

## Subdivision 12, Publications 2018 – 2020

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### Articles in journals

- 1) Martinez, V., Karadeniz, B., Biliškov, N., Lončarić, I., Muratović, S., Žilić, D., **Avdoshenko, S.M.**, Roslova, M., **Popov, A.A.**, Užarević, K., Tunable Fulleretic Sodalite MOFs: Highly Efficient and Controllable Entrapment of C<sub>60</sub> Fullerene via Mechanochemistry, *Chemistry of Materials* 24 32 (2020), S. 10628-10640  
<https://pubs.acs.org/doi/10.1021/acs.chemmater.0c03796>.
- 2)\* Ditte, K., **Perez, J.**, Chae, S., Hamsch, M., Al-Hussein, M., Komber, H., Formanek, P., Mannsfeld, S.C.B., Fery, A., Kiriy, A., Lissel, F., Ultrasoft and High-Mobility Block Copolymers for Skin-Compatible Electronics, *Advanced Materials* 4 33 (2021), S. 2005416/1-8  
<https://onlinelibrary.wiley.com/doi/10.1002/adma.202005416>.
- 3) Jäschke, A., Stumpf, T., **Aliabadi, A.**, **Büchner, B.**, **Kataev, V.**, Hahn, T., Kortus, J., Kersting, B., Tetranuclear Lanthanide Complexes Supported by Hydroxyquinoline-Calix[4]arene-Ligands: Synthesis, Structure, and Magnetic Properties of [Ln<sub>4</sub>(H<sub>3</sub>L)<sub>2</sub>(μ-OH)<sub>2</sub>(NO<sub>3</sub>)<sub>4</sub>] (Ln = Tb, Dy, Yb) and [Dy<sub>2</sub>(H<sub>4</sub>L)<sub>2</sub>(NO<sub>3</sub>)](NO<sub>3</sub>)<sub>2</sub>, *European Journal of Inorganic Chemistry* 44 2020 (2020), S. 4203-4214 <https://chemistry-europe.onlinelibrary.wiley.com/doi/10.1002/ejic.202000718>.
- 4)\* **Dörfel, G.**, Wehreter, E., The Fifty Percent Machines—A Short History of Influence Machines and an Elementary Theory of Their Efficiency: An Attempt, *Annalen der Physik* 1 533 (2021), S. 2000465/1-6  
<https://onlinelibrary.wiley.com/doi/10.1002/andp.202000465>.
- 5) **Hao, Y.**, **Wang, Y.**, **Spree, L.**, **Liu, F.**, Rotation of fullerene molecules in the crystal lattice of fullerene/porphyrin: C<sub>60</sub> and Sc<sub>3</sub>N@C<sub>80</sub>, *Inorganic Chemistry Frontiers* (2020), S. 122-126  
<https://pubs.rsc.org/en/content/articlelanding/2020/QI/d0qi01101k#!divAbstract>.
- 6) Niu, W., Ma, J., Soltani, P., Zheng, W., **Liu, F.**, **Popov, A.A.**, Weigand, J.J., Komber, H., Poliani, E., Casiraghi, C., Droste, J., Hansen, M.R., Osella, S., Beljonne, D., Bonn, M., Wang, H.I., Feng, X., Liu, J., Mai, Y., A Curved Graphene Nanoribbon with Multi-Edge Structure and High Intrinsic Charge Carrier Mobility, *Journal of the American Chemical Society* 43 142 (2020), S. 18293-18298 <https://pubs.acs.org/doi/abs/10.1021/jacs.0c07013>.
- 7) Rietsch, P., Sobottka, S., Hoffmann, K., **Popov, A.A.**, Hildebrandt, P., Sarkar, B., Resch-Genger, U., Eigler, S., Between Aromatic and Quinoid Structure: A Symmetrical UV to Vis/NIR Benzothiadiazole Redox Switch, *Chemistry - A European Journal* 26 (2020), S. 17361-17365 <https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/chem.202004009>.
- 8) **Kuhrt, R.**, Ho, P.-Y., **Hantusch, M.**, Lissel, F., Blacque, O., **Knupfer, M.**, **Büchner, B.**, Synthesis and charge transfer characteristics of a ruthenium-acetylide complex, *RSC Advances* 70 10 (2020), S. 43242-43247  
<https://pubs.rsc.org/en/content/articlehtml/2020/ra/d0ra08390a>.
- 9) Chang, H., Liu, H., **Dmitrieva, E.**, Chen, Q., Ma, J., He, P., Liu, P., **Popov, A.A.**, Cao, X.-Y., Wang, X.-Y., Zou, Y., Narita, A., Müllen, K., Peng, H., Hu, Y., Furan-containing double tetraoxa[7]helicene and its radical cation, *Chemical Communications* (2020), S. 1-5  
<https://pubs.rsc.org/en/content/articlelanding/2020/cc/d0cc06970a#!divAbstract>.
- 10) Knaus, J., Sommer, M., Duchstein, P., Gumeniuk, R., Akselrud, L., **Sturm, S.**, Auffermann, G., Hennig, C., Zahn, D., Hulliger, J., Sturm, E.V., Polar Structure Formation in Solid Solution of Strontium-Substituted Fluorapatite-Gelatin Composites: From Structural and

- Morphogenetic Aspects to Pyroelectric Properties, *Chemistry of Materials* 19 32 (2020), S. 8619-8632 <https://pubs.acs.org/doi/10.1021/acs.chemmater.0c02993>.
- 11) Yu, M., Chandrasekhar, N., Raghupathy, Ramya Kormath Madam, Ly, K. H., Zhang, H., **Dmitrieva, E.**, Liang, C., Lu, X., Kühne, Thomas D., Mirhosseini, H., Weidinger, Inez M., Feng, X., A High-Rate Two-Dimensional Polyarylimide Covalent Organic Framework Anode for Aqueous Zn-Ion Energy Storage Devices, *Journal of the American Chemical Society* (2020), S. 19570–19578 <https://doi.org/10.1021/jacs.0c07992>.
  - 12) Zaripov, R., Kandrashkin, Y., Salikhov, K., **Büchner, B.**, Liu, F., **Rosenkranz, M.**, **Popov, A.**, **Kataev, V.**, Unusually large hyperfine structure of the electron spin levels in an endohedral dimetallofullerene and its spin coherent properties, *Nanoscale* 39 12 (2020), S. 20513-20521 <https://doi.org/10.1039/D0NR06114J>.
  - 13) Ullah, S., Shi, Q., Zhou, J., Yang, X., **Ta, Q.H.**, Hasan, M., Ahmad, N., Fu, L., **Bachmatiuk, A.**, **Rümmeli, M.**, Advances and Trends in Chemically Doped Graphene, *Advanced Materials Interfaces* 24 7 (2020), S. 2000999/1-23 <https://doi.org/10.1002/admi.202000999>.
  - 14) Schulz, M., Hagemeyer, N., Wehmeyer, F., Lowe, G., **Rosenkranz, M.**, Seidler, B., **Popov, A.A.**, Streb, C., Vos, J.G., Dietzek, B., Photoinduced Charge Accumulation and Prolonged Multielectron Storage for the Separation of Light and Dark Reaction, *Journal of the American Chemical Society* 37 142 (2020), S. 15722-15728 <https://pubs.acs.org/doi/10.1021/jacs.0c03779>.
  - 15) **Krylov, D.**, **Velkos, G.**, **Chen, C.-H.**, **Büchner, B.**, Kostanyan, A., Greber, T., **Avdoshenko, S.M.**, **Popov, A.A.**, Magnetic hysteresis and strong ferromagnetic coupling of sulfur-bridged Dy ions in clusterfullerene Dy<sub>2</sub>S@C<sub>82</sub>, *Inorganic Chemistry Frontiers* 19 7 (2020), S. 3521-3532 <https://pubs.rsc.org/en/content/articlelanding/2020/qi/d0qi00771d#!divAbstract>.
  - 16) **Fomin, V.M.**, Timoshenko, V., Spin-Dependent Phenomena in Semiconductor Micro-and Nanoparticles—From Fundamentals to Applications, *Applied Sciences* 14 10 (2020), S. 492/1-45 <https://doi.org/10.3390/app10144992>.
  - 17) Pykhova, A., Semivrazhskaya, O., **Samoylova, N.S.**, Rybalchenko, A., **Rosenkranz, M.**, Ioffe, I., **Popov, A.A.**, Goryunkov, A., Addition of CF<sub>2</sub> group to endohedral fullerene Sc<sub>3</sub>N@Ih-C<sub>80</sub>, *Dalton Transactions* 26 49 (2020), S. 9137-9147 <https://doi.org/10.1039/D0DT01513J>.
  - 18) **Liu, F.**, **Popov, A.A.**, Endohedral metallofullerene crystals: playing with disorders, *Acta Crystallographica A - Foundation and Advances A* 75 (2019), S. E 433.
  - 19) Fedorenko, S., Elistratova, J., Stepanov, A., Khazieva, A., Mikhailov, M., Sokolov, M., Kholin, K., Nizameev, I., **Mendes, R.**, **Rümmeli, M.**, **Gemming, T.**, **Weise, B.**, **Giebeler, L.**, **Mikhailova, D.**, Dutz, S., Zahn, D., Voloshina, A., Sapunova, A., Daminova, A., Fedosimova, S., Mustafina, A., ROS-generation and cellular uptake behavior of amino-silica nanoparticles arisen from their uploading by both iron-oxides and hexamolybdenum clusters, *Materials Science and Engineering C* (2020), S. 111305/ <https://doi.org/10.1016/j.msec.2020.111305>.
  - 20) **Li, T.**, **Bandari, V.K.**, **Hantusch, M.**, Xin, J., **Kuhr, R.**, **Ravishankar, R.**, **Xu, L.**, Zhang, J., **Knupfer, M.**, **Zhu, F.**, Yan, D., **Schmidt, O.G.**, Integrated molecular diode as 10 MHz half-wave rectifier based on an organic nanostructure heterojunction, *Nature Communications* 11 11 (2020), S. 3592/1-10 <https://www.nature.com/articles/s41467-020-17352-9>.
  - 21) Prasad, K.S., Pillai, R.R., **Ghimire, M.P.**, **Ray, R.**, **Richter, M.**, Shivamallu, C., Jain, A.S., Prasad, S.K., P, S., Armaković, S., Armaković, S.J., Amachawadi, R.G., Indole moiety induced biological potency in pseudo-peptides derived from 2-amino-2-(1H-indole-2-yl) based acetamides: Chemical synthesis, in vitro anticancer activity and theoretical studies, *Journal of Molecular Structure* 1217 (2020), S. 128445/1-12

