

CURRICULUM VITAE

PERSONAL PROFILE – BOGDAN YAVORSKY

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BIRTHDAY: 21.06.1964
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EDUCATION

09/1981 – 06/1986 study of physics at Taras-Shevchenko-University, Kyiv
06/1986 Graduate : Diploma – physicist (theoretical physics), teacher
09/1991 – 06/1994 Ph.D student at Institute of Metalphysics of Ukrainian Academy of
Sciences
04/1996 Ph.D in theoretical Solid State Physics

PROFESSIONAL EXPERIENCE

seit 01/2014 active application phase
01/2012 – 12/2013 research fellow at Steinbuch Centre for Computing, Karlsruher
Institut für Technologie, Karlsruhe
05/2001 – 12/2011 research fellow at the Institut of Physics, Workgroup Theory,
Martin-Luther Universität Halle-Wittenberg, Halle(Saale)
09/1998 – 04/1999, research fellow at the Institute of Theoretical Physics, Technische
06/2000 – 04/2001 Universität Dresden
10/1997 – 12/1997, collaboration with the Workgroup Theoretical Solid State Physics,
05/1998 – 06/1998, Technische Universität Dresden
05/1999 – 10/1999,
03/2000 – 05/2000
06/1986 – 09/2000 reseach fellow at the Institute of Metalphysics of Ukrainian Academy
of Sciences, Kyiv

LIST OF PUBLICATIONS

1. N. F. Hinsche, B. Yu. Yavorsky, M. Gradhand, M. Czerner, M. Winkler, J. König, H. Böttner, I. Mertig, and P. Zahn, *Thermoelectric transport in Bi₂Te₃/Sb₂Te₃ superlattices*, Phys. Rev. B **86**, 085323 (2012)
2. P. Zahn, N. F. Hinsche, B. Yu. Yavorsky and I. Mertig, *Bi₂Te₃: implications of the rhombohedral k-space texture on the evaluation of the in-plane/out-of-plane conductivity anisotropy*, J.Phys.: Condens. Matter **23**, 505504 (2011)
3. N.F. Hinsche, B.Y. Yavorsky, P. Zahn, and I. Mertig, *Influence of strain on the anisotropic thermoelectric transport properties of Bi₂Te₃ and Sb₂Te₃*, Phys. Rev. B **84**, 165214 (2011)
4. B.Y. Yavorsky, N.F. Hinsche, P. Zahn, and I. Mertig, *Electronic structure and transport anisotropy of Bi₂Te₃ and Sb₂Te₃*, Phys. Rev. B **84**, 165208 (2011)
5. M. Czerner, B. Yavorsky, and I. Mertig *The role of noncollinear magnetic order and magnetic anisotropy for the transport properties through nanowires*, phys. stat. sol.(b) **247**, 2594 (2010)
6. A. Tange, C. Gao, B. Yavorsky, I. Maznichenko, C. Etz, A. Ernst, W. Hergert, W. Wulfhekel, and J. Kirschner *Electronic structure and spin polarization of the Fe(001)-p(11)O surface*, Phys.Rev.B **81**, 195410 (2010)
7. M. Gradhand, M. Czerner, D. Fedorov, P. Zahn, B. Yavorsky, L. Szunyogh, and I. Mertig *Spin polarization on Fermi surfaces of metals by the KKR method*, Phys. Rev. B **80**, 224413 (2009)
8. C. Heiliger, P. Zahn, B. Yavorsky, and I. Mertig *Thickness dependence of the tunneling current in the coherent limit of transport*, Phys. Rev. B **77**, 224407 (2008)
9. M. Czerner, B. Yavorsky, and I. Mertig *Fully relaxed magnetic structure of transition metal nanowires: First-principles calculations*, Phys. Rev. B **77**, 104411 (2008)
10. M. Czerner, B. Yavorsky, and I. Mertig *Magnetic order in geometrically constrained domain walls*, J. Appl. Phys. **103**, 07F304 (2008)
11. C. Heiliger, M. Czerner, B. Yavorsky, I. Mertig, and M. Stiles *Implementation of a nonequilibrium Green's function method to calculate spin-transfer torque*, J. Appl. Phys. **103**, 07A709 (2008)
12. B. Yavorsky and I. Mertig *Noncollinear interface magnetism and ballistic transport in FeFeOMgOFe tunnel junctions: Ab initio calculations using the KKR method*, Phys. Rev. B **74**, 174402 (2006)
13. C. Heiliger, P. Zahn, B. Yavorsky, and I. Mertig *Interface structure and bias dependence of FeMgOFe tunnel junctions: Ab initio calculations*, Phys. Rev. B **73**, 214441 (2006)
14. C. Heiliger, P. Zahn, B. Yavorsky, and I. Mertig *Influence of the interface structure on the bias dependence of tunneling magnetoresistance*, Phys. Rev. B **72**, 180406 (2005)
15. B. Yavorsky, P. Zahn, and I. Mertig *About noncollinear magnetic structures if FCC-Fe*, JMMM **290-291**, 408, (2005)
16. B. Yavorsky, P. Zahn, and I. Mertig *Ab initio study of the magnetic structure of fcc Fe grown on a Cu(001) substrate*, Phys. Rev. B **70**, 014413 (2004)

