

List of Publications G. Schönhense

In preparation

M. Hoesch, O. Fedchenko, M. Wang, C. Schlueter, K. Medjanik, S. Babenkov, A. S. Ciobanu, A. Winkelmann, H.-J. Elmers, G. Schönhense and S. Zhou, ***3D active site of hyperdoped Te:Si(001) by hard x-ray photoelectron spectroscopy***

H.-J. Elmers, S. Chernov, S. Babenkov, D. Vasilyev, K. Medjanik, O. Fedchenko, M. Jourdan, S. Andrieu, C. Guillemard, F. Bertran, P. LeFevre, M. Schmitt, C. Schlueter, Yu. Matveyev, A. Gloskowski, R. Claessen, and G. Schönhense, ***Spin-Resolved Bulk Electronic Structure Analysis of the Half-Metallic Heusler Ferromagnet Co₂MnSi***

Submitted

375) D. Curcio, S. Pakdel, K. Volckaert, J. Miwa, S. Ulstrup, N. Lanata, M. Bianchi, D. Kutnyakhov, F. Pressacco, G. Brenner, S. Agustsson, K. Medjanik, D. Vasilyev, H.-J. Elmers, G. Schönhense, C. Tusche, Y.-J. Chen, F. Speck, T. Seyller, K. Bühlmann, R. Gort, F. Diekmann, K. Rossnagel, Y. Acremann, J. Demsar, W. Wurth, D. Lizzit, L. Bignardi, P. Lacovig, S. Lizzit, C. E. Sanders, and P. Hofmann, ***Ultrafast electronic line width broadening in the C 1s core level of graphene***, preprint on arXiv: 2105.10472v1 (2021)

374) G. Schönhense, K. Medjanik, O. Fedchenko, A. Zymaková, S. Chernov, D. Vasilyev, S. Babenkov, H. J. Elmers, P. Baumgärtel, P. Goslawski, G. Öhrwall, M. Ellguth, D. Vasilyev and A. Oelsner, ***Time-of-Flight Photoelectron Momentum Microscopy at 100-500 MHz Synchrotron Sources: Electron-Optical Chopping or Bandwidth Pre-Selection***, preprint on arXiv: 2102.09265 (2021).

373) M. Schmitt, O. Kirilmaz, S. Chernov, S. Babenkov, D. Vasilyev, O. Fedchenko, K. Medjanik, Yu. Matveyev, A. Gloskovskii, C. Schlueter, A. Winkelmann, L. Dudy, H. J. Elmers, G. Schönhense, M. Sing, and R. Claessen, ***Bulk Spin Polarization of Magnetite from Spin-Resolved Hard X-Ray Photoelectron Spectroscopy***, submitted (PRB) 2021

372) F. Pressacco, D. Sangalli, V. Uhlir, D. Kutnyakhov, J. Ander Arregi, S. Y. Agustsson, G. Brenner, H. Redlin, M. Heber, D. Vasilyev, J. Demsar, G. Schönhense, M. Gatti, A. Marini, W. Wurth and F. Sirotti, ***Subpicosecond metamagnetic phase transition driven by non-equilibrium electron dynamics***, submitted (Nat. Commun.); preprint on arXiv: 2102.09265 (2021)

371) J. Seidel, P. M. Bühl, S. Mousavion, B. Dupé, E. S. Walther, K. Medjanik, D. Vasilyev, S. Babenkov, M. Ellguth, M. Maniraj, J. Sinova, G. Schönhense, H.-J. Elmers, B. Stadtmüller, and M. Aeschlimann, ***Exchange Splitting of a Hybrid Surface State and Ferromagnetic Order in a 2D Surface Alloy***, submitted; preprint on arXiv: 1906.03780 (2020)

2021

370) G. Schönhense, D. Kutnyakhov, F. Pressacco, M. Heber, N. Wind, S. Y. Agustsson, S. Babenkov, D. Vasilyev, O. Fedchenko, S. Chernov, L. Rettig, B. Schönhense, L. Wenthaus, G. Brenner, S. Dziarzhyski, S. Palutke, S. K. Mahatha, N. Schirmel, H. Redlin, B. Manschwetus, I. Hartl, Yu. Matveyev, A. Gloskovskii, C. Schlueter, V. Shokeen, H. Duerr, T. K. Allison, M. Beye, K. Rossnagel, H. J. Elmers and K. Medjanik, ***Suppression of the vacuum space-charge effect in fs-photoemission by a retarding electrostatic front lens***, Rev. Sci. Instrum. **92**, 053703 (2021); doi: 10.1063/5.0046567.

369) K. Medjanik, O. Fedchenko, O. Yastrubchak, J. Sadowski, M. Sawicki, L. Gluba, D. Vasilyev, S. Babenkov, S. Chernov, A. Winkelmann, H. J. Elmers, and G. Schönhense,

Site-specific Atomic Order and Band Structure Tailoring in the Diluted Magnetic Semiconductor (In,Ga,Mn)As,

Phys. Rev. B **103**, 075107 (2021); doi: 10.1103/PhysRevB.103.075107.

368) S. Y. Agustsson, S. V. Chernov, K. Medjanik, S. Babenkov, O. Fedchenko, D. Vasilyev, C. Schlueter, A. Hloskovskii, Yu. Matveyev, K. Kliemt, C. Krellner, J. Demsar, G.

Schönhense and H.-J. Elmers, **Temperature-dependent Change of the Electronic Structure in the Kondo Lattice System YbRh₂Si₂,**

J. Phys. Condens. Matter **33**, 205601 (2021); doi: 10.1088/1361-648X/abe479.

367) S. Chernov, C. Lidig, O. Fedchenko, K. Medjanik, S. Babenkov, D. Vasilyev, M. Jourdan, G. Schönhense and H. J. Elmers, **Band structure tuning of Heusler compounds: Spin- and momentum-resolved electronic structure analysis of compounds with different band filling,**

Phys. Rev. B **103**, 054407 (2021); doi:10.1103/PhysRevB.103.054407.

366) C. Kalha, N. K Fernando, P. Bhatt, F. O. L. Johansson, A. Lindblad, H. Rensmo, L. Zendejas Medina, R. Lindblad, S. Siol, L. P. H. Jeurgens, C. Cancellieri, K. Rossnagel, K. Medjanik, G. Schönhense, M. Simon, A. X. Gray, S. Nemsák, P. Lömker, C. Schlueter and A. Regoutz, **Hard x-ray photoelectron spectroscopy - a snapshot of the state-of-the-art in 2020 (Topical Review),**

J. Phys. Condens. Matter **33**, 233001 (2021) (44pp); doi: 10.1088/1361-648X/abeacd.

2020

365) G. Schönhense, S. Babenkov, D. Vasilyev, H.-J. Elmers and K. Medjanik, **Single-Hemisphere Photoelectron Momentum Microscope with Time-of-Flight Recording,** Rev. Sci. Instrum. **91**, 123110 (2020), doi: 10.1063/5.0024074.

