Prof. Dr. Ján Minár

Curriculum Vitae

Personal Data

Date of birth	22. July 1975 in Spišská Nová Ves (Slowakia)
Address	University of West Bohemia, New Technologies-Research Centre, Univerzitní 8, 306 14 Plzeň, Czech Republic
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Areas of Research

Electronic structure of solids and low-dimensional systems
Electron Spectroscopy with main focus on the photoemission
Denisty functional theory and Green function based methods
Electronic correlations
Development of band structure methods

Professional Background

since 2017	Professor at University of West Bohemia, Pilsen, Czech Republic
2012-2017	Lecturer at Ludwig-Maximilians-University, München
2015	Extraordinary member of Center for NanoScience CeNS, LMU München
since 2014	Visitig Professor at New-Technologies Research Center University of West Bohemia, Pilsen, Czech Republic
2014 and 2015	Guest Professor University of Cergy-Pontoise, Paris, France
2008-2012	Habilitation at LMU München
2003-2008	Post-doc at LMU München
2002-2003	Post-doc at Forschungszentrum Jülich

Education

2018, Habilitation in Applied Physics	*Recent developments in the electronic structure theory: correlations, disorder and spectroscopy* University of West Bohemia, Pilsen, Czech Rep.
2012, Habilitation in Physical Chemistry	*Correlation effects in transition metals and their alloys studied using the fully self-consistent KKR-based LSDA + DMFT scheme* Ludwig-Maximilians-University, München, Germany
2003, Ph.D. thesis	*Spin orbit coupling influenced spectroscopies and resonant X-ray magneto-optical properties of transition metal systems*

	Ludwig-Maximilians-University, München, Germany
1998, Diploma Degree	*The structure and properties of graphite monofluorid using the three-dimensional cyclic cluster approach*
1993-1998	Study of Theoretical and Physical Chemistry
	Technical University of Bratislava, Slovakia

Fellowships, awards and services to the community

2019	Honorary Fellow of Munich University of Applied Sciences
2014, 2015,2016	Invited guest professor for theoretical solid state chemistry at Universite de Cergy-Pontoise, Paris France
since 2014	Member of managment comitee and workgroup leader (Correlations)
	European cooperation in science and technology *MP1306: EuSPEC*
2012	Invited guest scientist
	Paul Scherrer Institute, Villigen, Switzerland
2013	Invited guest scientist
	ALS, Berkeley, USA
2011	Römer Prize, in the category habitation, Ludwig-Maximilians-University, München, Germany
2007	Invited guest scientist
	Prof. M. Katsnelson, University of Nijmegen, Netherlands
1993	2-nd place at Czechoslovak Chemistry Olympiad
from 2008	Regular referee for many international journals
	among others: Nature Com., Phys. Rev. Lett., J. Phys Chem.
from 2008	Referee of national and international funding agencies:
	DFG, Swiss SFN, AustriUan FWF, USA DOE and NSF

Bibliometric data

208 articles in peer reviewd journals and books, more than 5400 citations, h-index 39

Activities during last 5 years

Head of Spin- and angle resoved photoemission laboratory

Electronic structure of solids and low-dimensional systems

Electron Spectroscopy with main focus to magnetic dichroism (XMCD) and Photoemission (ARPES)

Free and Deposited Magnetic Clusters

Electronic correlations and magnetism

Electronic structure of correlated electron materials (LDA+DMFT)

Active development of band structure methods (SPR-KKR)

Prof. Dr. Ján Minár

List of publications (1998-2020)

Publications

1 M. Fanciulli, J. Schusser, M.-I. Lee, Z. El Youbi, O. Heckmann, M. C. Richter, C. Cacho, C. Spezzani, D. Bresteau, J.-F. Hergott *et al.*: Spin, time, and angle resolved photoemission spectroscopy on WTe 2, Physical Review Research **2**, 013261 (2020).

2 J. Krempaskỳ, M. Fanciulli, L. Nicolaï, J. Minár, H. Volfová, O. Caha, V. V. Volobuev, J. Sánchez-Barriga, M. Gmitra, K. Yaji *et al.*: Fully spin-polarized bulk states in ferroelectric GeTe, Physical Review Research **2**, 013107 (2020).

3 H. Elmers, J. Regel, T. Mashoff, J. Braun, S. Babenkov, S. Chernov, O. Fedchenko, K. Medjanik, D. Vasilyev, J. Minar *et al.*: Rashba splitting of the Tamm surface state on Re (0001) observed by spin-resolved photoemission and scanning tunneling spectroscopy, Physical Review Research **2**, 013296 (2020).