- <https://www.sciencedirect.com/science/article/abs/pii/S0022286020307705?via%3Dihub#!>.
- 22) Muratović, S., Karadeniz, B., Stolar, T., Lukin, S., Halasz, I., Herak, M., Mali, G., **Krupskaya, Y., Kataev, V.**, Žilić, D., Užarević, K., Impact of dehydration and mechanical amorphization on the magnetic properties of Ni(II)-MOF-74, *Journal of Materials Chemistry C* 21 8 (2020), S. 7132-7142 <https://doi.org/10.1039/d0tc00844c>.
  - 23) Borovinskaya, E., **Oswald, S.**, Reschetilowski, W., Effects of Promoter on Structural and Surface Properties of Zirconium Oxide-Based Catalyst Materials, *Molecules* 11 25 (2020), S. 2619/1-12 <https://www.mdpi.com/1420-3049/25/11/2619>.
  - 24) **Velkos, G.**, Yang, W., Yao, Y.-R., **Sudarkova, S.M.**, Liu, X.Y., **Büchner, B.**, **Avdoshenko, S.M.**, Chen, N., **Popov, A.A.**, Shape-adaptive single-molecule magnetism and hysteresis up to 14 K in oxide clusterfullerenes Dy<sub>2</sub>O@C<sub>72</sub> and Dy<sub>2</sub>O@C<sub>74</sub> with fused pentagon pairs and flexible Dy-(μ<sub>2</sub>-O)-Dy angle, *Chemical Science* 18 11 (2020), S. 4766-4772 <https://pubs.rsc.org/en/content/articlelanding/2020/SC/D0SC00624F#!divAbstract>.
  - 25) Novozhilova, M., Anischenko, D., Chepurnaya, I., **Dmitrieva, E.**, Malev, V., Timonov, A., Karushev, M., Metal-centered redox activity in a polymeric Cobalt(II) complex of a sterically hindered salen type ligand, *Electrochimica Acta* 353 (2020), S. 136496/1-12 <https://www.sciencedirect.com/science/article/pii/S0013468620308896>.
  - 26) Möller, L., Thauer, E., Ottmann, A., Deeg, L., **Ghunaim, R.**, **Hampel, S.**, Klingeler, R., CoFe<sub>2</sub>O<sub>4</sub>-filled carbon nanotubes as anode material for lithium-ion batteries, *Journal of Alloys and Compounds* 834 (2020), S. 155018/1-6 <https://www.sciencedirect.com/science/article/abs/pii/S0925838820313815?via%3Dihub>.
  - 27) Zhao, L., **Ta, H.**, **Mendes, R.**, Bachmatiuk, A., **Rümmeli, M.**, In Situ Observations of Freestanding Single-Atom-Thick Gold Nanoribbons Suspended in Graphene, *Advanced Materials Interfaces* 12 7 (2020), S. 2000436/1-7 <https://doi.org/10.1002/admi.202000436>.
  - 28) Ajayakumar, M., Fu, Y., **Liu, F.**, Komber, H., Tkachova, V., Xu, C., Zhou, S., Popov, A.A., Liu, J., Feng, X., Tailoring Magnetic Features in Zigzag-Edged Nanographenes by Controlled Diels-Alder Reactions, *Chemistry - A European Journal* 33 26 (2020), S. 7497-7503 <https://doi.org/10.1002/chem.202001130>.
  - 29) Thauer, E., Ottmann, A., Schneider, P., Möller, L., Deeg, L., Zeus, R., Wilhelmi, F., Schlestein, L., Neef, C., **Ghunaim, R.**, **Gellesch, M.**, **Nowka, C.**, **Scholz, M.**, **Haft, M.**, **Wurmehl, S.**, Wenelska, K., Mijowska, E., Kapoor, A., Bajpai, A., **Hampel, S.**, Klingeler, R., Filled Carbon Nanotubes as Anode Materials for Lithium-Ion Batteries, *Molecules* 5 25 (2020), S. 1064/1-20 <https://doi.org/10.3390/molecules25051064>.
  - 30) **Scholz, M.**, Hayashi, Y., **Eckert, V.**, **Khavrus, V.**, **Leonhardt, A.**, **Büchner, B.**, Mertig, M., **Hampel, S.**, Systematic Investigations of Annealing and Functionalization of Carbon Nanotube Yarns, *Molecules* 5 25 (2020), S. 1144/1-14 <https://doi.org/10.3390/molecules25051144>.
  - 31) **Kuhrt, R.**, **Hantusch, M.**, **Knupfer, M.**, **Büchner, B.**, Charge transfer characteristics of F 6 TCNNQ-gold interface, *Surface and Interface Analysis* 12 52 (2020), S. 953-956 <https://doi.org/10.1002/sia.6794>.
  - 32) Kostanyan, A., Westerström, R., **Kunhardt, D.**, **Büchner, B.**, **Popov, A.**, Greber, T., Sub-Kelvin hysteresis of the dilanthanide single-molecule magnet Tb<sub>2</sub>ScN@C<sub>80</sub>, *Physical Review B* 13 101 (2020), S. 134429/1-6 <https://doi.org/10.1103/PhysRevB.101.134429>.
  - 33) Fedorov, F., Solomatina, M., **Uhlemann, M.**, **Oswald, S.**, Kolosov, D., Morozov, A., Varezchnikov, A., Ivanov, M., Grebenko, A., Sommer, M., Glukhova, O., Nasibulin, A., Sysoev,

