

VMESNO POROČILO O REZULTATIH INFRASTRUKTURNEGA PROGRAMA V LETU 2017

Priloga: Objavljeni članki in članki sprejeti v objavo s podporo programa IO-0002: Infrastruktorna dejavnost pri IMFM

4. Realizirana podpora infrastrukturnega programa raziskovalnim programom:

V letu 2017 smo objavili 15 člankov, 2 pa sta bila sprejeta v objavo.

Objavljeni članki:

- [1] S. Vrtnik, S. Guo, S. Heikh, A. Elen, P. Koželj, J. Luzar, A. Kocjan, Z. Jaglicic, A. Meden, H. Guim, H.-J. Kim, J. Dolinšek. Magnetism of CoCrFeNiZr_x eutectic high-entropy alloys. *Intermetallics*, 2017, 93: 122-133, doi: [10.1016/j.intermet.2017.11.017](https://doi.org/10.1016/j.intermet.2017.11.017)
- [2] T. Gilewski, J. Gawraczynski, M. Derzsi, Z. Jaglicic, Z. Mazej, P. Polczynski, R. Jurczakowski, P. Leszczynski, W. Grochala. $[\text{Ag}(\text{OH}_2)_2][\text{Ag}(\text{SO}_4)_2]$: A hydrate of a silver(II) salt. *Chemistry: A European Journal*, 2017, 23(8): 1805-1813, doi: [10.1002/chem.201604179](https://doi.org/10.1002/chem.201604179)
- [3] Z. Mazej, E.A. Goreschnik, Z. Jaglicic, Y. Filinchuk, N. Tumanov, L.G. Akselrud. Photochemical synthesis and characterization of xenon(VI) hexafluoridomanganates(IV). *European Journal of Inorganic Chemistry*, 2017, 2017(14): 2130-2137, doi: [10.1002/ejic.201700054](https://doi.org/10.1002/ejic.201700054)
- [4] Z. Mazej, T. Gilewski, E.A. Goreschnik, Z. Jaglicic, M. Derzsi, W. Grochala. Canted antiferromagnetism in two-dimensional silver(II) Bis[pentafluoridooxidotungstate(VI)]. *Inorganic chemistry*, 2017, 56(1): 224-233, doi: [10.1021/acs.inorgchem.6b02034](https://doi.org/10.1021/acs.inorgchem.6b02034)
- [5] Y.-W. Li, L.-Y. Guo, H.-F. Su, M. Jagodic, M. Luo, X.-Q. Zhou, S.-Y. Zeng, C.-H. Tung, D. Sun, L.-S. Heng. Two unprecedented POM-based inorganic-organic hybrids with concomitant heteropolytungstate and molybdate. *Inorganic chemistry*, 2017, 56(5): 2481-2489. doi: [10.1021/acs.inorgchem.6b02601](https://doi.org/10.1021/acs.inorgchem.6b02601)
- [6] Z. Jaglicic, Z. Mazej. Antiferromagnetic CsCrF_5 and canted antiferromagnetism in RbCrF_5 and KCrF_5 . *Journal of Magnetism and Magnetic Materials*, 2017, 434: 112-117, doi: [10.1016/j.jmmm.2017.03.048](https://doi.org/10.1016/j.jmmm.2017.03.048)
- [7] E. Safaei, H. Bahrami, A. Pevec, B. Kozlevcar, Z. Jaglicic. Copper(II) complex of new non-innocent O-aminophenol-based ligand as biomimetic model for galactose oxidase enzyme in aerobic oxidation of alcohols. *Journal of molecular structure*, 2017, 1133: 526-533, doi: [10.1016/j.molstruc.2016.11.076](https://doi.org/10.1016/j.molstruc.2016.11.076)
- [8] S. Beguš, J. Pirnat, V. Jazbinšek, Z. Trontelj. Optical detection of low frequency NQR signals: A step forward from conventional NQR. *Journal of Physics D, Applied Physics*, 2017, 50(9): 1-10, doi: [10.1088/1361-6463/aa4f23](https://doi.org/10.1088/1361-6463/aa4f23)
- [9] L. Radovanovic, J. Rogan, D. Poleti, M.V. Rodic, Z. Jaglicic. Terephthalate-bridged two-dimensional heteronuclear $\text{Cu}(\text{II})$ - $\text{Mn}(\text{II})$ complex with terminal 2,2'-dipyridylamine ligand. *Journal of the Serbian Chemical Society*, 2017, 82(11): 1247-1258, doi: [10.2298/JSC170425086R](https://doi.org/10.2298/JSC170425086R)
- [10] M. Klanjšek, A. Zorko, R. Žitko, J. Mravlje, Z. Jaglicic, P. Kumar Biswas, P. Prelovšek, D. Mihailovic, D. Arcon. A high-temperature quantum spin liquid with polaron spins. *Nature physics*, 2017, 7 pp., doi: [10.1038/nphys4212](https://doi.org/10.1038/nphys4212)
- [11] Mat. Mihalik, Mar. Mihalik, Z. Jaglicic, R. Vilarinho, J.A. Moreira, E. Queiros, P.B. Tavares, A. Almeida, M. Zentková. Magnetic phase diagram of the $\text{TbMn}_{1-x}\text{Fe}_x\text{O}_3$ solid solution system. *Physica B, Condensed matter*, 2017, 506: 163-167, doi: [10.1016/j.physb.2016.11.015](https://doi.org/10.1016/j.physb.2016.11.015)
- [12] J. Buh, A. Mrzel, A. Kovic, V.V. Kabanov, Z. Jaglicic, S. Vrtnik, P. Koželj, D. Mihailovic. Phase slip and telegraph noise in d-MoN nanowires. *Physica C, Superconductivity and its applications*, 2017, 535: 24-29, doi: [10.1016/j.physc.2017.03.003](https://doi.org/10.1016/j.physc.2017.03.003)
- [13] E. Safaei, N. Naghdi, Z. Jaglicic, A. Pevec, Y.-I. Lee. Synthesis and characterization of an iron(III) complex of an ethylenediamine derivative of an aminophenol ligand in relevance to catechol dioxygenase active site. *Polyhedron*, ISSN 0277-5387. 2017, 122: 116-123, doi: [10.1016/j.poly.2016.10.034](https://doi.org/10.1016/j.poly.2016.10.034)
- [14] E. Safaei, H. Bahrami, A. Wojtczak, S. Alavi, Z. Jaglicic. Redox potential tuning by redox-inactive anions in copper(II) complexes of non-innocent o-aminophenol-based ligand containing benzoxazole: Learning from nature. *Polyhedron*, 2017, 122: 219-227, doi: [10.1016/j.poly.2016.11.031](https://doi.org/10.1016/j.poly.2016.11.031)
- [15] M. Wencka, S. Vrtnik, P. Koželj, Z. Jaglicic, P. Gille, J. Dolinšek. Anisotropic electrical, thermal and magnetic properties of $\text{Al}_{13}\text{Ru}_4$ decagonal quasicrystalline approximant. *Zeitschrift für Kristallographie, Crystalline materials*, 2017, 232(7/9): 647-652, doi: [10.1515/zkri-2016-2039](https://doi.org/10.1515/zkri-2016-2039)