4 J. Čapek, Š. Batková, M. Matas, Š. Kos, T. Kozák, S. Haviar, J. Houška, J. Schusser, J. Minár, F. Dvořák *et al.*: Bixbyite-Ta2N2O film prepared by HiPIMS and postdeposition annealing: Structure and properties, Journal of Vacuum Science & Technology A: Vacuum, Surfaces, and Films **38**, 033409 (2020).

5 E. D. L. Rienks, S. Wimmer, J. Sánchez-Barriga, O. Caha, P. S. Mandal, J. Ruzicka, A. Ney, H. Steiner, V. V. Volobuev, H. Groiss, M. Albu, G. Kothleitner, J. Michalicka, S. A. Khan, J. Minár, H. Ebert, G. Bauer, F. Freyse, A. Varykhalov, O. Rader and G. Springholz: Large magnetic gap at the Dirac point in Bi2Te3/MnBi2Te4 heterostructures, Nature **576**, 423 (2019).

6 D. Takegami, L. Nicolaï, T. Koethe, D. Kasinathan, C. Kuo, Y. Liao, K. Tsuei, G. Panaccione, F. Offi, G. Monaco *et al.*: Valence band hard x-ray photoelectron spectroscopy on 3 d transition-metal oxides containing rare-earth elements, Physical Review B **99**, 165101 (2019).

7 S. Wimmer, S. Mankovsky, J. Minár, A. N. Yaresko and H. Ebert: Magneto-optic and transverse-transport properties of noncollinear antiferromagnets, Phys. Rev. B **100**, 214429 (2019).

8 S. A. Khan, M. Vondráček, P. Blaha, K. Horáková, J. Minár, O. Šipr and V. Cháb: Local geometry around B atoms in B/Si(1 1 1) from polarized x-ray absorption spectroscopy, Journal of Physics: Condensed Matter **32**, 045901 (2019).

9 M. Mallmann, R. Niklaus, T. Rackl, M. Benz, T. G. Chau, D. Johrendt, J. Minar and W. Schnick: Solid Solutions of Grimm-Sommerfeld Analogous Nitride Semiconductors II-IV-N-2 (II=Mg, Mn, Zn; IV=Si, Ge): Ammonothermal Synthesis and DFT Calculations, CHEMISTRY-A EUROPEAN JOURNAL **25** (2019).

10 A. Arab, X. Liu, O. Köksal, W. Yang, R. U. Chandrasena, S. Middey, M. Kareev, S. Kumar, M.-A. Husanu, Z. Yang, L. Gu, V. N. Strocov, T.-L. Lee, J. Minár, R. Pentcheva, J. Chakhalian and A. X. Gray: Electronic Structure of a Graphene-like Artificial Crystal of NdNiO3, Nano Letters **19**, 8311 (2019).

11 C. Lidig, J. Minar, J. Braun, H. Ebert, A. Gloskovskii, J. A. Krieger, V. Strocov, M. Klaeui and M. Jourdan: Surface resonance of thin films of the Heusler half-metal Co2MnSi probed by soft x-ray angular resolved photoemission spectroscopy, PHYSICAL REVIEW B **99** (2019).

12 K. Hricovini, M. Richter, O. Heckmann, L. Nicolaï, J. Mariot and J. Minár: Topological electronic structure and Rashba effect in Bi thin layers: theoretical predictions and experiments, Journal of Physics: Condensed Matter **31**, 283001 (2019).

13 M. Wörsching, S.-K. Fricke, J. Minár, R. Niklaus and C. Hoch: Ba6 (MN4) N2–x (M= MoVI/TaV), a Subvalent Nitridometalate with Perovskite-like Crystal Structure, Zeitschrift für anorganische und allgemeine Chemie **645**, 278 (2019).

14 J. Krempasky, M. Fanciulli, N. Pilet, J. Minar, W. Khan, M. Muntwiler, F. Bertran, S. Muff, A. P. Weber, V. N. Strocov, V. V. Volobuiev, G. Springholz and J. H. Dil: Spin-resolved electronic structure of ferroelectric alpha-GeTe and multiferroic Ge1-xMnxTe, JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS **128**, 237 (2019).