- V., Quasi-2D Co<sub>3</sub>O<sub>4</sub> nanoflakes as an efficient gas sensor versus alcohol VOCs, *Journal of Materials Chemistry A* 15 8 (2020), S. 7214-7228 <https://doi.org/10.1039/D0TA00511H>.
- 34) Korb, M., Liu, X., Walz, S., **Rosenkranz, M., Dmitrieva, E., Popov, A.**, Lang, H., (Electrochemical) Properties and Computational Investigations of Ferrocenyl-substituted Fe<sub>3</sub>(μ<sub>3</sub>-PFC)<sub>2</sub>(CO)<sub>9</sub> and Co<sub>4</sub>(μ<sub>4</sub>-PFC)<sub>2</sub>(CO)<sub>9</sub> Clusters and Their Reduced Species, *Inorganic Chemistry* 9 59 (2020), S. 6147–6160 <https://pubs.acs.org/doi/10.1021/acs.inorgchem.0c00276>.
- 35) Intorp, S., Hodecker, M., Müller, M., Tverskoy, O., **Rosenkranz, M., Dmitrieva, E., Popov, A.**, Rominger, F., Freudenberg, J., Dreuw, A., Bunz, U., Quinoidal Azaacenes: 99% Diradical Character, *Angewandte Chemie - International Edition* 30 59 (2020), S. 12396-12401 <https://doi.org/10.1002/anie.201915977>.
- 36) **Dmitrieva, E., Popov, A.**, Yu, X., Hartmann, H., On the Electrochemical Reduction of 4-(Thiazol-2-ylazo)-Substituted 1-Chloronaphthalenes: Formation and Characterization of Stable Radical Anions, *ChemElectroChem* 7 7 (2020), S. 1666-1671 <https://doi.org/10.1002/celec.202000121>.
- 37) **Ge, J.**, Zhu, H., Yang, Y., Xie, Y., Wang, G., Huang, J., Shi, L., **Schmidt, O.G.**, Yu, S., A General and Programmable Synthesis of Graphene-Based Composite Aerogels by a Melamine-Sponge-Templated Hydrothermal Process, *CCS Chemistry* 2 2 (2020), S. 1-12 <https://doi.org/10.31635/ccschem.020.201900073>.
- 38) Karpov, Y., Kiriy, N., Formanek, P., Hoffmann, C., Beryozkina, T., Hamsch, M., Al-Hussein, M., Mannsfeld, S., **Büchner, B., Debnath, B., Bretschneider, M., Krupskaya, Y.**, Lissel, F., Kiriy, A., Sequentially Processed P3HT/CN<sub>6</sub>-CP•-NBu<sub>4</sub><sup>+</sup> Films: Interfacial or Bulk Doping?, *Advanced Electronic Materials* 2020 (2020), S. 1901346/1-13 <https://doi.org/10.1002/aelm.201901346>.
- 39) **Dmitrieva, E.**, Yu, X., Hartmann, H., Electron-transfer initiated nucleophilic substitution of thiophenolate anion by 1-chloro-substituted 4-(thiazol-2-ylazo)naphthalenes, *Electrochemistry Communications* 114 (2020), S. 106706/1-5 <https://doi.org/10.1016/j.elecom.2020.106706>.
- 40) Wrobel, P., Wlodarski, M., Jedrzejewska, A., Placek, K., Szukiewicz, R., Kotowicz, S., Tokarska, K., Quang, H., **Mendes, R.**, Liu, Z., Trzebicka, B., **Rümmeli, M.**, Bachmatiuk, A., A comparative study on simple and practical chemical gas sensors from chemically modified graphene films, *Materials Research Express* 1 6 (2019), S. 015607/1-11 <https://doi.org/10.1088/2053-1591/aae6be>.
- 41) Zeng, M., Liu, J., Zhou, L., **Mendes, R.**, Dong, Y., Zhang, M., Cui, Z., Cai, Z., Zhang, Z., Zhu, D., Yang, T., Li, X., Wang, J., Zhao, L., Chen, G., Jiang, H., **Rümmeli, M.**, Zhou, H., Fu, L., Bandgap tuning of two-dimensional materials by sphere diameter engineering, *Nature Materials* 19 (2020), S. 528-533 <https://www.nature.com/articles/s41563-020-0622-y>.
- 42) **Spree, L., Schlesier, C.**, Kostanyan, A., Westerström, R., Greber, T., **Büchner, B., Avdoshenko, S., Popov, A.**, Single-Molecule Magnets DyM<sub>2</sub>N@C<sub>80</sub> and Dy<sub>2</sub>MN@C<sub>80</sub> (M=Sc, Lu): The Impact of Diamagnetic Metals on Dy<sup>3+</sup> Magnetic Anisotropy, Dy···Dy Coupling, and Mixing of Molecular and Lattice Vibrations, *Chemistry - A European Journal* 11 26 (2020), S. 2436-2449 <https://onlinelibrary.wiley.com/doi/full/10.1002/chem.201904879>.
- 43) Shi, Q., Tokarska, K., **Ta, H.**, Yang, X., Liu, Y., Ullah, S., Liu, L., Trzebicka, B., **Bachmatiuk, A.**, Sun, J., Fu, L., Liu, Z., **Rümmeli, M.**, Substrate Developments for the Chemical Vapor Deposition Synthesis of Graphene, *Advanced Materials Interfaces* 7 7 (2020), S. 1902024/1-10 <https://onlinelibrary.wiley.com/doi/full/10.1002/admi.201902024>.

