 1 3 (2020), S. 181/1-8 <https://doi.org/10.1038/s42005-020-00448-50P>.
- 10) Poelchen, G., Schulz, S., Mende, M., Güttler, M., Generalov, A., **Fedorov, A.**, Caroca-Canales, N., Geibel, C., Kliemt, K., Krellner, C., Danzenbächer, S., Usachov, D., Dudin, P., Antonov, V., Allen, J., Laubschat, C., Kummer, K., Kucherenko, Y., Vyalikh, D., Unexpected differences between surface and bulk spectroscopic and implied Kondo properties of heavy fermion  $\text{CeRh}_2\text{Si}_2$ , *npj Quantum Materials* 1 5 (2020), S. 70/1-7 <https://doi.org/10.1038/s41535-020-00273-7>.
- 11) **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 Quantum Materials* 1 5 (2020), S. 67/1-8 <https://doi.org/10.1038/s41535-020-00268-4>.

- 12) **Sparing, M., Espenhahn, T., Fuchs, G.,** Hossain, M., Abdkader, A., **Niensch, K.,** Cherif, C., **Hühne, R.,** Analysis of the high-speed rotary motion of a superconducting magnetic bearing during ring spinning, *Engineering Research Express* 3 2 (2020), S. 035039/1-8 <https://doi.org/10.1088/2631-8695/abb7e4>.
- 13) Guguchia, Z., Das, D., Wang, C., Adachi, T., Kitajima, N., Elender, M., Brückner, F., Ghosh, S., **Grinenko, V.,** Shiroka, T., Müller, M., Mudry, C., Baines, C., Bartkowiak, M., Koike, Y., Amato, A., Tranquada, J., Klauss, H., Hicks, C., Luetkens, H., Using Uniaxial Stress to Probe the Relationship between Competing Superconducting States in a Cuprate with Spin-stripe Order, *Physical Review Letters* 9 125 (2020), S. 097005/1-7 <https://doi.org/10.1103/PhysRevLett.125.097005>.
- 14) Haindl, S., Sato, M., **Wurmehl, S., Büchner, B.,** Kampert, E., Pulsed laser deposition of Fe-oxypnictides: Co- and F-substitution, *Superconductor Science and Technology* 10 33 (2020), S. 105004/1-9 <https://doi.org/10.1088/1361-6668/ababea>.
- 15) Kitatani, M., Si, L., **Janson, O.,** Arita, R., Zhong, Z., Held, K., Nickelate superconductors-a renaissance of the one-band Hubbard model, *npj Quantum Materials* 1 5 (2020), S. 59/1-6 <https://doi.org/10.1038/s41535-020-00260-y>.
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- 17) **Sturza, M.I., Amigó, M.L., Facio, J.I., Cagliaris, F., Aswartham, S., Seiro, S., Hess, C., van den Brink, J., Wurmehl, S., Büchner, B.,**  $\text{La}_6\text{Pd}_{2+x}\text{Sb}_{15}$  ( $x = 0.28$ ): A rare-earth palladium intermetallic compound with extended pnictogen ribbons, *Journal of Solid State Chemistry* 291 (2020), S. 121578 <https://doi.org/10.1016/j.jssc.2020.121578>.
- 18) Feig, M., Schnelle, W., Maisuradze, A., Amon, A., Baines, C., Nicklas, M., **Seiro, S.,** Howald, L., Khasanov, R., Leithe-Jasper, A., Gumenuik, R., Conventional isotropic s-wave superconductivity with strong electron-phonon coupling in  $\text{Sc}_5\text{Rh}_6\text{Sn}_{18}$ , *Physical Review B* 2 102 (2020), S. 024508/1-8 <https://journals.aps.org/prb/abstract/10.1103/PhysRevB.102.024508>.
- 19) **Morrow, R., Sturza, M., Ray, R.,** Himcinschi, C., Kern, J., Schlender, P., **Richter, M., Wurmehl, S., Büchner, B.,** Discovery, Crystal Growth, and Characterization of Garnet  $\text{Eu}_2\text{PbSb}_2\text{Zn}_3\text{O}_{12}$ , *European Journal of Inorganic Chemistry* 26 2020 (2020), S. 2512-2520 <https://doi.org/10.1002/ejic.202000271>.
- 20) Muntyanu, F., Gilewski, A., **Nenkov, K.,** Zaleski, A., Chistol, V., Influence of the pronounced degree of imperfection on the superconductivity, weak magnetism, and quantum transport of crystallite structures with one or more nano-width multilayer interfaces of  $\text{Bi}_{1-x}\text{Sb}_x$  ( $0.07 \leq x \leq 0.2$ ) alloys, *Physica B* 592 (2020), S. 412262/1-5 <https://doi.org/10.1016/j.physb.2020.412262>.
- 21) Kuzmicheva, T.E., Kuzmichev, S.A., Morozov, I.V., **Wurmehl, S., Büchner, B.,** Experimental Evidence of Three-Gap Superconductivity in  $\text{LiFeAs}$ , *JETP Letters* 6 111 (2020), S. 350-356 <https://link.springer.com/article/10.1134/S002136402006003X>.
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- 25) **Smirnova, E., Rezaev, R., Fomin, V.**, Simulation of dynamics of the order parameter in superconducting nanostructured materials: Effect of the magnetic field renormalization, *Low Temperature Physics* 46 (2020), S. 325-330 <https://doi.org/10.1063/10.0000862>.
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