15 R. Niklaus, J. Minár, P. Strobel, P. J. Schmidt and W. Schnick: Ab initio exploration and prediction of AE-containing nitrido (litho/magneso) tetrelates (AE= Ca, Sr; Tt= Si, Ge) with [Si2N6] 10- or [Ge2N6] 10- units, Dalton Transactions **48**, 8671 (2019).

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18 Structural analysis of Ni-doped SrTiO3: XRD study, Z. Jansa, L. Prušáková, F. Alarab, P. Šutta and J. Minár : in *AIP Conference Proceedings,* vol. 2131, p. 020022, AIP Publishing (2019).

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32 D. Benea, J. Minár, H. Ebert and L. Chioncel: Magnetic Compton profiles of disordered Fe 0.5 Ni 0.5 and ordered FeNi alloys, Physical Review B **97**, 144408 (2018).

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34 J. Braun, J. Minár and H. Ebert: Correlation, temperature and disorder: Recent developments in the one-step description of angle-resolved photoemission, Physics Reports **749**, 1 (2018).

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41 XPS limit in soft X-ray photoemission spectroscopy of Ag (001), L. Nicolaï and J. Minár : in *AIP Conference Proceedings,* vol. 1996, p. 020033, AIP Publishing (2018).

42 K. Chadova, S. Mankovsky, J. Minár and H. Ebert: Impact of finite temperatures on the transport properties of Gd from first principles, Physical Review B **95**, 125109 (2017).

43 E. D. Schaefer, S. Borek, J. Braun, J. Minár, H. Ebert, K. Medjanik, D. Kutnyakhov, G. Schönhense and H.-J. Elmers: Vectorial spin polarization detection in multichannel spin-resolved photoemission spectroscopy using an Ir (001) imaging spin filter, Physical Review B **95**, 104423 (2017).

44 M. Fanciulli, H. Volfová, S. Muff, J. Braun, H. Ebert, J. Minár, U. Heinzmann and J. H. Dil: Spin polarization and attosecond time delay in photoemission from spin degenerate states of solids, Physical Review Letters **118**, 067402 (2017).

45 J. Sánchez-Barriga, M. Battiato, M. Krivenkov, E. Golias, A. Varykhalov, A. Romualdi, L. V. Yashina, J. Minár, O. Kornilov, H. Ebert, K. Held and J. Braun: Subpicosecond spin dynamics of excited states in the topological insulator Bi2Te3, Physical Review B **95**, 125405 (2017).

46 C. Datzer, A. Zumbülte, J. Braun, T. Förster, A. B. Schmidt, J. Mi, B. Iversen, P. Hofmann, J. Minár, H. Ebert, P. Krüger, M. Rohlfing and M. Donath: Unraveling the spin structure of unoccupied states in Bi2Se3, Physical Review B **95**, 115401 (2017).

47 R. Niklaus, J. Minár, J. Häusler and W. Schnick: First-principles and experimental characterization of the electronic properties of CaGaSiN3 and CaAlSiN3: the impact of chemical disorder, Physical Chemistry Chemical Physics **19**, 9292 (2017).

48 S. A. Khan, J. Minár, H. Ebert, P. Blaha and O. c. v. Šipr: Local environment effects in the magnetic properties and electronic structure of disordered FePt, Phys. Rev. B **95**, 014408 (2017).

49 J. Minár, H. Ebert and L. Chioncel: A self-consistent, relativistic implementation of the LSDA+ DMFT method, The European Physical Journal Special Topics **226**, 2477 (2017).

50 G. Schönhense, K. Medjanik, S. Chernov, D. Kutnyakhov, O. Fedchenko, M. Ellguth, D. Vasilyev, A. Zaporozhchenko-Zymaková, D. Panzer, A. Oelsner, C. Tusche, B. Schönhense, J. Braun, J. Minár, H. Ebert, J. Viefhaus, W. Wurth and H. Elmers: Spin-Filtered Time-of-Flight k-Space Microscopy of Ir–Towards the "Complete" Photoemission Experiment, Ultramicroscopy **183**, 19 (2017).

51 G. Derondeau, F. Bisti, M. Kobayashi, J. Braun, H. Ebert, V. A. Rogalev, M. Shi, T. Schmitt, J. Ma, H. Ding, V. N. Strocov and J. Minár: Fermi surface and effective masses in photoemission response of the (Ba1−xKx)Fe2As2 superconductor, Scientific Reports **7**, 8787 (2017).

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