364) H. J. Elmers, S. V. Chernov, S. W. Dsouza, S. P. Bommanaboyena, S. Yu. Bodnar, K. Medjanik, S. Babenkov, O. Fedchenko, D. Vasilyev, S. Y. Agustsson, C. Schlueter, A. Gloskovskii, Yu. Matveyev, V. N. Strocov, Y. Skourski, L. Smejkal, J. Sinova, J. Minar, M. Kläui, G. Schönhense, and M. Jourdan, **Néel vector induced manipulation of valence states in the collinear antiferromagnet Mn₂Au,**

ACS Nano **14**, 17554 (2020); doi: 10.1021/acsnano.0c08215.

363) G. Schönhense, K. Medjanik, S. Babenkov, D. Vasilyev, M. Ellguth, O. Fedchenko, S. Chernov, B. Schönhense and H.-J. Elmers, **Momentum-Transfer Model of Valence-Band Photoelectron Diffraction,**

Comms. Phys. **3**, 45 (2020); doi: 10.1038/s42005-020-0311-9.

362) D. Kutnyakhov, P. Xian, M. Dendzik, M. Heber, F. Pressacco, S.Y. Agustsson, L. Wenthaus, H. Meyer, S. Gieschen, G. Mercurio, A. Benz, K. Bühlman, S. Däster, R. Gort, D. Curcio, K. Volckaert, M. Bianchi, Ch. Sanders, J.A. Miwa, S. Ulstrup, A. Oelsner, C. Tusche, Y.J. Chen, , D. Vasilyev, K. Medjanik, G. Brenner, S. Dziarzhytski, H. Redlin, B.

Manschwetetus, S. Dong, J. Hauer, L. Rettig, F. Diekmann, K. Rossnagel, J. Demsar, H.J.

Elmers, Ph. Hofmann, R. Ernstorfer, G. Schönhense, Y. Acremann and W. Wurth, **Time- and momentum-resolved photoemission studies using time-of-flight momentum microscopy at a free-electron laser,**

Rev. Sci. Instrum. **91**, 013109 (2020), doi: 10.1063/1.5118777.

361) H.-J. Elmers, J. Regel, T. Mashof, J. Braun, S. Babenkov, S. Chernov, O. Fedchenko, K. Medjanik, D. Vasilyev, J. Minar, H. Ebert and G. Schönhense,

Rashba splitting of the Tamm surface state on Re(0001) observed by spin-resolved photoemission and scanning tunnelling spectroscopy,

Phys. Rev. Research **2**, 013296 (2020); doi: 10.1103/PhysRevResearch.2.013296.

- 360) D. Vasilyev, K. Medjanik, S. Babenkov, M. Ellguth, G. Schönhense and H.-J. Elmers, ***Relation between Spin-Orbit Induced Spin Polarization, Fano-Effect and Circular Dichroism in Soft X-ray Photoemission***, J. Phys. C **32**, 135501 (2020), doi: 10.1088/1361-648X/ab5e70.
- 359) O. Fedchenko, A. Winkelmann, S. Chernov, K. Medjanik, S. Babenkov, S. Agustsson, D. Vasilyev, M. Hoesch, H.-J. Elmers and G. Schönhense, ***Emitter-Site Specificity of Hard X-Ray Photoelectron Kikuchi-Diffraction***, New J. of Phys. **22**, 103002 (2020), doi: 10.1088/1367-2630/abb68b.
- 358) K. Bühlmann, R. Gort, A. Fognini, S. Däster, S. Holenstein, N. Hartmann, Y. Zemp, G. Salvatella, T. U. Michlmayr, T. Bähler, D. Kutnyakhov, K. Medjanik, G. Schönhense, A. Vaterlaus and Y. Acremann, ***Compact setup for spin-, time-, and angle-resolved photoemission spectroscopy***, Rev. Sci. Instrum. **91**, 063001 (2020), doi: 10.1063/5.0004861.

2019

- 357) S. Babenkov, K. Medjanik, D. Vasilyev, S. Chernov, C. Schlueter, A. Gloskovskii, Yu. Matveyev, W. Drube, B. Schönhense, K. Rossnagel, H.-J. Elmers and G. Schönhense, ***High-accuracy bulk electronic bandmapping with eliminated diffraction effects using hard X-ray photoelectron momentum microscopy***, Comms. Phys. **2**, 107 (2019); doi: 10.1038/s42005-019-0208-7
- 356) O. Fedchenko, A. Winkelmann, K. Medjanik, S. Babenkov, D. Vasilyev, S. Chernov, C. Schlueter, A. Gloskovskii, Yu. Matveyev, W. Drube, B. Schönhense, H. J. Elmers and G. Schönhense, ***High-resolution hard-X-ray Photoelectron Diffraction in a Momentum Microscope - the Model Case of Graphite***, New J. of Phys. **21**, 113031 (2019), doi: 10.1088/1367-2630/ab51fe.
- 355) O. Fedchenko, K. Medjanik, S. Chernov, D. Kutnyakhov, M. Ellguth, A. Oelsner, B. Schönhense, T. Peixoto, P. Lutz, C.-H. Min, F. Reinert, S. Däster, Y. Acremann, J. Viehhaus, W. Wurth, J. Braun, J. Minár, H. Ebert, H. J. Elmers and G. Schönhense ***4D texture of circular dichroism in soft-x-ray photoemission from tungsten***, New J. of Phys. **21**, 013017 (2019) doi: 1367-2630/aaf4cd
- 354) M. Mankos, K. Shadman, R. Hahn, Y. J. Picard, D. Comparat, O. Fedchenko, G. Schönhense, L. Amiaud, A. Lafosse and N. Barrett, ***Design for a high resolution electron energy loss microscope***, Ultramicroscopy **207**, 112848 (2019), doi: 10.1016/j.ultramic.2019.112848
- 353) M. Lehr, K. Bley, N. Vogel, B. Rethfeld, G. Schönhense, H.-J. Elmers, ***Evidence of Spatially Inhomogeneous Electron Temperature in a Resonantly-Excited Array of Bow-Tie Nanoantennas***, J. Phys. Chem. C **12**, 319, 12429-12436 (2019), doi: 10.1021/acs.jpcc.9b03722
- 352) K. Medjanik, S. V. Babenkov, S. Chernov, D. Vasilyev, B. Schönhense, C. Schlueter, A. Gloskovskii, Yu. Matveyev, W. Drube, H. J. Elmers and G. Schönhense, ***Progress in HAXPES Performance Combining Full-Field k-Imaging with Time-of-Flight Recording***, J. of Synchr. Radiation **26**, 1996–2012 (2019), doi: 10.1107/S1600577519012773
- 351) K. Medjanik, H.-J. Elmers, G. Schönhense, J.-P. Pouget, R. Valenti and M. Lang, ***Electron- and X-Ray Spectroscopies of Organic Charge-Transfer Complexes***, Phys. Status Solidi B **1800745** (2019), doi: 10.1002/pssb.201800745 (review article)

