Personal details

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Education

Ph.D in Physics
2010 - 2014, Ben Gurion University of the Negev.
Under the supervision of Prof. H. Shaked and Dr. E. N. Caspi

M.Sc in physics
2006 - 2009, Ben Gurion University of the Negev.
Under the supervision of Prof. H. Shaked and Dr. E. N. Caspi

B.Sc in physics
2002 – 2006, Technion, Israel's institute of technology.

Employment history

2017 (Oct.) – Present, Israeli Atomic Energy Commission (IAEC) and Nuclear Research Center Negev (NRCN)
2017 (Oct.) – Present, team leader - Neutron diffraction, neutron activation and safeguards.

2016 – 2017 (Sep.), Helmholtz Zentrum Berlin (Germany)
2016 – 2017 (Sep.), postdoctoral instrument scientist, Extreme Environment Diffractometer (EXED), Department of High Field Magnet.

2006 – 2015, Israeli Atomic Energy Commission (IAEC) and Nuclear Research Center Negev (NRCN)
2014 – 2015, research staff, Department of Physics.
2009 – 2014, junior research staff, Department of Physics.
2006 – 2009, Professional academic training, Department of Physics.

Awards honors and fellowships

1. The Director's excellence in research award (NRCN, Sep. 2018).
2. 'Pazi' grant, co-author in "Magnetic properties within the 3D and 2D MAX/MXene phases", Israeli Atomic Energy Commission (2018).
3. 'Pazi' personal development scholarship for advanced scientific training, Israeli Atomic Energy Commission (2017).
4. Head of the Israeli Atomic Energy Commission excellence in research award (2015).
5. 'Katzir' scholarship, Israeli Ministry of Defense, Directorate of Defense R&D (2013).
6. Head of the Physics Department (NRCN) excellence in research award (2013).
7. World Nuclear University (WNU) fellowship, Oxford (2011).
8. Head of the Physics Department (NRCN) excellence in research award (2011).

Publications

Refereed articles and letters in journals

1. A. Babak, J. Lu, **O. Rivin**, M. Dahlqvist, J. Halim, C. Voigt, J. Rosen, L. Hultman, W. W. Barsoum and E. N. Caspi, "*A Tungsten-based nano-laminated ternary carbide: $(W,Ti)_4C_{4-x}$*", Inorganic Chemistry, *accepted*.

2. D. Potashnikov, E. N. Caspi, A. Pesach, A. Hoser, S. Kota, L. Verger, M. W. Barsoum, I. Felner, A. Keren and **O. Rivin**, "*Magnetic ordering in the nano-laminar ternary Mn_2AlB_2 investigated using neutron and X-ray diffraction*", J. M. M. M 471, 468 (2019).

3. A. Pesach E. Tiferet, S. C. Vogel, M. Chonin, A. Diskin, L. Zilberman, **O. Rivin**, O. Yeheskel and E. N. Caspi, "*Texture analysis of additively manufactured Ti-6Al-4V using neutron diffraction*", Additive Manufacturing 23, 394 (2018).

4. A. Broide, **O. Rivin**, S. Maskova, M. S. Lucas, A. Hen, I. Orion, S. Salhov, M. Shandalov, A. Dos Santos, J. Molaison, Z. Chen and I. Halevi, "*Pressure-induced crystal structure transition in Fe-Cr alloys*", International Journal of Engineering Science Invention 7, 1 (2018).

5. M. Nechiche, T. Cabioc'h, E. N. Caspi, **O. Rivin**, A. Hoser, V. Gauthier-Brunet, P. Chartier and S. Dubois, "*Evidence for symmetry reduction in $Ti_3(Al_{1-\delta}Cu_\delta)C_2$ MAX phase solid solutions*", Inorganic Chemistry **56**, 14388 (2017).

6. K. Prokeš, M. Bartkowiak, **O. Rivin**, O. Prokhnenko, T. Förster, S. Gerischer, R. Wahle, Y. -K. Huang, and J. A. Mydosh, "*Magnetic structure in $U(Ru_{0.92}Rh_{0.08})_2Si_2$ single crystal studied by neutron diffraction in static magnetic fields up to 24 T*", Phys. Rev. B: Rapid Communications **96**, 121117(R) (2017).

7. **O. Rivin**, E. N. Caspi, A. Pesach, H. Shaked, A. Hoser, R. Georgii, Q. Tao, J. Rosen, and M. W. Barsoum, "*Evidence for Ferromagnetic Ordering in the MAX Phase $(Cr_{0.96}Mn_{0.04})_2GeC$*", J. Mater. Res. Lett. **5**, 465 (2017).

8. T. Lapauw, K. Lambrinoub, T. Cabioc'h, J. Halimd, J. Lud , A. Pesach, **O. Rivin**, O. Ozeri, E. N. Caspi, L. Hultman, P. Eklund, J. Rosen, M. W. Barsoum and J. Vleugels, "*Synthesis of the new MAX phase Zr_2AlC*", J. European Ceramic Society **36**, 1847 (2016).

9. E. Tiferet, **O. Rivin**, Ganor, H.Ettedgui, O. Ozeri, E. N. Caspi and O. Yeheskel, "*Structural investigation of selective laser melting and electron beam melting of Ti-6Al-4V using neutron diffraction*", Additive Manufacturing **10**, 43 (2016).