Sprejeto v objavo:

- [16] B. Babic-Stojic, V. Jokanovic, D. Milivojevic, M. Požek, Z. Jaglicic, D. Makovec, N. Jovic Orsini, M. Markovic, K. Arskin, V. Paunovic. Ultrasmall iron oxide nanoparticles: Magnetic and NMR relaxometric properties. *Sprejeto v Current Applied Physics*.

[17] S. Vrtnik, J. Lužnik, P. Koželj, A. Jelen, J. Luzar, Z. Jaglicic, A. Meden, M. Feuerbacher, J. Dolinšek. Disordered ferromagnetic state in the Ce-Gd-Tb-Dy-Ho hexagonal high-entropy alloy. Sprejeto v Journal of Alloys and Compounds.

5. Realizirana podpora infrastrukturnega programa raziskovalnim projektom:

Rezultate smo v letu 2017 objavili v štirih člankih, eden pa je bil sprejet v objavo.

Objavljeni članki:

- [18] S. Pršic, S. Savic, Z. Brankovic, Z. Jaglicic, S. Vrtnik, G. Brankovic. Antiferromagnetism and heat capacity of $\text{NaCo}_2\text{-xCu}_x\text{O}_4$ ceramics. *Ceramics international*, 2017, 43(2): 2022-2026. doi: [10.1016/j.ceramint.2016.10.170](https://doi.org/10.1016/j.ceramint.2016.10.170)
- [19] S. Gyergyek, D. Makovec, M. Jagodic, M. Drofenik, K. Schenk, O. Jordan, J. Kovac, G. Dražic, H. Hofmann. Hydrothermal growth of iron oxide NPs with a uniform size distribution for magnetically induced hyperthermia: Structural, colloidal and magnetic properties. *Journal of alloys and compounds*, 2017, 694: 261-271, doi: [10.1016/j.jallcom.2016.09.238](https://doi.org/10.1016/j.jallcom.2016.09.238)
- [20] B. Dojer, A. Pevec, Z. Jaglicic, M. Kristl. Cobalt(II) complexes with hydroxypyridines and halogenides. *Journal of molecular structure*, 2017, 1128: 724-729, doi: [10.1016/j.molstruc.2016.09.023](https://doi.org/10.1016/j.molstruc.2016.09.023)
- [21] M. Krmel, S. Vrtnik, P. Koželj, A. Kocjan, Z. Jagličič, P. Boulet, M.-C. De Weerd, J.-M. Dubois, J. Dolinšek. Random-anisotropy ferromagnetic state in the $\text{Cu}_5\text{Gd}_{0.54}\text{Ca}_{0.42}$ intermetallic compound. *Phys. Rev. B, Condens. Matter Mater. Phys.*, **93**(9):094202-1-094202-14, doi: [10.1103/PhysRevB.93.094202](https://doi.org/10.1103/PhysRevB.93.094202)

Sprejeto v objavo:

- [22] K. Žužek Rožman, D. Pecko, Š. Trafela, Z. Samardžija, M. Spreitzer, Z. Jaglicic, P. Nadrah, M. Zorko, M. Bele, T. Tišler, A. Pintar, S. Šturm, N. Kostevšek. Austenite-martensite transformation in electro-deposited $\text{Fe}_{70}\text{Pd}_{30}$ NWs: A step towards making bio-nano-actuators tested on in-vivo systems. Sprejeto v *Smart Materials and Structures*.