350) T. Mashoff, J. Regel, K. Medjanik, G. Schönhense, M. Huth, J. Müller, M. Lang, R. Valentí, M. Baumgarten and H.-J. Elmers,

Investigation of Many-Body Effects in the Quasi-Two-Dimensional Electronic System of Organic Charge-Transfer Salts,

Phys. Status Solidi B 1800674 (2019), doi: 10.1002/pssb.201800674 (review article)

349) O. Fedchenko, S. Chernov, G. Schönhense, R. Hahn and D. Comparat,

Narrow-Band Pulsed Electron Source Based on Near-Threshold Photoionization of Cs in a Magneto-Optical Trap

Phys. Rev. A **101**, 013424 (2020), doi: 10.1103/PhysRevA.101.013424

348) C. Schlueter, A. Gloskovskii, K. Ederer, S. Piec, M. Sing, R. Claessen, C. Wiemann, C.M. Schneider, K. Medjanik, G. Schönhense, P. Amann, A. Nilsson and W. Drube,

New HAXPES Applications at PETRA III,

AIP Conferences Proceedings **2054**, 040010 (2019)

2018

347) B. Schönhense, K. Medjanik, O. Fedchenko, S. Chernov, M. Ellguth, D. Vasilyev, A. Oelsner, J. Viehhaus, D. Kutnyakhov, W. Wurth, H. J. Elmers and G. Schönhense

Multidimensional Photoemission Spectroscopy – the Space-Charge Limit

New J. of Physics **20**, 033004 (2018) doi: 10.1088/1367-2630/aaa262

346) C. Schlueter, A. Gloskovskii, K. Ederer, S. Piec, M. Sing, R. Claessen, C. Wiemann, C.M. Schneider, K. Medjanik, G. Schönhense, P. Amann, A. Nilsson and W. Drube,

New HAXPES Applications at PETRA III,

Synchr. Radiation News **31**, 29 (2018)

2017

345) K. Medjanik, O. Fedchenko, S. Chernov, D. Kutnyakhov, M. Ellguth, A. Oelsner, B. Schönhense, T. R. F. Peixoto, P. Lutz, C.-H. Min, F. Reinert, S. Däster, Y. Acremann, J. Viehhaus, W. Wurth, H. J. Elmers and G. Schönhense

Direct 3D Mapping of the Fermi Surface and Fermi Velocity

Nature Materials **16**, 615 (2017)

344) M. Lehr, B. Foerster, M. Schmitt, K. Krüger, C. Sönnichsen, G. Schönhense and H.-J. Elmers

Momentum distribution of electrons emitted from resonantly excited individual gold nanorods

Nano Letters **17**, 6606-6612 (2017), doi: 10.1021/acs.nanolett.7b02434

343) G. Schönhense, K. Medjanik, S. Chernov, D. Kutnyakhov, O. Fedchenko, M. Ellguth, D. Vasilyev, A. Zaporozhchenko, D. Panzer, A. Oelsner, C. Tusche, B. Schönhense, J. Braun, J. Minár, H. Ebert, J. Viehhaus, W. Wurth and H. J. Elmers

Spin-Filtered Time-of-Flight k-Space Microscopy of Ir – Towards the “Complete” Photoemission Experiment

Ultramicroscopy **183**, 19–29 (2017)

342) E.D. Schäfer, S. Borek, J. Braun, J. Minar, 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

Phys. Rev. B **95**, 104423 (2017)

341) M. Staab, D. Kutnyakhov, R. Wallauer, S. Chernov, K. Medjanik, H.- J. Elmers, M. Kläui and G. Schönhense

Energy- and k-resolved mapping of the magnetic circular dichroism in threshold photoemission from Co films on Pt(111)

Phys. Rev. B **95**, 165437 (2017)

340) H. J. Elmers, D. Kutnyakhov, S.V. Chernov, K. Medjanik, O. Fedchenko, A. Zaporozhchenko-Zymakova, M. Ellguth, C. Tusche, J. Viefhaus, G. Schönhense

Hosting of surface states in spin-orbit induced projected bulk band gaps of W(110) and Ir(111)

J. Phys.: Condens. Matter **29** (2017) 255001

339) A. Zaporozhchenko-Zymaková, D. Kutnyakhov, K. Medjanik, C. Tusche, O. Fedchenko, S. Chernov, M. Ellguth, S.A. Nepijko, H.J. Elmers, and G. Schönhense

Observation of Dark Lines in k-Resolved Photoemission from Ir(111) and Graphene/Ir(111) via High-Resolution Time-of-Flight Momentum Microscopy

Phys. Rev. B **96**, 155108 (2017)

2016

338) C. Tusche, P. Goslawski, D. Kutnyakhov, M. Ellguth, K. Medjanik, H. J. Elmers, S. Chernov, R. Wallauer, D. Engel, A. Jankowiak, and G. Schönhense

Multi-MHz Time-of-Flight Electronic Bandstructure Imaging of Graphene on Ir(111)

Appl. Phys. Lett. **108**, 261602 (2016)

337) A. Kronenberg, J. Braun, J. Minar, H.-J. Elmers, D. Kutnyakhov, A. V. Zaporozhchenko, R. Wallauer, S. Chernov, K. Medjanik, G. Schönhense, M. Kläui, S. Chadov, H. Ebert, and M. Jourdan,

Dirac cone and pseudogapped density of states in the topological half-Heusler compound YPtBi,

Phys. Rev. B **94**, 161108 (2016)

336) D. Kutnyakhov, S. Chernov, K. Medjanik, R. Wallauer, C. Tusche, M. Ellguth, S.A. Nepijko, M. Krivenkov, J. Braun, S. Borek, J. Minar, H. Ebert, H.J. Elmers, and G. Schönhense

Spin texture of time-reversal symmetry invariant surface states on W(110)

Scientific. Rep. **6**, 29394 (2016)

335) H. J. Elmers, R. Wallauer, M. Liebmann, J. Kellner, M. Morgenstern, R. N. Wang, J. E. Boschker, R. Calarco, J. Sanchez-Barriga, O. Rader, D. Kutnyakhov, S. V. Chernov, K. Medjanik, C. Tusche, M. Ellguth, H. Volfova, S. Borek, J. Braun, J. Minar, H. Ebert, and G. Schönhense

Spin mapping of surface and bulk Rashba states in ferroelectric α -GeTe(111) films

Phys. Rev. B **94**, 201403 (2016)

334) K. Medjanik, A. Chernenkaya, X. Kozina, S. A. Nepijko, G. Öhrwall, P. Foury-Leylekian, P. Alemany, G. Schönhense, E. Canadell, and J.-P. Pouget

A NEXAFS investigation of the quasi-one dimensional organic conductor (TMTSF)₂PF₆

