

English

We are looking for a Ph.D. candidate in experimental solid-state materials science/physics/chemistry to work on materials with exotic electrical and magnetic properties such as multicaloric materials. Activities will include the syntheses, structural determination, and physical properties investigation. Using the facilities of the newly established Laboratory for material science ULTRACOOOL (<http://www-k5.ijs.si/sistem-za-nanasanje-trdnih-delcev-v-curku-aerosola/>;<http://www-k5.ijs.si/oprema/ultracool-laboratorij-financiran-iz-direktorjevega-sklada-2017/>) we will investigate the feasibility to prepare multicaloric composites. The work will take place at the Laboratory for Electronic Ceramics, K5 (<http://www-k5.ijs.si/en/>), from Jožef Stefan Institute, Slovenia, under the supervision of Asst. Prof. Hana Uršič Nemevšek (<https://scholar.google.com/citations?user=ljc7xS4AAAAJ&hl>). Collaboration with national and international research groups is an essential part of the research. If you have finished the Master program (or not yet) and you are interested in PhD study and employment at the institute, please contact me at hana.ursic@ijs.si.

[1] H. Ursic, V. Bobnar, B. Malic, C. Filipic, M. Vrabelj, S. Drnovsek, Y. Jo, M. Wencka and Z. Kutnjak, *Sci. Rep.*, vol. 6, pp. 26629 1–5, 2016. <https://www.nature.com/articles/srep26629>

[2] T. Rojac et al. *Nature Materials*, vol. 16, pp. 322–327, 2017. <https://www.nature.com/articles/nmat4799>

[3] U. Prah, M. Wencka, T. Rojac, A. Benčan and H. Uršič, *J. Mater. Chem. C*, vol. 8, pp. 11282–11291, 2020. <https://pubs.rsc.org/lv/content/articlehtml/2020/tc/d0tc02329a>

Slovensko

Iščemo kandidatko ali kandidata za mesto mladega raziskovalca na področju raziskav materialov z eksotičnimi električnimi in magnetnimi lastnostmi, kot so multikalorični materiali za nove, okolju prijazne hladilne sisteme na osnovi trdnih snovi. Delo bo zajemalo sintezo, strukturno karakterizacijo in raziskave fizikalnih lastnosti pripravljenih materialov. S posebnimi eksperimentalnimi metodami bomo v okviru našega novoustanovljenega Laboratorija za materiale - ULTRACOOOL (<http://www-k5.ijs.si/sistem-za-nanasanje-trdnih-delcev-v-curku-aerosola/>;<http://www-k5.ijs.si/oprema/ultracool-laboratorij-financiran-iz-direktorjevega-sklada-2017/>) raziskovali, če lahko pripravimo dobre multikalorične kompozite. Delo bo potekalo pod mentorstvom Doc. Dr. Hane Uršič Nemevšek (<https://scholar.google.com/citations?user=ljc7xS4AAAAJ&hl>), na Odseku za elektronsko keramiko (<http://www-k5.ijs.si/>), Inštituta "Jožef Stefan". Raziskave bodo potekale v sodelavi z raziskovalci iz tujine. Če ste zainteresirani za doktorski študij in delo na inštitutu mi prosim pišite na hana.ursic@ijs.si.

[1] H. Ursic, V. Bobnar, B. Malic, C. Filipic, M. Vrabelj, S. Drnovsek, Y. Jo, M. Wencka and Z. Kutnjak, *Sci. Rep.*, vol. 6, pp. 26629 1–5, 2016. <https://www.nature.com/articles/srep26629>

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