17. B. Yavorsky, I. Mertig, and V. Antonov *Electronic structure and transport properties of Co/Ni superlattices*, Phase Transitions **76**, 481 (2003)
18. B. Yavorsky, I. Mertig, A. Perlov, A. Yaresko, and V. Antonov *Giant magnetoresistance due to a domain wall in Fe: Ab initio study*, Phys. Rev. B **66**, 174422 (2002)
19. B. Yavorsky, I. Mertig, A. Perlov, A. Yaresko, and V. Antonov *Ab initio study of the angular dependence of giant magnetoresistance in Fe/Cr superlattices*, Phys. Rev. B **62**, 9586 (2000)
20. Yu. Kucherenko, P. Rennert, and B. Yavorsky *Angular distribution and spin polarization of Auger-electrons from a potassium (110) surface*, J. Phys.: Condens. Matter **11**, 1861 (1999)
21. O. Krasovska, B. Winkler, E. Krasovskii, V. Antonov and B. Yavorsky *The colour of sulphur*, J. Phys.: Condens. Matter **10**, 4093 (1998)
22. A. Perlov, P. Oppeneer, V. Antonov, A. Yaresko, and B. Yavorsky *Anisotropic resistivity and giant magnetoresistance in UNi₂Ge₂ and UNiGa from ab initio calculations*, J. Alloys and Compounds **271**, 486 (1998)
23. V. Antonov, O. Krasovska, E. Krasovskii, Yu. Kudryavtsev, V. Nemoshkalenko, B. Yavorsky, Y. P. Lee and K. W. Kim *Experimental and theoretical study of the optical properties of FeAl alloy*, J. Phys.: Condens. Matter **9**, 11227 (1997)
24. V. Antonov, B. Yavorsky, A. Shpak, Vl. Antonov, O. Jepsen, G. Guizzetti, and F. Marabelli *Electronic structure and physical properties of NbSi₂*, Phys. Rev. B **53**, 15631 (1996)
25. B. Yavorsky, O. Krasovska, E. Krasovskii, A. Yaresko, and V. Antonov *Ab initio calculation of the Fermi surface of RuO₂*, Physica B **225** 243 (1996)
26. O. Andersen, O. Jepsen, Vl. Antonov, V. Antonov, B. Yavorsky, A. Perlov, and A. Shpak *Fermi surface, bonding, and pseudogap in MoSi₂*, Physica B **204** 65 (1995)
27. V. Antonov, B. Yavorsky, V. Nemoshkalenko, Vl. Antonov, O. Jepsen, O. Andersen, E. Haanappel, M. Vosgerau, W. Joss, P. Wyder, R. Madar, and A. Rouault *Fermi surface of Pd₂Si*, Phys. Rev. B **49**, 17022 (1994)
28. V. Antonov, B. Yavorsky, A. Shpak, and A. Perlov *The electronic structure and properties of MoSi₂. I. Body-centered tetragonal C11b structure*, Low Temp. Phys. **20**, 734 (1994)
29. V. Antonov, B. Yavorsky, A. Shpak, and A. Perlov *The electronic structure and properties of MoSi₂. II. Hexagonal C40 structure*, Low Temp. Phys. **20**, 743 (1994)