J. Phys. Chem. A, **120** (43), 8574–8583 (2016).

- 333) V.G. Dyukov, S.A. Nepijko and G. Schönhense
Voltage Contrast Modes in a Scanning Electron Microscope and Their Application
 Advances in Imaging and Electron Physics, Volume **196**, 165-246 (2016) (invited review)
- 332) D. Schwander, L. Kööp, T. Berg, G. Schönhense, P. R. Heck, A. M. Davis and U. Ott
Formation of refractory metal nuggets and their link to the history of CAIs.
 Geochim. Cosmochim. Acta **168**, 70-87 (2016)
- 331) S. Borek, J. Braun, J. Minár, D. Kutnyakhov, H.-J. Elmers, G. Schönhense and H. Ebert,
Determination of surface and interface magnetic properties for the multiferroic heterostructure Co/BaTiO₃ using SPLEED and ARPES,
 J. Phys.: Condens. Matter **28**, 436004 (2016)
- 330) X. Kozina, E. Ikenaga, C. E. Viol Barbosa, S. Ouardi, J. Karel, M. Yamamoto, K. Kobayashi, H.-J. Elmers, G. Schönhense, C. Felser
Development of hard X-ray photoelectron SPLEED-based spectrometer applicable for probing of buried magnetic layer valence states,
 Journal of Electron Spectrosc. Relat. Phenom. **211**, 12-18 (2016)
- 329) S.A. Nepijko, A. Chernenkaya, K. Medjanik, S.V. Chernov, A.V. Yarmak, L.V. Odnodvoretz, W. Schulze and G. Schönhense
Spectral measurement of light emission from individual Au nanoparticles using scanning tunnelling microscopy
 J. of Nano- and Electronic Physics **8**, 02039 (2016)
- 328) E. D. Schaefer, S. V. Chernov, A. Sapozhnik, D. M. Kostyuk, A. Zaporozhchenko, S. I. Protsenko, M. Bode, S. A. Nepijko, H.-J. Elmers and G. Schönhense
Morphological and magnetic analysis of Fe nanostructures on W(110) by using scanning tunneling microscopy and Lorentz microscopy
 Jap. J. of Applied Physics **55**, 02BC11 (2016)
- 327) O. Fedchenko, S.V. Chernov, M. Klimenkov, S.I. Protsenko, S.A. Nepijko and G. Schönhense
TEM investigation of oxidation of (110) NiAl single crystal with non-stoichiometry composition (surplus of Ni)
 JNEP, **V8**, 04067 (2016)
- 326) A. Chernenkaya, A. Morherr, K. Medjanik, S. Witt, X. Kozina, S. A. Nepijko, G. Öhrwall, M. Bolte, C. Krellner, H. O. Jeschke, R. Valenti, M. Baumgarten, H.-J. Elmers, G. Schönhense
Orbital-selective NEXAFS: two mechanisms of the charge transfer in single crystals based on thiophene derivatives
 J. Chem. Phys. **145**, 034702 (2016)
- 325) P. Klaer, G. Razinskas, M. Lehr, X.-F. Wu, B. Hecht, F. Schertz, H.-J. Butt, G. Schönhense and H.-J. Elmers
Polarization dependence of plasmonic near-field enhanced photoemission from cross antennas
 Appl. Phys. B **122**, 136 (2016)
- 324) G. Schönhense
Fast k-Space Mapping of Electronic Bands Using Time-of-Flight Based Cathode-Lens Microspectroscopy.

Microscopy Microelectr., Proceedings CPO conference 2016 (invited)

323) A. Morherr, S. Witt, A. Chernenkaya, J.-P. Bäcker, G. Schönhense, M. Bolte, C. Krellner
Crystal growth of new charge-transfer salts based on π -conjugated donor molecules
Physica B **496**, 98–105 (2016)

2015

322) S. Chernov, K. Medjanik, D. Kutnyakhov, C. Tusche, S. A. Nepijko, A. Oelsner, J. Braun, J. Minár, S. Borek, H. Ebert, H. J. Elmers, J. Kirschner and G. Schönhense
Anomalous d-like Surface Resonance on Mo(110) Analyzed by Time-of-Flight Momentum Microscopy
Ultramicroscopy **159**, 463 (2015)

321) G. Schönhense, K. Medjanik, C. Tusche, M. de Loos, B. van der Geer, M. Scholz, F. Hieke, N. Gerken, J. Kirschner and W. Wurth
Correction of the deterministic part of space-charge interaction in momentum microscopy of charged particles
Ultramicroscopy **159**, 499 (2015)

320) G. Schönhense, K. Medjanik and H.-J. Elmers
Space-, Time- and Spin-resolved Photoemission
Journal of Electron Spectrosc. Relat. Phenom., **200**, 94 (2015) (invited review)

319) J. Braun, M. Jourdan, A. Kronenberg, S. Chadov, B. Balke, M. Kolbe, A. Gloskovskii, H. J. Elmers, G. Schönhense, C. Felser, M. Kläui, H. Ebert, and J. Minár
Monitoring surface resonances on Co₂MnSi(100) by spin-resolved photoelectron spectroscopy
Phys. Rev. B **91** (2015) 195128

318) D. Kutnyakhov, H.J. Elmers, G. Schönhense, C. Tusche, S. Borek, J. Braun, J. Minár and H. Ebert
Specular reflection of spin-polarized electrons from a W(001) spin-filter crystal in a larger range of scattering energies and angles
Phys. Rev. B **91** (2015) 014416

317) A. Chernenkaya, K. Medjanik, P. Nagel, M. Merz, S. Schuppler, E. Canadell, J.-P. Pouget and G. Schönhense
Nature of the empty states and signature of the charge density wave instability and upper Peierls transition of TTF-TCNQ by temperature-dependent NEXAFS spectroscopy
Eur. Phys. J. B **88** (2015) 13

316) K. Medjanik, A. Chernenkaya, S. A. Nepijko, G. Öhrwall, P. Foury-Leylekian, P. Alemany, E. Canadell, G. Schönhense and J.-P. Pouget
Donor-anion interactions at the charge localization and the charge ordering transition of (TMTTF)₂AsF₆ probed by NEXAFS
Phys. Chem. Chem. Phys. **17**, 19202 – 19214 (2015)

315) A.V. Zaporozhchenko, S.V. Chernov, A.A. Sapozhnik, L.V. Odnodvoretz, B.V. Stetsenko, S.A. Nepijko, H.J. Elmers and G. Schönhense
Photon-assisted field emission from a Si tip at addition of an AC low voltage
Appl. Phys. A (2015) DOI 10.1007/s00339-015-9064-9

314) A. Chernenkaya, O. Koplak, K. Medjanik, A. Kotov, R. Morgunov, E. Yagubskii, H.-J. Elmers and G. Schönhense

Temperature dependence of electronic and magnetic properties of (DOEO)₄[HgBr₄]·TCE single crystals,

Solid State Phenomena 233-234 (2015) 173-176

313) O. N. Martyanov, D. A. Balaev, O. V. Pylypenko, L. V. Odnodvoretz, S. V. Chernov, S. A. Nepijko, H. J. Elmers, C. M. Schneider and G. Schönhense

FMR investigations of two-dimensional periodic arrays of disc-shaped Co particles at different temperatures

J. Supercond. Nov. Magn. **28**, 3587–3591 (2015)

312) I. Shpetnyi, A.S. Kovalenko, M. Klimenkov, I.Yu. Protsenko, S.V. Chernov, S.A. Nepijko, H.J. Elmers and G. Schönhense

Characterization and magnetic properties of nanoparticles based on FePt solid solution with an oxide shell

Journal of Magn. Magn. Mater. **373** (2015) 231-235

311) D. Schwander, S. Buhre, G. Schönhense and U. Ott

Synthesis of refractory metal nuggets (RMNs) and clues to the cooling rate of RMN bearing CAIs.