- 44) **Eckert, V., Haubold, E., Oswald, S.,** Michel, S., Bellmann, C., **Potapov, P., Wolf, D., Hampel, S., Büchner, B.,** Mertig, M., **Leonhardt, A.,** Investigation of the surface properties of different highly aligned N-MWCNT carpets, *Carbon* 141 (2019), S. 99-106  
<https://www.sciencedirect.com/science/article/abs/pii/S0008622318308492>.
- 45) Sahabudeen, H., Qi, H., Ballabio, M., Položij, M., Olthof, S., Shivhare, R., Jing, Y., Park, S., Liu, K., Zhang, T., Ma, J., **Rellinghaus, B.,** Mannsfeld, S., Heine, T., Bonn, M., Cánovas, E., Zheng, Z., Kaiser, U., Dong, R., Feng, X., Highly Crystalline and Semiconducting Imine-Based Two-Dimensional Polymers Enabled by Interfacial Synthesis, *Angewandte Chemie - International Edition* 15 59 (2020), S. 6028-6036  
<https://doi.org/10.1002/anie.201915217>.
- 46) Ma, J., Fu, Y., **Dmitrieva, E., Liu, F.,** Komber, H., Hennersdorf, F., **Popov, A.A.,** Weigand, J., Liu, J., Feng, X., Helical Nanographenes Containing an Azulene Unit: Synthesis, Crystal Structures, and Properties, *Angewandte Chemie - International Edition* 14 59 (2020), S. 5637-5642 <https://doi.org/10.1002/anie.201914716>.
- 47) **Hantusch, M., Kuhrt, R., Knupfer, M.,** Photoelectron Spectroscopy on Polycyclic Hydrocarbon-F6TCNNQ Interfaces, *The Journal of Physical Chemistry C* 5 124 (2020), S. 2961–2967 <https://doi.org/10.1021/acs.jpcc.9b08409>.
- 48) **Krylov, D., Schimmel, S., Dubrovin, V., Liu, F., Nguyen, T.T.N., Spree, L., Chen, C., Velkos, G.,** Bulbucan, C., Westerström, R., Studniarek, M., Dreiser, J., **Heß, C., Büchner, B., Avdoshenko, S., Popov, A.A.,** Substrate-Independent Magnetic Bistability in Monolayers of the Single-Molecule Magnet Dy<sub>2</sub>ScN@C<sub>80</sub> on Metals and Insulators, *Angewandte Chemie - International Edition* 14 59 (2020), S. 5756-5764  
<https://doi.org/10.1002/anie.201913955>.
- 49) Ma, J., Fu, Y., **Dmitrieva, E., Liu, F.,** Komber, H., Hennersdorf, F., **Popov, A.,** Weigand, J., Liu, J., Feng, X., Helical Nanographenes Containing an Azulene Unit: Synthesis, Crystal Structures, and Properties, *Angewandte Chemie - International Edition* 14 132 (2019), S. 5686-5691 <https://onlinelibrary.wiley.com/doi/abs/10.1002/ange.201914716>.
- 50) **Liu, F., Spree, L.,** Molecular spinning top: visualizing the dynamics of M<sub>3</sub>N@C<sub>80</sub> with variable temperature single crystal X-ray diffraction, *Chemical Communications* 86 55 (2019), S. 13000-13003  
<https://pubs.rsc.org/en/content/articlelanding/2019/CC/C9CC06363C#!divAbstract>.
- 51) **Dubrovin, V., Popov, A.A., Avdoshenko, S.,** Magnetism in Ln molecular systems with 4f/valence-shell interplay (FV-magnetism), *Chemical Communications* 93 55 (2019), S. 13963-13966  
<https://pubs.rsc.org/en/content/articlelanding/2019/CC/C9CC06913E#!divAbstract>.
- 52) Melidonie, J., **Dmitrieva, E.,** Zhang, K., Fu, Y., **Popov, A.A.,** Pisula, W., Berger, R., Liu, J., Feng, X., Dipyrrene-Fused Dicyclopenta[a,f]naphthalenes, *The Journal of Organic Chemistry* 1 85 (2020), S. 215-223 <https://pubs.acs.org/doi/10.1021/acs.joc.9b02626>.
- 53) **Dmitrieva, E.,** Chepurnaya, I., Karushev, M., Timonov, A., The Nature of Charge Carriers in Polymeric Complexes of Nickel with Schiff Bases Containing Electron-Withdrawing Substituents, *Russian Journal of Electrochemistry* 11 55 (2019), S. 1039–1046  
<https://doi.org/10.1134/S1023193519110041>.
- 54) **Kataeva, O.,** Metlushka, K., Ivshin, K., Nikitina, K., Alfonsov, V., Vandyukov, A., Khrizanforov, M., Budnikova, Y., Sinyashin, O., **Krupskaya, Y., Kataev, V., Büchner, B., Knupfer, M.,** An unusual donor–acceptor system MnIIPc-TCNQ/F4-TCNQ and the properties of the mixed single crystals of metal phthalocyanines with organic acceptor molecules, *Dalton Transactions* 46 48 (2019), S. 17252-17257  
<https://doi.org/10.1039/C9DT03642C>.

- 55) Zaripov, R., **Avdoshenko, S.**, Khairuzhdinov, I., Salikhov, K., Voronkova, V., Weheabby, S., Ruffer, T., **Popov, A.A., Büchner, B., Kataev, V.**, Effect of the Diamagnetic Single-Crystalline Host on the Angular-Resolved Electron Nuclear Double Resonance Experiments: Case of Paramagnetic [nBu<sub>4</sub>N]<sub>2</sub>[Cu(opba)] Embedded in Diamagnetic [nBu<sub>4</sub>N]<sub>2</sub>[Ni(opba)], *Journal of Physical Chemistry Letters* 10 (2019), S. 6565-6571 <https://doi.org/10.1021/acs.jpcllett.9b02523>.
- 56) **Liu, F., Spree, L., Krylov, D., Velkos, G., Avdoshenko, S., Popov, A.A.**, Single-Electron Lanthanide-Lanthanide Bonds Inside Fullerenes toward Robust Redox-Active Molecular Magnets, *Accounts of Chemical Research* 10 52 (2019), S. 2981-2993 <https://doi.org/10.1021/acs.accounts.9b00373>.
- 57) Ehrling, S., Senkovska, I., Bon, V., Evans, J.D., Petkov, P., **Krupskaya, Y., Kataev, V.**, Wulf, T., Krylov, A., Vtyurin, A., Krylova, S., Adichtchev, S., Slyusareva, E., Weiss, M.S., **Büchner, B.**, Heine, T., Kaskel, S., Crystal size versus paddle wheel deformability: selective gated adsorption transitions of the switchable metal-organic frameworks DUT-8(Co) and DUT-8(Ni), *Journal of Materials Chemistry A* 37 7 (2019), S. 21459-21475 <https://pubs.rsc.org/en/content/articlelanding/2019/TA/C9TA06781G#!divAbstract>.
- 58) Castro, K.P., Bukovsky, E.V., Kuvychko, I.V., DeWeerd, N.J., Chen, Y.-S., Deng, S.H.M., Wang, X.-B., **Popov, A.A.**, Strauss, S.H., Boltalina, O.V., PAH/PAH(CF<sub>3</sub>)<sub>n</sub> Donor/Acceptor Charge-Transfer Complexes in Solution and in Solid-State Co-Crystals, *Chemistry - A European Journal* 59 25 (2019), S. 13547-13565 <https://onlinelibrary.wiley.com/doi/full/10.1002/chem.201902712>.
- 59) Stepanov, A., **Mendes, R., Rummeli, M., Gemming, T.**, Nizameev, I., Mustafina, A., Synthesis of spherical iron-oxide nanoparticles of various sizes under different synthetic conditions, *Chemical Papers* 11 73 (2019), S. 2715-2722 <https://doi.org/10.1007/s11696-019-00823-9>.
- 60) Samal, M., **Valligatla, S.**, Saad, N.A., Rao, M.V., Rao, D.N., Sahu, R., Biswal, B.P., A thiazolo[5,4-d]thiazole-bridged porphyrin organic framework as a promising nonlinear optical material, *Chemical Communications* 74 55 (2019), S. 11025-11028 <https://pubs.rsc.org/en/content/articlelanding/2019/CC/C9CC05415D#!divAbstract>.
- 61) Requardt, H., Braun, A., Steinberg, P., **Hampel, S.**, Hansen, T., Surface defects reduce Carbon Nanotube toxicity in vitro, *Toxicology in Vitro* 60 (2019), S. 12-18 <https://www.sciencedirect.com/science/article/pii/S0887233318305800?via%3Dihub>.
- 62) **Bandari, V.K., Gu, Y., Shi, S., Nan, Y.**, He, K., Li, Y., **Bandari, N., Moradi, S.**, Tian, H., **Zhu, F.**, Geng, Y., Yan, D., **Schmidt, O.G.**, Fully Integrated Microscale Quasi-2D Crystalline Molecular Field-Effect Transistors, *Advanced Functional Materials* 36 29 (2019), S. 1903738/1-9 <https://onlinelibrary.wiley.com/doi/full/10.1002/adfm.201903738>.
- 63) Hasan, M., Meiou, W., Yulian, L., Ullah, S., Ta, H., Zhao, L., **Mendes, R.**, Malik, Z., Ahmad, N., Liu, Z., **Rummeli, M.**, Direct chemical vapor deposition synthesis of large area single-layer brominated graphene, *RSC Advances* 24 9 (2019), S. 13527-13532 <https://pubs.rsc.org/en/content/articlelanding/2019/RA/C9RA01152H#!divAbstract>.
- 64) Hasan, M., Meiou, W., Yulian, L., Ullah, S., Ta, H.Q., Zhao, L., **Mendes, R.G.**, Malik, Z.P., Ahmad, N.M., Liu, Z., **Rummeli, M.H.**, Correction: Direct chemical vapor deposition synthesis of large area single-layer brominated graphene, *RSC Advances* 28 9 (2019), S. 16057 <https://pubs.rsc.org/en/content/articlelanding/2019/ra/c9ra90038a#!divAbstract>.
- 65) Biswal, B.P., **Valligatla, S.**, Wang, M., Banerjee, T., Saad, N.A., Mariserla, B.M.K., Chandrasekhar, N., Becker, D., Addicoat, M., Senkovska, I., Berger, R., Rao, D.N., Kaskel, S., Feng, X., Nonlinear Optical Switching in Regioregular Porphyrin Covalent Organic