10. C.-C. Lai, R. Meshkian, M. Dahlqvist, J. Lu, L.-Å. Näslund, **O. Rivin**, E. N. Caspi, O. Ozeri, L. Hultman, P. Eklund, M. W. Barsoum, and J. Rosen, "*Structural and chemical determination of the new nanolaminated carbide Mo_2Ga_2C from first principles and materials analysis*", Acta Mater. **99**, 157 (2015).

11. **O. Rivin**, H. Shaked and E. N. Caspi, "*Induced magnetic ordering transition in RCo_5 type materials*", J. Mag. Mag. Matt. **390**, 152 (2015).

12. E. Gilad, **O. Rivin**, H. Ettedgui, I. Yaar, B. Geslot, A. Pepino, J. Di Salvo and P. Blaise, "*Estimation of delayed neutron fraction of the MAESTRO core in Minerve zero power reactor*", J. of Nucl. Sci. Tech. DOI 1038331 (2015).

13. **O. Rivin**, A. Broide, S. Maskova, M. S. Lucas, A. Hen, I. Orion, S. Salhov, M. Shandalov, A. F. Moreira Dos Santos, J. Molaison, Z. Chen and I. Halevy, "*High pressure neutron powder diffraction study of $Fe_{1-x}Cr_x$ with and without Hydrogen exposure*", HyperFine Interactions **231**, 29 (2014).

14. **O. Rivin**, H. Shaked, A. Gukasov and E. N. Caspi, "*Long-range and short-range magnetic order in the singlet ground state system, $TbCo_3B_2$*", Phys. Rev. B **89**, 174423 (2014).

15. **O. Rivin**, H. Shaked, A. Gukasov and E. N. Caspi, "*Polarized neutron powder diffraction from anisotropic ferromagnetic structures*", J. Neutron Research **18**, 13 (2015).

16. **O. Rivin**, E. N. Caspi, H. Ettedgui, H. Shaked and A. Gukasov, "*Magnetic structure determination of $TbCo_2Ni_3$ using polarized and non-polarized neutron powder diffractions*", Phys. Rev. B **88**, 054430 (2013).

17. E. N. Caspi, H. Ettedgui, **O. Rivin**, M. Peilstocker, B. Breitman, I. Hershko, S. Shilstein and S. Shalev, *"Neutron diffraction of two fenestrated axes from 'Enot Shuni' bronze age cemetery*", J. Archae. Science **36**, 2835 (2009).

18. **O. Rivin**, R. Osborn, A. I. Kolesnikov, E. N. Caspi and H. Shaked, "*Tb^{3+} in $TbCo_3B_2$, a singlet ground state system studied by inelastic neutron scattering*", Phys. Rev. B **78**, 184424 (2008).

19. I. Halevy, A. Beck, I. Yaar, S. Kahane, O, Levy, E. Auster, H. Ettedgui, E. N. Caspi, **O. Rivin**, Z. Berant and J. Hu, *"XRD, TDPAC and LAPW study of $^{10}HfB_2$ under high pressure*", HyperFine Interactions **177**, 57 (2007).

Chapters in collective volumes and conference proceedings

20. A. Pesach, **O. Rivin**, O. Ozeri, H. Ettegui and E. N. Caspi, "A systematic calibration of the KARL neutron diffractometer", Nuclear Research Center report number N-2017/890-003 (2017).

21. **O. Rivin**, "*FM and AFM ordering within a MAX phase bulk*", International Conference on Neutron Scattering, Daejeon Korea (ICNS 2017).

22. E. Gilad, A. Kolin, **O. Rivin**, C. Dubi, B. Geslot and P. Blaise, "*Analysis of Critical and Subcritical Neutron Noise Experiments in MINERVE Using Advanced Noise Techniques*", PHYSOR 2016 (2016).

23. C.-C. Lai, R. Meshkian, M. Dahlqvist, J. Lu, L.-Å. Näslund, **O. Rivin**, E. N. Caspi, O. Ozeri, L. Hultman, P. Eklund, M. W. Barsoum and J. Rosen, "*Mo_2Ga_2C: structural determination of the new nanolaminated carbide and its 2D modification by selective etching*", AVS International Symposium (2016).

24. P. Blaise, B. Geslot and **O. Rivin**, "*State-of-the-art on Local/global signal oscillation technique and experimental setup in MINERVE for capture and scattering cross sections measurement*", NT SPEX/LPE/2014/036/Indice A (CEA report, 2015).

25. **O. Rivin**, E. N. Caspi, H. Ettedgui, H. Shaked and A. Gukasov, *"Magnetic structure determination of $TbCo_2Ni_3$ using polarized and non-polarized neutron powder diffractions*", Laboratoire Léon Brillouin Annual Report (Saclay, 2013).

26. J. Di-Salvo, A Gruel and **O. Rivin**, "*Assembly power measurements: dead time study*", CEA / Cadarache report DO 79 (CEA report, 2013).

27. **O. Rivin**, E. N. Caspi and H. Ettedgui, "*Set up and calibration of the double axis neutron powder diffractometer – KARL at the Soreq Nuclear Research Center*", NRCN report (2010), *in Hebrew.*

Additional information

Languages

English: Fluent, written and spoken.
Hebrew: Native level written and spoken.
Russian: Fluent spoken (nuts and bolts of the written language).

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