Meteorit. & Planet. Sci. 1–11 (2015) doi: 10.1111/maps.12440

310) S.A. Nepijko, A. Chernenkaya, K. Medjanik, S.V. Chernov, M. Klimenkov, O.V. Vlasenko, S.S. Petrovskaya, L.V. Odnodvoretz, Ya. V. Zaulichnyy and G. Schönhense

Soft X-ray emission spectroscopy used for the characterization of α -C and CN_x thin films

Thin Solid Films 557 (2015) 109-113

309) O.V. Koplak, A. Chernenkaya, K. Medjanik, A. Brambilla, A. Gloskovskii, A. Calloni, H.J. Elmers, G. Schönhense, F. Ciccacci and R.B. Morgunov

Spectroscopic fingerprints for charge localization in the organic semiconductor (DOEO)₄[HgBr₄]·TCE

Eur. Phys. J. B **88** (2015) 120

2014

308) M. Jourdan, J. Minár, J. Braun, A. Kronenberg, S. Chadov, B. Balke, A. Gloskovskii, M. Kolbe, H.J. Elmers, G. Schönhense, H. Ebert, C. Felser and M. Kläui

Direct observation of half-metallicity in the Heusler compound Co₂MnSi

Nature Commun. **5** (2014) 3974

307) K. Medjanik, M. de Souza, D. Kutnyakhov, A. Gloskovskii, J. Müller, M. Lang, J.- P. Pouget, P. Foury-Leylekian, A. Moradpour, H. J. Elmers and G. Schönhense

Hard X-ray Photoemission Study of the Fabre Salts (TMTTF)₂X (X=SbF₆ and PF₆)

Eur. Phys. J. B **87** (2014) 256, DOI: 10.1140/epjb/e2014-50499-y

306) D. Schwander, T. Berg, G. Schönhense and U. Ott

Condensation of refractory metals in AGB and other stellar environments.

Astrophys. J. **793**:20, (2014) September 20 doi:10.1088/0004-637X/793/1/20.

305) D. Schwander, T. Berg, D. Harries, G. Schönhense and U. Ott

Composition and clues to the origin of Refractory Metal Nuggets extracted from chondritic meteorites.

Meteorit. & Planet. Sci., **49**, no 10, 1888-1901 (2014). doi: 10.1111/maps.12366

304) S.A. Nepijko, A. Chernenkaya, K. Medjanik, S.V. Chernov, D.V. Shapko, I.Yu. Protsenko, W. Schulze and G. Schönhense
Investigation of a Ge nanoparticle film by means of electron stimulated photon emission spectroscopy.

Journal of Electron Spectrosc. Relat. Phenom. **193** (2014) 54.

303) S.V. Chernov, Z.M. Makukha, I.Y. Protsenko, S.A. Nepijko, H.J. Elmers and G. Schönhense

Test object for emission electron microscope

Appl. Phys. A **114** (2014) 1383–1385.

2013

302) J. Klanke, E. Rentschler, K. Medjanik, D. Kutniakhov, G. Schönhense, S. Krasnikov, I.V. Shvets, S. Schuppler, P. Nagel, M. Merz and H. J. Elmers

Beyond the Heisenberg model: Anisotropic exchange interaction between a Cu-tetraazaporphyrin monolayer on Fe₃O₄(100)

Phys. Rev. Lett. **110** (2013) 137202

301) H. J. Elmers, A. Chernenkaya, K. Medjanik, M. Emmel, G. Jakob, G. Schönhense, D. Gottlob, I. Krug, F. M. F. de Groot and A. Gloskovskii,

Exchange coupling in the correlated electronic states of amorphous GdFe films,

Phys. Rev. B **88** (2013) 174407.

300) P. Klaer, F. Schertz, M. Lehr, G. Schönhense, and H. J. Elmers

Spin-polarized photoelectrons resonantly excited by circularly polarized light from a fractional Ag film on GaAs(100)

Phys. Rev. B **88** (2013) 214425

299) C. Tusche, M. Ellguth, A. Krasnyuk, A. Winkelmann, D. Kutnyakhov, P. Lushchik, K. Medjanik, G. Schönhense and J. Kirschner

Efficient Spin-Polarization Analysis in Photoelectron Emission Microscopy With an Imaging Spin Filter,

Ultramicroscopy **130** (2013) 70-76

298) D. Kutnyakhov, P. Lushchik, D. Perriard, M. Kolbe, K. Medjanik, E. Fedchenko, S.A. Nepijko, H.J. Elmers, G. Salvatella, R. Gort, T. Böhler, T. Michlmayer, A. Fognini, Y. Acremann, A. Vaterlaus, C. Tusche, A. Krasnyuk, J. Kirschner, F. Giebels, H. Gollisch, R. Feder and G. Schönhense

Imaging Spin Filter for Electrons Based on Specular Reflection from Ir (001)

Ultramicroscopy **130** (2013) 63–69

297) S.A. Nepijko, E. Fedchenko, S.V. Chernov and G. Schönhense

Growth and defect studies of CdTe particles

Cryst. Res. Technol. **48** (2013) 287-293

296) S.A. Nepijko, A. Petrov, D. Kondrakhova, I.E. Protsenko, H.J. Elmers and G. Schönhense

Investigation of exchange bias effect of fine cobalt particles with oxidized surface

Journal of Nanoparticle Research **15** (2013) 1603

295) S.A. Nepijko, D.M. Kostyuk, S.I. Protsenko, W. Schulze and G. Schönhense

Decoration of atomic steps on (001)NaCl cleavage face during deposition of preformed Ag clusters

Appl. Phys. A - Materials Science & Processing **111** (2013) 237-242

- 294) S.A. Nepijko, H.J. Elmers, G. Schönhense, M.H. Demydenko, S.I. Protsenko and D.M. Kostyuk

Magnetoresistive properties of Fe₃O₄ nanoparticles embedded in a Cu matrix

Appl. Phys. A - Materials Science & Processing **112** (2013) 463-467

- 293) S.A. Nepijko, O.V. Pylypenko, L.V. Odnodvoretz, E. Kisker, H.J. Elmers and G. Schönhense

Quadratic magneto-optical effects in two-dimensional permalloy particles investigated by scanning X-ray microscopy

Appl. Phys. A - Materials Science & Processing **111** (2013) 557-561

2012

- 292) F. Schertz, M. Schmelzeisen, R. Mohammadi, M. Kreiter, H.-J. Elmers and G. Schönhense

Near Field of Strongly Coupled Plasmons: Uncovering Dark Modes

Nano Lett. **12** (2012) 1885–1890.