- Frameworks, *Angewandte Chemie - International Edition* 21 58 (2019), S. 6896-6900  
<https://doi.org/10.1002/anie.201814412>.
- 66) Ullah, S., Hasan, M., **Ta, H.Q.**, Zhao, L., Shi, Q., Fu, L., Choi, J., Yang, R., Liu, Z., **Rümmeli, M.H.**, Synthesis of Doped Porous 3D Graphene Structures by Chemical Vapor Deposition and Its Applications, *Advanced Functional Materials* 48 29 (2019), S. 1904457/1-17  
<https://onlinelibrary.wiley.com/doi/full/10.1002/adfm.201904457>.
- 67) Yang, W., **Velkos, G., Liu, F., Sudarkova, S.M.**, Wang, Y., Zhuang, J., Zhang, H., Li, X., Zhang, X., **Büchner, B., Avdoshenko, S.M., Popov, A.A.**, Chen, N., Single Molecule Magnetism with Strong Magnetic Anisotropy and Enhanced Dy···Dy Coupling in Three Isomers of Dy-Oxide Clusterfullerene Dy<sub>2</sub>O@C<sub>82</sub>, *Advanced Science* 20 6 (2019), S. 1901352/1-18  
<https://onlinelibrary.wiley.com/doi/10.1002/advs.201901352>.
- 68) Huettner, C., Hagemann, D., Troschke, E., Hippauf, F., Borchardt, L., **Oswald, S.**, Henle, T., Kaskel, S., Tailoring the Adsorption of ACE-Inhibiting Peptides by Nitrogen Functionalization of Porous Carbons, *Langmuir* 30 35 (2019), S. 9721-9731  
<https://doi.org/10.1021/acs.langmuir.9b00996>.
- 69) Liu, Y., Nitschke, M., Stepien, L., **Khavrus, V.**, Bezugly, V., Cuniberti, G., Ammonia Plasma-Induced n-Type Doping of Semiconducting Carbon Nanotube Films: Thermoelectric Properties and Ambient Effects, *ACS Applied Materials & Interfaces* 24 11 (2019), S. 21807-21814 <https://doi.org/10.1021/acsami.9b02918>.
- 70) Tzounis, L., Liebscher, M., **Fuge, R., Leonhardt, A.**, Mechtcherine, V., P- and n-type thermoelectric cement composites with CVD grown p- and n-doped carbon nanotubes: Demonstration of a structural thermoelectric generator, *Energy and Buildings* 191 (2019), S. 151-163 <https://doi.org/10.1016/j.enbuild.2019.03.027>.
- 71) Ho, P., Komber, H., Horatz, K., Tsuda, T., Mannsfeld, S., **Dmitrieva, E.**, Blacque, O., Kraft, U., Sirringhaus, H., Lissel, F., Synthesis and Characterization of a Semiconducting and Solution-processable Ruthenium-based Polymetallayne, *Polymer Chemistry* 2 11 (2019), S. 472-479  
<https://pubs.rsc.org/en/content/articlelanding/2019/py/c9py01090d#!divAbstract>.
- 72) **Dmitrieva, E., Rosenkranz, M.**, Alesanco, Y., Viñuales, A., Spectroelectrochemical study of alkyl-aryl asymmetric viologens in poly(vinyl alcohol) (PVA) – borax electrolyte, *Electrochimica Acta* 323 (2019), S. 134792  
<https://www.sciencedirect.com/science/article/pii/S0013468619316639?dgcid=author>.
- 73) **Kovbasa, N., Graf, L., Knupfer, M.**, Evolution of the charge carrier plasmon in the one-dimensional metal TTF-TCNQ as a function of temperature and momentum, *Materials Research Express* 10 6 (2019), S. 106319/1-7  
<https://iopscience.iop.org/article/10.1088/2053-1591/ab3f9d>.
- 74) Kataeva, O., Ivshin, K., Metlushka, K., Latypov, S., Nikitina, K., Zakharychev, D., Laskin, A., Alfonsov, V., Sinyashin, O., **Mgeladze, E., Jäger, A., Krupskaya, Y., Büchner, B., Knupfer, M.**, Charge-Transfer Complexes of Linear Acenes with a New Acceptor Perfluoroanthraquinone. The Interplay of Charge-Transfer and F···F Interactions, *Crystal Growth & Design* 9 19 (2019), S. 5123-5131  
<https://pubs.acs.org/doi/10.1021/acs.cgd.9b00486>.
- 75) Gonzalez-Martinez, I., Bachmatiuk, A., **Gemming, T.**, Cuniberti, G., Trzebicka, B., Rummeli, M., Room temperature single-step synthesis of metal decorated boron-rich nanowires via laser ablation, *Nano Convergence* 6 (2019), S. 14/1-9  
<https://doi.org/10.1186/s40580-019-0185-2>.
- 76) Zhong, H., Ly, K., Wang, M., **Krupskaya, Y.**, Han, X., Zhang, Jichao, Zhang, Jian, **Kataev, V., Büchner, B.**, Weidinger, I., Kaskel, S., Liu, P., Chen, M., Dong, R., Feng, X., A Phthalocyanine-Based Layered Two-Dimensional Conjugated Metal-Organic Framework as a Highly

- Efficient Electrocatalyst for the Oxygen Reduction Reaction, *Angewandte Chemie - International Edition* 31 58 (2019), S. 10677 – 10682  
<https://onlinelibrary.wiley.com/doi/full/10.1002/anie.201907002>.
- 77) Sonntag, L., Shamraienko, V., Fan, X., Samadi Khoshkhoo, M., Knepe, D., **Koitzsch, A., Gemming, T.**, Hiekel, K., Leo, K., Lesnyak, V., Eychmüller, A., Colloidal PbS nanoplatelets synthesized via cation exchange for electronic applications, *Nanoscale* 41 11 (2019), S. 19370-19379  
<https://pubs.rsc.org/en/content/articlelanding/2019/NR/C9NR02437A#!divAbstract>.
- 78) Fedorenko, S., Stepanov, A., Sibgatullina, G., Samigullin, D., Mukhitov, A., Petrov, K., **Mendes, R., Rümeli, M., Giebeler, L., Weise, B., Gemming, T.**, Nizameev, I., Kholin, K., Mustafina, A., Fluorescent magnetic nanoparticles for modulating the level of intracellular Ca<sup>2+</sup> in motoneurons, *Nanoscale* 34 11 (2019), S. 16103-16113  
<https://pubs.rsc.org/en/content/articlelanding/2019/NR/C9NR05071J#!divAbstract>.
- 79) Blaudeck, T., Preuß, A., Scharf, S., Notz, S., Kossmann, A., Hartmann, S., Kasper, L., **Mendes, R., Gemming, T.**, Hermann, S., Lang, H., Schulz, S., Photosensitive Field-Effect Transistors Made from Semiconducting Carbon Nanotubes and Non-Covalently Attached Gold Nanoparticles, *Physica Status Solidi A* 19 216 (2019), S. 1900030/1-11  
<https://doi.org/10.1002/pssa.201900030>.
- 80) **Morávková, Z., Dmitrieva, E.**, The First Products of Aniline Oxidation - SERS Spectroelectrochemistry, *ChemistrySelect* 30 4 (2019), S. 8847 –8854  
<https://doi.org/10.1002/slct.201802878>.
- 81) **Schlesier, C., Liu, F., Dubrovin, V., Spree, L., Büchner, B., Avdoshenko, S., Popov, A.**, Mixed dysprosium-lanthanide nitride clusterfullerenes DyM<sub>2</sub>N@C<sub>80</sub>-I<sub>h</sub> and Dy<sub>2</sub>MN@C<sub>80</sub>-I<sub>h</sub> (M = Gd, Er, Tm, and Lu): synthesis, molecular structure, and quantum motion of the endohedral nitrogen atom, *Nanoscale* 27 11 (2019), S. 13139-13153  
<https://pubs.rsc.org/en/content/articlelanding/2019/NR/C9NR03593A#!divAbstract>.
- 82) Ma, J., Zhang, K., Schellhammer, K.S., Fu, Y., Komber, H., Xu, C., **Popov, A.A.**, Hennersdorf, F., Weigand, J.J., Zhou, S., Pisula, W., Ortmann, F., Berger, R., Liu, J., Feng, X., Wavy-shaped Polycyclic Hydrocarbons with Controlled Aromaticity, *Chemical Science* 14 10 (2019), S. 4025-4031  
<https://pubs.rsc.org/en/content/articlelanding/2019/SC/C8SC05416A#!divAbstract>.
- 83) DeWeerd, N.J., Bukovsky, E.V., Castro, K.P., Kuvychko, I.V., **Popov, A.A.**, Strauss, S.H., Boltalina, O.V., Steric and electronic effects of CF<sub>3</sub> conformations in acene(CF<sub>3</sub>)<sub>n</sub> derivatives, *Journal of Fluorine Chemistry* 221 (2019), S. 1-7  
<https://doi.org/10.1016/j.jfluchem.2019.02.010>.
- 84) **Velkos, G., Krylov, D.S.**, Kirkpatrick, K., **Spree, L., Dubrovin, V., Büchner, B., Avdoshenko, S.**, Bezmelnitsyn, V., Davis, S., Faust, P., Duchamp, J., Dorn, H.C., **Popov, A.A.**, High blocking temperature of magnetization and giant coercivity in the azafullerene Tb<sub>2</sub>@C<sub>79</sub>N with a single-electron Tb-Tb bond, *Angewandte Chemie - International Edition* 18 58 (2019), S. 5891-5896 <https://doi.org/10.1002/anie.201900943>.
- 85) **Dubrovin, V., Gan, L.-H., Büchner, B., Popov, A.A., Avdoshenko, S.**, Endohedral metal-nitride cluster ordering in metallofullerene-Ni<sup>II</sup>(OEP) complexes and crystals: a theoretical study, *Physical Chemistry Chemical Physics* 16 21 (2019), S. 8197-8200  
<https://pubs.rsc.org/en/content/articlelanding/2019/CP/C9CP00634F#!divAbstract>.
- 86) Greber, T., Seitsonen, A.P., Hemmi, A., Dreiser, J., Stania, R., Matsui, F., Muntwiler, M., **Popov, A.A.**, Westerström, R., Circular dichroism and angular deviation in x-ray absorption spectra of Dy<sub>2</sub>ScN@C<sub>80</sub> single molecule magnets on h-BN/Rh(111), *Physical Review Materials* 1 3 (2019), S. 014409/1-5 <https://doi.org/10.1103/PhysRevMaterials.3.014409>.