- 291) K. Medjanik, D. Chercka, P. Nagel, M. Merz, S. Schuppler, M. Baumgarten, K. Müllen, S. A. Nepijko, H.J. Elmers, G. Schönhense, H. O. Jeschke and R. Valenti

Orbital-Resolved Partial Charge Transfer from the Methoxy Groups of Substituted Pyrenes in Complexes with Tetracyanoquinodimethane – a NEXAFS Study

J. Am. Chem. Soc. **134** (2012) 4694-4699.

- 290) F. Schertz, M. Schmelzeisen, M. Kreiter, H.-J. Elmers and G. Schönhense
- Field Emission of Electrons Generated by the Near Field of Strongly Coupled Plasmons***

Phys. Rev. Lett. **108** (2012) 237602.

- 289) M. Kolbe, S. Chadov, E. Arbelo Jorge, G. Schönhense, C. Felser, H.-J. Elmers, M. Kläui and M. Jourdan

Test of band structure calculations for Heusler compounds by spin resolved photoemission spectroscopy

Phys. Rev. B **86** (2012) 024422.

- 288) K. Hild, G. Schönhense, H.J. Elmers, T. Nakagawa, T. Yokoyama, K. Tarafder and P.M. Oppeneer

Dominance of the first excitation step for magnetic circular dichroism in near-threshold two-photon photoemission

Phys. Rev. B **85** (2012) 014426.

- 287) S.A. Nepijko and G. Schönhense

Electron holography for electric and magnetic field measurements and its application for nanophysics. In: Advances in Imaging and Electron Physics

Edited by P.W. Hawkes. “Academic Press” (USA) **169**, San Diego 2011, 173-240.

- 286) K. Medjanik, A. Gloskovskii, D. Kutnyakhov, C. Felser, D. Chercka, M. Baumgarten, K. Müllen and G. Schönhense

Charge transfer in the novel donor-acceptor complexes tetra- and hexamethoxypyrene with tetracyanoquinodimethane studied by HAXPES

J. Electron Spectrosc. Relat. Phenom. **185** (2012) 77-84.

- 285) G. Stryganyuk, X. Kozina, G. H. Fecher, S. Ouardi, S. Chadov, C. Felser, G. Schönhense, P. Lushchik, A. Oelsner, P. Bernhard, E. Ikenaga, T. Sugiyama, H. Sukegawa, Z. Wen, K. Inomata and K. Kobayashi
Spin Polarimetry and Magnetic Dichroism on a buried magnetic layer using Hard X-ray Photoelectron Spectroscopy
Japanese J. of Appl. Phys. **51** (2012) 016602.
- 284) D. Schwander, T. Berg, U. Ott, G. Schönhense and H. Palme
Formation of refractory metal alloys and their occurrence in CAIs
Meteoritics & Planetary Science **47** (2012) A348.
- 283) S.A. Nepijko, D. Kutnyakhov, I.E. Protsenko, R. Wiesendanger, H.J. Elmers and G. Schönhense
Structure and magnetic properties of one-dimensional chains of ferromagnetic nanoparticles
Appl. Phys. A **109** (2012) 699-702.
- 282) K.O. Graivoronska, M. Klimenkov, Yu.M. Solonin, S.A. Nepijko and G. Schönhense
Detailed study of defects in thin fullerite films
Cryst. Res. Technol **47**, (2012) 1255-1268.

2011

- 281) M. Kolbe, P. Lushchik, B. Petereit, H.J. Elmers, G. Schönhense, A. Oelsner, C. Tusche and J. Kirschner
Highly Efficient Multichannel Spin-Polarization Detection
Phys. Rev. Lett. **107** (2011) 207601.
- 280) C. Tusche, M. Ellguth, A. A. Ünal, C. T. Chiang, A. Winkelmann, A. Krasnyuk, M. Hahn, G. Schönhense and J. Kirschner
Spin resolved photoelectron microscopy using a two-dimensional spin-polarizing electron mirror
Appl. Phys. Lett. **99** (2011) 032505.
- 279) M. Hahn G. Schönhense, E. Arbelo Jorge and M. Jourdan
Significant spin polarization of Co₂MnGa Heusler thin films on MgO (100) measured by ultraviolet photoemission spectroscopy
Appl. Phys. Lett. **98** (2011) 232503-3.
- 278) X. Kozina, G. H. Fecher, G. Stryganyuk, S. Ouardi, B. Balke, C. Felser, G. Schönhense, E. Ikenaga, T. Sugiyama, N. Kawamura, M. Suzuki, T. Taira, T. Uemura, M. Yamamoto, H. Sukegawa, W. Wang, K. Inomata and K. Kobayashi
Magnetic dichroism in angle-resolved hard x-ray photoemission from buried layers
Phys. Rev. B **84** (2011) 054449.

- 277) S.A. Nepijko and G. Schönhense

Analysis of Optical Systems, Contrast Depth, and Measurement of Electric and Magnetic Field Distribution on the Object's Surface in Mirror Electron Microscopy.

In: *Advances in Imaging and Electron Physics*

Edited by P.W. Hawkes, "Academic Press" (USA) **168** San Diego (2011) 193.

- 276) M. Jourdan, F. Große-Schulte, M. Hahn and G. Schönhense
Spectroscopy of the electronic states of the Heusler compounds Co_2FeAl and $\text{Co}_2\text{Cr}_{0.6}\text{Fe}_{0.4}\text{Al}$ and the influence of oxidation
Journal of Physics D: Appl. Phys. **44** (2011) 155001.
- 275) S.A. Nepijko, D. Kutnyakhov, S. I. Protsenko, L.V. Odnodvoretz and G. Schönhense
Sensor and microelectronic elements based on granular systems
J. Nanoparticle Res. **13** (2011) 6263-6281.
- 274) S.A.Nepijko, A.Krasyuk, A.Oelsner, C.M.Schneider and G.Schönhense
Quantitative measurements of magnetic stray field dynamics of Permalloy particles in a photoemission electron microscope
J. Microsc. **242** (2011) 216-220.
- 273) F. Schertz, D. Kutnyakhov, S. Schuppler, P. Nagel, S. A. Nepijko, G. Schönhense
Measurement of object height in emission electron microscopy
Appl. Phys. A **102** (2011) 253-258.
- 272) O. Buluy, S. A. Nepijko, V. Reshetnyak, E. Ouskova, V. Zadorozhnyi, A. Leonhardt, M. Ritschel, G. Schönhense, Yuriy Reznikov
Magnetic sensitivity of a dispersion of aggregated ferromagnetic carbon nanotubes in liquid crystals, Soft Matter **7** (2011) 644-649.
- 271) S. Naghavi, T. Gruhn, V. Alijani, G. H. Fecher, C. Felser, K. Medjanik, D. Kutnyakhov, S. A. Nepijko, G. Schönhense, R. Rieger, M. Baumgarten, K. Müllen
Theoretical study of new acceptor and donor molecules based on polycyclic aromatic hydrocarbons, Journal of Molecular Spectroscopy **265** (2011) 95-101.
- 270) R. Mohammadi, A. Unger, H.J. Elmers, G. Schönhense, M.Z. Shushtari, M. Kreiter
Manipulation near field polarization beyond the diffraction limit
Appl. Phys. B **6** (2011) 4475-6.