- 87) Richter, M., Fu, Y., **Dmitrieva, E.**, Weigand, J.J., **Popov, A.**, Berger, R., Liu, J., Feng, X., Polycyclic Aromatic Hydrocarbons Containing A Pyrrolopyridazine Core, *ChemPlusChem* 6 84 (2019), S. 613-618 <https://onlinelibrary.wiley.com/doi/10.1002/cplu.201900031>.
- 88) Shekurov, R., Khrizanforova, V., Gilmanova, L., Khrizanforov, M., Miluykov, V., Kataeva, O., Yamaleeva, Z., Burganov, T., Gerasimova, T., Khamatgalimov, A., Katsyuba, S., Kovalenko, V., **Krupskaya, Y., Kataev, V., Büchner, B.**, Bon, V., Senkovska, I., Kaskel, S., Gubaidullin, A., Sinyashin, O., Budnikova, Y., Zn and Co redox active coordination polymers as efficient electrocatalysts, *Dalton Transactions* 11 48 (2019), S. 3601-3609 <https://pubs.rsc.org/en/content/articlelanding/2019/DT/C8DT04618B#!divAbstract>.
- 89) **Spree, L., Popov, A.A.**, Recent advances in single molecule magnetism of dysprosium-metallofullerenes, *Dalton Transactions* 9 48 (2019), S. 2861-2871 <https://pubs.rsc.org/en/content/articlelanding/2019/DT/C8DT05153D#!divAbstract>.
- 90) Intorp, S.N., Kushida, S., **Dmitrieva, E., Popov, A.A.**, Rominger, F., Freudenberg, J., Hinkel, F., Bunz, U.H.F., True Blue Through Oxidation - A Thiaazulenic Heterophenanthroquinone as Electrochromic, *Chemistry - A European Journal* 21 25 (2019), S. 5412-5415 <https://onlinelibrary.wiley.com/doi/full/10.1002/chem.201900535>.
- 91) Fu, Y., Zhang, K., **Dmitrieva, E., Liu, F.**, Ma, J., Weigand, J.J., **Popov, A.A.**, Berger, R., Pisula, W., Liu, J., Feng, X., NBN-embedded Polycyclic Aromatic Hydrocarbons Containing Pentagonal and Heptagonal Rings, *Organic Letters* 21 (2019), S. 1354-1358 <https://pubs.acs.org/doi/10.1021/acs.orglett.9b00057>.
- 92) Waas, D., Rückerl, F., **Knupfer, M.**, Charge Transfer at the Interface Between MnPc and F<sub>6</sub>TCNQ, *Physica Status Solidi B - Basic Solid State Physics* 256 (2019), S. 1800245/1-5 <https://onlinelibrary.wiley.com/doi/full/10.1002/pssb.201800245>.
- 93) **Liu, F., Velkos, G., Krylov, D.S., Spree, L.**, Zalibera, M., **Ray, R., Samoylova, N.A., Chen, C.H., Rosenkranz, M., Schiemenz, S., Ziegls, F., Nenkov, K.**, Kostanyan, A., Greber, T., **Volter-Giraud, A., Richter, M., Büchner, B., Avdoshenko, S., Popov, A.**, Air-stable redox-active nanomagnets with lanthanide spins radical-bridged by a metal-metal bond, *Nature Communications* 10 (2019), S. 571/1-11 <https://doi.org/10.1038/s41467-019-08513-6>.
- 94) **Popov, A.A.**, Redox-active metal-metal bonds between lanthanides in dimetallofullerenes, *Current Opinion in Electrochemistry* 8 (2018), S. 73-80 <https://doi.org/10.1016/j.coelec.2017.12.003>.
- 95) San, L.K., Spisak, S.N., Dubceac, C., Deng, S.H.M., Kuvychko, I.V., Petrukhina, M.A., Wang, X.-B., **Popov, A.A.**, Strauss, S.H., Boltalina, O.V., Experimental and DFT Studies of the Electron-Withdrawing Ability of Perfluoroalkyl (RF) Groups: Electron Affinities of PAH(RF)<sub>n</sub> Increase Significantly with Increasing RF Chain Length, *Chemistry - A European Journal* 6 24 (2018), S. 1441-1447 <https://doi.org/10.1002/chem.201704868>.
- 96) Kuvychko, I.V., Clikeman, T., Dubceac, C., Chen, Y.-S., Petrukhina, M.A., Strauss, S.H., **Popov, A.A.**, Boltalina, O.V., Understanding Polyarene Trifluoromethylation with Hot CF<sub>3</sub> Radicals using Corannulene, *European Journal of Organic Chemistry* 31 (2018), S. 4233-4245 <https://doi.org/10.1002/ejoc.201800508>.
- 97) Zhang, X., Li, W., Feng, L., Chen, X., Hansen, A., Grimme, S., Fortier, S., Sergentu, D.-C., Duignan, T.J., Autschbach, J., Wang, S., Wang, Y., **Velkos, G., Popov, A.A.**, Aghdassi, N., Duhm, S., Li, X., Li, J., Echegoyen, L., Schwarz, W.H.E., Chen, N., A Diuranium Carbide Cluster Stabilized Inside a C<sub>80</sub> Fullerene Cage, *Nature Communications* 9 (2018), S. 2753.
- 98) **Chen, C.H., Krylov, D.S., Avdoshenko, S.M., Liu, F., Spree, L.**, Westerström, R., Bulbucan, C., Studniarek, M., Dreiser, J., **Volter, A.U.B., Büchner, B., Popov, A.A.**, Magnetic hysteresis in self-assembled monolayers of Dy-fullerene single molecule magnets on gold, *Nanoscale* 24 10 (2018), S. 11287-11292 <https://doi.org/10.1039/C8NR00511G>.

- 99) **Mendes, R.G.**, Wrobel, P.S., Bachmatiuk, A., Sun, J., **Gemming, T.**, Liu, Z., **Rümmeli, M.**, Carbon Nanostructures as a Multi-Functional Platform for Sensing Applications, *Chemosensors* 4 6 (2018), S. 60/1-28 <http://dx.doi.org/10.3390/chemosensors6040060>.
- 100) Soni, A., Zhao, L., Ta, H.Q., Shi, Q., **Pang, J.**, Wrobel, P.S., **Gemming, T.**, **Bachmatiuk, A.**, **Rümmeli, M.**, Facile Graphitization of Silicon Nano-Particles with Ethanol Based Chemical Vapor Deposition, *Nano-Structures and Nano-Objects* 16 (2018), S. 38-44 <http://dx.doi.org/10.1016/j.nanoso.2018.04.001>.
- 101) Du, N., Manjunath, N., Li, Y., Menzel, S., Linn, E., Waser, R., You, T.G., Burger, D., Skorupa, I., Walczyk, D., Walczyk, C., **Schmidt, O.G.**, Schmidt, H., Field-Driven Hopping Transport of Oxygen Vacancies in Memristive Oxide Switches with Interface-Mediated Resistive Switching, *Physical Review Applied* 5 10 (2018), S. 054025/1-8 <https://doi.org/10.1103/PhysRevApplied.10.054025>.
- 102) **Wolf, D.**, Kübel, C., Electron Tomography for 3D Imaging of Nanoscale Materials, *Practical Metallography - Praktische Metallographie* 8 55 (2018), S. 527-538 <https://doi.org/10.3139/147.110536>.
- 103) Xu, X., Prüfer, T., **Wolf, D.**, Engelmann, H.-J., Bischoff, L., Hübner, R., Heinig, K.-H., Möller, W., Facsko, S., von Borany, J., Hlawacek, G., Site-controlled formation of single Si nanocrystals in a buried SiO<sub>2</sub> matrix using ion beam mixing, *Beilstein Journal of Nanotechnology* 9 (2018), S. 2883-2892.
- 104) Richter, M., Hahn, S., **Dmitrieva, E.**, Rominger, F., **Popov, A.**, Bunz, U.H.F., Feng, X., Berger, R., Helical Ullazine-Quinoxaline-Based Polycyclic Aromatic Hydrocarbons, *Chemistry - A European Journal* 5 25 (2019), S. 1345-1352 <https://doi.org/10.1002/chem.201804751>.
- 105) **Pawlik, A.S.**, **Aswartham, S.**, **Morozov, I.**, **Knupfer, M.**, **Büchner, B.**, **Efremov, D.**, **Koitzsch, A.**, Thickness dependent electronic structure of exfoliated mono- and few-layer 1T'-MoTe<sub>2</sub>, *Physical Review Materials* 10 2 (2018), S. 104004/1-8.
- 106) **Brandenburg, A.**, **Krylov, D.S.**, **Beger, A.**, **Wolter-Giraud, A.**, **Büchner, B.**, **Popov, A.**, Carbide clusterfullerene DyYTiC@C-80 featuring three different metals in the endohedral cluster and its single-ion magnetism, *Chemical Communications* 76 54 (2018), S. 10683-10686 <https://doi.org/10.1039/C8CC04736G>.
- 107) Nakayama, K., Wang, Z., Trang, C.X., Souma, S., **Rienks, E.D.L.**, Takahashi, T., Ando, Y., Sato, T., Observation of Dirac-like energy band and unusual spectral line shape in quasi-one-dimensional superconductor Tl<sub>2</sub>Mo<sub>6</sub>Se<sub>6</sub>, *Physical Review B* 14 98 (2018), S. 140502/1-5 <https://doi.org/10.1103/PhysRevB.98.140502>.
- 108) Wang, K., **Pang, J.**, Li, L., Zhou, S., Li, Y., Zhang, T., Synthesis of hydrophobic carbon nanotubes/reduced graphene oxide composite films by flash light irradiation, *Frontiers of Chemical Science and Engineering* 3 12 (2018), S. 376-382 <https://doi.org/10.1007/s11705-018-1705-z>.
- 109) Harnagea, L., Kumar, R., Singh, S., **Wurmehl, S.**, **Wolter-Giraud, A.**, **Büchner, B.**, Evolution of the magnetic order of Fe and Eu sublattices in Eu<sub>1-x</sub>Ca<sub>x</sub>Fe<sub>2</sub>As<sub>2</sub> (0 < x < 1), *Journal of Physics: Condensed Matter* 41 30 (2018), S. 415601/1-8 <https://doi.org/10.1088/1361-648X/aadea6>.
- 110) Wang, C., Chen, C., **Chang, C.-H.**, Tsai, H.-S., Pandey, P., Xu, C., Boettger, R., Chen, D., Zeng, Y.-J., Gao, X., Helm, M., Zhou, S., Defect-Induced Exchange Bias in a Single SrRuO<sub>3</sub> Layer, *ACS Applied Materials & Interfaces* 32 10 (2018), S. 27472-27476.
- 111) Quereda, J., Ghiasi, T.S., **You, J.**, **van den Brink, J.**, van Wees, B.J., van der Wal, C.H., Symmetry regimes for circular photocurrents in monolayer MoSe<sub>2</sub>, *Nature Communications* 9 (2018), S. 3346/1-8.