2010

- 269) K. Medjanik, S. Perkert, S. Naghavi, M. Rudloff, V. Solovyeva, D. Chercka, M. Huth, S. A. Nepijko, T. Methfessel, C. Felser, M. Baumgarten, K. Müllen, H.J. Elmers, G. Schönhense
Formation of an intermolecular charge-transfer compound in UHV codeposited tetramethoxypyrene and tetracyanoquinodimethane
Phys. Rev. B **82** (2010) 245419.
- 268) K. Hild, G. Schönhense, and H. J. Elmers T. Nakagawa and T. Yokoyama, K. Tarafder, P. M. Oppeneer
Energy- and angle-dependent threshold photoemission magnetic circular dichroism from an ultrathin Co/Pt(111) film, Phys. Rev. B **82** (2010) 195430.

- 267) K. Medjanik, D. Kutnyakhov, S. A. Nepijko, G. Schönhense, S. Naghavi, V. Alijani, C. Felser, N. Koch, R. Rieger, M. Baumgarten, K. Müllen,
Electronic structure of large disc-type donors and acceptors
Phys. Chem. Chem. Phys. **12** (2010) 7184.
- 266) D. Panzer, C. Beck, M. Hahn, J. Maul, G. Schönhense, H. Decker, E. F. Aziz
Water Influences on the Copper Active Site in Hemocyanin
The Journal of Physical Chemistry Letters **1** (2010) 1642-1647.
- 265) A. Oelsner, M. Rohmer, Ch. Schneider, D. Bayer, G. Schönhense, M. Aeschlimann
Time- and Energy resolved photoemission electron microscopy – imaging of photoelectron time-of-flight analysis by means of pulsed excitations
J. Electron Spectrosc. Relat. Phenom. **178-179** (2010) 317-330.
- 264) A. Gloskovskii, D.A.Valdaitsev, L.V.Viduta, S.A. Nepijko, G. Schönhense
Investigation of the local electron emission from current-carrying silver cluster films by an emission electron microscope
Thin Solid Films **518** (2010) 4030-4034.
- 263) H. J. Elmers, G. Schönhense
Ferromagnetism at the summit : A perspective on : « Spin polarized field emission from Fe and co-coated W tips » by Y.R. Niu and M. S. Altman
Surface Science Perspectives **604** (2010) 1060-1061.
- 262) S.A. Nepijko, G. Schönhense
Measurement of potential distribution function on object surface by using an electron microscope in the mirror operation mode, Journal of Microscopy **238** (2010) 90–94.
- 2009**
- 261) K. Hild, J. Maul, G. Schönhense, H.J. Elmers, M. Amft, P. Oppeneer
Magnetic circular dichroism in two-photon photoemission
Phys. Rev. Lett. **102** (2009) 057207-4
- 260) F. Wegelin, A. Krasnyuk, D. A. Valdaitsev, S. A. Nepijko, H.J. Elmers, G. Schönhense, C.M. Schneider
Magnetization dynamics in polycrystalline permalloy and epitaxial Co platelets observed by time-resolved photoemission electron microscopy
Physica Status Solidi B **246** (2009) 1476-1482
- 259) O. Gaier, J. Hamrle, B. Hillebrands, M. Kallmayer, P. Pörsch, G. Schönhense, H. J. Elmers, J. Fassbender, A. Gloskovskii, C. A. Jenkins, C. Felser, E. Ikenaga, Y. Sakuraba, S. Tsunegi, M. Oogane, and Y. Ando
Improvement of structural, electronic, and magnetic properties of Co₂MnSi thin films by He⁺ irradiation
Appl. Phys. Lett. **94** (2009) 152508.
- 258) T. Berg, J. Maul, G. Schönhense, E. Marosits, P. Hoppe, U. Ott, and H. Palme
Direct Evidence for Condensation in the Early Solar System and Implications for Nebular Cooling Rates
The Astrophysical Journal **702** (2009) L172-L176

- 257) S. Ouardi, B. Balke, A. Gloskovskii, G. H. Fecher, C. Felser, G. Schoenhense, T. Ishikawa, T. Uemura, M. Yamamoto, H. Sukegawa, W. Wang, K. Inomata, Y. Yamashita, H. Yoshikawa, S. Ueda, and K.e Kobayashi
Hard X-ray photoelectron spectroscopy of buried Heusler compounds,
J. Phys. D: Appl. Phys. **42** (2009) 084010.
- 256) A. Krasnyuk, F. Wegelin, S.A. Nepijko, H.J. Elmers, G. Schönhense, I. Mönch, H. Vinzelberg, C.M. Schneider
Dynamics of 180° Néel Walls in Two-Dimensional Permalloy Particles Observed Via Picosecond Time-Resolved Photoemission Electron Microscopy
Ukrain. J. Phys. **54** (2009) 170-175
- 255) C.M. Schneider, I. Krug, M. Müller, F. Matthes, A. Kaiser, C. Wiemann, S. Cramm, H.-J. Elmers, F. Wegelin, A. Krasnyuk, S.A. Nepijko, G. Schönhense
Investigating spintronics thin film systems with synchrotron radiation
Radiation Physics and Chemistry **78** (2009) 5-10
- 254) S.A.Nepijko, G.Schönhense
Quantitative Lorentz transmission electron microscopy of structured thin permalloy films
Appl. Phys. A: Materials Science & Processing **96** (2009) 671-677
- 253) C. Zimmer, K. Medjanik, G. Schönhense, S. Krischok P. Lorenz, J. Schubert, T. Doll
Low vacuum photo electron emitting thin films
Phys. Status Solidi A (2009) 1-5