- 112) **Thirupathiah, S., Morozov, I., Kushnirenko, Y., Fedorov, A., Haubold, E., Kim, T.K., Shipunov, G.,** Maksutova, A., Kataeva, O., **Aswartham, S., Büchner, B., Borisenko, S.,** Spectroscopic evidence of topological phase transition in the three-dimensional Dirac semimetal Cd-3(As<sub>1-x</sub>Px)<sub>2</sub>, *Physical Review B* 8 98 (2018), S. 085145/1-5  
<https://doi.org/10.1103/PhysRevB.98.085145>.
- 113) Stepanov, A., Fedorenko, S., Amirov, R., Nizameev, I., Kholin, K., Voloshina, A., Sapunova, A., **Mendes, R., Rümmele, M., Gemming, T.,** Mustafina, A., Odintsov, B., Silica-coated iron-oxide nanoparticles doped with Gd(III) complexes as potential double contrast agents for magnetic resonance imaging at different field strengths, *Journal of Chemical Sciences* 9 130 (2018), S. UNSP 125/1-10 <https://doi.org/10.1007/s12039-018-1527-z>.
- 114) **Schlesier, C., Spree, L.,** Kostanyan, A., Westerstroem, R., **Brandenburg, A., Wolter, A.U.B.,** Yang, S., Greber, T., **Popov, A.A.,** Strong carbon cage influence on the single molecule magnetism in Dy-Sc nitride clusterfullerenes, *Chemical Communications* 70 54 (2018), S. 9730-9733  
<https://pubs.rsc.org/en/content/articlelanding/2018/CC/C8CC05029E#!divAbstract>.
- 115) **Dmitrieva, E., Rosenkranz, M.,** Alesanco, Y., Vinuales, A., The reduction mechanism of p-cyanophenylviologen in PVA-borax gel polyelectrolyte-based bicolor electrochromic devices, *Electrochimica Acta* 292 (2018), S. 81-87  
<https://doi.org/10.1016/j.electacta.2018.09.137>.
- 116) **Naumann, M., Knupfer, M.,** Complex momentum behavior of electronic excitations in beta-CuPc, *The Journal of Chemical Physics* 8 149 (2018), S. 084704/1-5  
<https://doi.org/10.1063/1.5046388>.
- 117) Kataeva, O., Metlushka, K., Ivshin, K., Kiamov, A., Alfonsov, V., Khrizanforov, M., Budnikova, Y., Sinyashin, O., **Krupskaya, Y., Kataev, V., Büchner, B., Knupfer, M.,** Electron Transfer and Unusual Chemical Transformations of F4-TCNQ in a Reaction with Mn-Phthalocyanine, *European Journal of Inorganic Chemistry* 28 2018 (2018), S. 3344-3353  
<https://doi.org/10.1002/ejic.201800641>.
- 118) Stania, R., Seitsonen, A.P., Kunhardt, D., **Büchner, B., Popov, A.,** Muntwiler, M., Greber, T., Electrostatic Interaction across a Single-Layer Carbon Shell, *Journal of Physical Chemistry Letters* 13 9 (2018), S. 3586-3590.
- 119) **Rümmele, M.,** Pan, Y., Zhao, L., Gao, J., Ta, H.Q., **Martinez, I.G.,** Mendes, R.G., **Gemming, T.,** Fu, L., Bachmatiuk, A., Liu, Z., In Situ Room Temperature Electron-Beam Driven Graphene Growth from Hydrocarbon Contamination in a Transmission Electron Microscope, *Materials* 6 11 (2018), S. 896/1-10 <https://doi.org/10.3390/ma11060896>.
- 120) Ajayakumar, M.R., Fu, Y., Ma, J., Hennesdorf, F., Komber, H., Weigand, J.J., **Alfonsov, A., Popov, A.A.,** Berger, R., Liu, J., Muellen, K., Feng, X., Toward Full Zigzag-Edged Nanographenes: peri-Tetracene and Its Corresponding Circumanthracene, *Journal of the American Chemical Society* 20 140 (2018), S. 6240-6244.
- 121) **Krylov, D., Liu, F., Brandenburg, A., Spree, L.,** Bon, V., Kaskel, S., **Wolter-Giraud, A., Büchner, B., Avdoshenko, S., Popov, A.,** Magnetization relaxation in the single-ion magnet DySc<sub>2</sub>N@C<sub>-80</sub>: quantum tunneling, magnetic dilution, and unconventional temperature dependence, *Physical Chemistry Chemical Physics* 17 20 (2018), S. 11656-11672  
<https://pubs.rsc.org/en/content/articlelanding/2018/CP/C8CP01608A#!divAbstract>.
- 122) Hugdal, H.G., Rex, S., **Nogueira, F.S.,** Sudbo, A., Magnon-induced superconductivity in a topological insulator coupled to ferromagnetic and antiferromagnetic insulators, *Physical Review B* 19 97 (2018), S. 195438/1-9 <https://doi.org/10.1103/PhysRevB.97.195438>.
- 123) **Grinenko, V.,** Sarkar, R., Materne, P., Kamusella, S., Yamamshita, A., Takano, Y., Sun, Y., Tamegai, T., **Efremov, D.V., Drechsler, S.-L.,** Orain, J.-C., Goko, T., Scheuermann, R.,

- Luetkens, H., Klauss, H.-H., Low-temperature breakdown of antiferromagnetic quantum critical behavior in FeSe, *Physical Review B* 20 97 (2018), S. 201102/1-5  
<https://journals.aps.org/prb/abstract/10.1103/PhysRevB.97.201102>.
- 124) Eleazer, B.J., Smith, M.D., **Popov, A.A.**, Peryshkov, D.V., Expansion of the (BB) Ru metallacycle with coinage metal cations: formation of B-M-Ru-B (M = Cu, Ag, Au) dimetalacyclodiboryls, *Chemical Science* 9 9 (2018), S. 2601-2608  
<https://pubs.rsc.org/en/content/articlelanding/2018/SC/C8SC00190A#!divAbstract>.
- 125) Zapf, M., Stuebinger, M., Jin, L., Kamp, M., Pfaff, F., **Lubk, A., Büchner, B.**, Sing, M., Claessen, R., Domain matching epitaxy of BaBiO<sub>3</sub> on SrTiO<sub>3</sub> with structurally modified interface, *Applied Physics Letters* 14 112 (2018), S. 141601/1-5 <https://doi.org/10.1063/1.5016116>
- 126) **Velkos, G., Krylov, D.S.**, Kirkpatrick, K., Liu, X., **Spree, L., Wolter-Giraud, A., Büchner, B.**, Dorn, H.C., **Popov, A.**, Giant exchange coupling and field-induced slow relaxation of magnetization in Gd-2@C<sub>79</sub>N with a single-electron Gd-Gd bond, *Chemical Communications* 23 54 (2018), S. 2902-2905.
- 127) Hu, Y., **Li, G.**, Peng, W., Chen, Z., Comparing the Gate Dependence of Contact Resistance and Channel Resistance in Organic Field-Effect Transistors for Understanding the Mobility Overestimation, *IEEE Electron Device Letters* 3 39 (2018), S. 421-423.
- 128) Schliebe, C., Noll, J., Scharf, S., **Gemming, T., Seifert, A.**, Spange, S., Lehmann, D., Zahn, D.R.T., Fiedler, B., Friedrich, J., Blaudeck, T., Lang, H., Nitrogen-containing porous carbon materials by twin polymerization, *Colloid and Polymer Science* 3 296 (2018), S. 413-426  
<https://doi.org/10.1007/s00396-017-4254-y>.
- 129) Dubraja, L.A., Juric, M., Popovic, J., Pajic, D., **Krupskaya, Y., Kataev, V., Büchner, B.**, Zilic, D., Magneto-structural correlations in oxalate-bridged Sr(II)Cr(III) coordination polymers: structure, magnetization, X-band, and high-field ESR studies, *Dalton Transactions* 11 47 (2018), S. 3992-4000 <https://doi.org/10.1039/C7DT04655C>.
- 130) Hu, Y., **Li, G.**, Chen, Z., The Importance of Contact Resistance in High-Mobility Organic Field-Effect Transistors Studied by Scanning Kelvin Probe Microscopy, *IEEE Electron Device Letters* 2 39 (2018), S. 276-279.
- 131) **Ghunaim, R., Eckert, V., Scholz, M., Gellesch, M., Wurmehl, S., Damm, C., Mertig, M., Hampel, S.**, Carbon nanotube-assisted synthesis of ferromagnetic Heusler nanoparticles of Fe<sub>3</sub>Ga (Nano-Galfenol), *Journal of Materials Chemistry C* 5 6 (2018), S. 1255-1263  
<https://doi.org/10.1039/C7TC04618A>.
- 132) Panes-Ruiz, L.A., Shaygan, M., Fu, Y.X., Liu, Y., **Khavrus, V., Oswald, S., Gemming, T.**, Baraban, L., **Bezugly, V.**, Cuniberti, G., Toward Highly Sensitive and Energy Efficient Ammonia Gas Detection with Modified Single-Walled Carbon Nanotubes at Room Temperature, *ACS Sensors* 1 3 (2018), S. 79-86  
<https://doi.org/10.1021/acssensors.7b00358>.
- 133) Zalibera, M., **Krylov, D.S., Karagiannis, D.**, Will, P.-A., **Ziegs, F., Schiemenz, S.**, Lubitz, W., Reineke, S., Savitsky, A., **Popov, A.A.**, Thermally Activated Delayed Fluorescence in a Y<sub>3</sub>N@C<sub>80</sub> Endohedral Fullerene: Time-Resolved Luminescence and EPR Studies, *Angewandte Chemie - International Edition* 1 57 (2018), S. 277-281.
- 134) Pagenkopf, F., **Mueller, E., Knupfer, M.**, Electronic excitations of manganese phthalocyanine molecules, *The Journal of Chemical Physics* 4 148 (2018), S. 044701/1-5  
<https://doi.org/10.1063/1.5008916>.
- 135) Khusnuriyalova, A.F., **Petr, A.**, Gubaidullin, A.T., Sukhov, A.V., Morozov, V.I., **Büchner, B., Kataev, V.**, Sinyashin, O.G., Yakhvarov, D.G., Electrochemical generation and observation by

magnetic resonance of superparamagnetic cobalt nanoparticles, *Electrochimica Acta* 260 (2018), S. 324-329 <https://doi.org/10.1016/j.electacta.2017.12.050>.

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