2008

- 252) A. Gloskovskii, D. A. Valdaitsev, M. Cinchetti, S. A. Nepijko, J. Lange, M. Aeschlimann, M. Bauer, M. Klimenkov, L. V. Viduta, P. Tomchuk, G. Schönhense
Electron emission from films of Ag and Au nanoparticles excited by a femtosecond pump-probe laser
Phys. Rev. B **77** (2008) 195427
- 251) K. Hild, J. Maul, T. Meng, M. Kallmayer, G. Schönhense, H.J. Elmers
Optical magnetic circular dichroism in threshold photoemission from a magnetite thin film
Journal of Physics: Condensed Matter **20** (2008) 235218 (5pp)
- 250) D. Panzer, C. Beck, J. Maul, M. Möller, H. Decker, G. Schönhense
Transmission photoemission electron microscopy for lateral mapping of the X-ray absorption structure of a metalloprotein in a liquid cell
Europ. Biophys. Journal **38** (2008) 53-5
- 249) T. Berg, E. Marosits, J. Maul, P. Nagel, U. Ott, F. Schertz, S. Schuppler, Ch. Sudek, G. Schönhense
Quantum confinement observed in the X-ray absorption spectrum of size distributed meteoritic nanodiamonds
Journal of Applied Physics **104** (2008) 064303 (5pp)
- 248) J. Lin, N. Weber, M. Escher, J. Maul, H-S. Han, M. Merkel, St. Wurm, G. Schönhense, U. Kleineberg
Three-dimensional characterization of extreme ultraviolet mask blank defects by interference contrast photoemission electron microscopy
Opt. Express **16** (2008) 15343-153-15352
- 247) L. Basit, S. A. Nepijko, I. Shukoor, V. Ksenofontov, M. Klimenkov, G.H. Fecher, G. Schönhense, W. Tremel, C. Felser
Structure and magnetic properties of iron-platinum particles with γ -ferric oxide shell

- Appl. Phys. A: Materials Science & Processing **94** (2009) 619-625
- 246) S. A. Nepijko, A. Graff, G. Schönhense, C.M. Schneider
Quantitative determination of magnetic fields from iron particles of oblong form encapsulated by carbon nanotubes using interference electron microscopy
 Appl. Phys. A: Materials Science & Processing **94** (2009) 543-547
- 245) N. B. Weber, M. Escher, M. Merkel, A. Oelsner, G. Schönhense
Energy- and Time-Resolved Microscopy Using PEEM: Recent Developments and State-of-the-Art
 Journal of Physics: Conference Series **100** (2008) 072031
- 244) J. Lin, J. Maul, N. Weber, Ch. Holfeld, M. Escher, M. Merkel, G. Schönhense, U. Kleineberg
Inspection of EUVL mask blank defects and patterned masks using EUV photoemission electron microscopy
 Microelectronic Engineering **85** (2008) 922-924
- 243) S. A. Nepijko, G. Schönhense
Size selective melting of small metal particles
 Metallofizika I Noveishie Tekhnologii **30** (2008) 479-483
- 242) M. Hovorka, L. Frank, D. Valdaitsev, S.A. Nepijko, H.-J. Elmers, G. Schönhense
High-pass Energy-Filtered PEEM Imaging of Dopants in Silicon
 J. Microsc. **230** (2008) 42-47

2007

- 241) F. Wegelin, D. Valdaitsev, A. Krasnyuk, S. A. Nepijko, G. Schönhense, H. J. Elmers, I. Krug, C. M. Schneider
Magnetization dynamics in microscopic spin-valve elements: Shortcomings of the macrospin picture
 Phys. Rev. B **76** (2007) 134410/1-4
- 240) O. N. Martyanov, V. F. Yudanov, R. N. Lee, A. S. Nepijko, H. J. Elmers, R. Hertel, C. M. Schneider G. Schönhense
Ferromagnetic resonance study of thin film antidot array: Experiment and micromagnetic simulations
 Phys. Rev. B **75** (2007) 174429
- 239) F. Wegelin, A. Krasnyuk, H.-J. Elmers, S. A. Nepijko, C. M. Schneider, G. Schönhense
Stroboscopic XMCD-PEEM Imaging of Standing and Propagating Spinwave Modes in Permalloy Thin-Film Structures
 Surf. Science **601** (2007) 4694-4699
- 238) S. A. Nepijko, G. K. L. Marx, G. Schönhense
Quantitative determination of magnetic fields on object surfaces via photoemission electron microscopy without restriction of the electron beam
 Nuclear Instr. and Meth. in Phys. Research B **264** (2007) 194-200
- 237) J. Maul, J. Lin, A. Oelsner, D. Valdaitsev, N. Weber, M. Escher, M. Merkel, H. Seitz, U. Heinzmann, U. Kleineberg, G. Schönhense
Phase defect inspection of multilayer masks for 13.5 nm optical lithography using PEEM in a standing-wave mode
 Surf. Science **601** (2007) 4758-4763
- 236) G. Schönhense and H. J. Elmers
Stroboscopic XMCD-PEEM imaging
 Encyclopedia of Materials: Science and Technology, Elsevier (2007) 1-5 (invited)

- 235) J. Lin, N. Weber, J. Maul, S. Hendel, K. Rott, M. Merkel, G. Schönhense, U. Kleineberg:
At-wavelength inspection of sub-40 nm defects in extreme ultraviolet lithography mask blank by photoemission electron microscopy
Optics Letters **32** (2007) 1875-1877
- 234) A. Krasnyuk, S. A. Nepijko, A. Oelsner, C. M. Schneider, H. J. Elmers, G. Schönhense
Magnetic stray fields of patterned permalloy structures investigated by photoemission electron microscopy
Appl. Phys. A: Materials Science & Processing **88** (2007) 793-796
- 233) L. Frank, F. Mika, M. Hovorka, D. Valdaitsev, G. Schönhense, I. Müllerova
Dopant Contrast in Semiconductors as Interpretation Challenge at Imaging by Electrons
Materials Transactions **48** (2007) 936-939
- 232) G. H. Fecher, B. Balke, S. Ouardi, C. Felser, G. Schönhense, E. Ikenaga, J.-J. Kim, S. Ueda, K. Kobayashi
High energy, high resolution photoelectron spectroscopy of $\text{Co}_2\text{Mn}_{1-x}\text{Fe}_x\text{Si}$
J. Phys. D: Appl. Phys. **40** (2007) 1576-1581
- 231) A. Gloskovskii, J. Barth, B. Balke, G. H. Fecher, C. Felser, F. Kronast, R. Ovsyannikov, H. Dürr, W. Eberhardt, G. Schönhense
A spatially resolved investigation of the local, micro-magnetic domain structure of single and polycrystalline Co_2FeSi
J. Phys. D: Appl. Phys. **40** (2007) 1570-1575
- 230) J. Lin, U. Neuhausler, J. Slieh, A. Brechling, U. Heinzmann, N. Weber, M. Escher, M. Merkel, A. Oelsner, D. Valdaitsev, G. Schönhense, E. Quesnel, U. Kleineberg
Actinic inspection of EUVL mask blank defects by photoemission electron microscopy: Effect of inspection wavelength variation
Microelectronic Engineering **84** (2007) 1011-1014
- 229) A. Gloskovskii, D. Valdaitsev, S. A. Nepijko, G. Schönhense, B. Rethfeld
Coexisting electron emission mechanisms in small metal particles observed in fs-laser excited PEEM
Surf. Science **601** (2007) 4706-4713
- 228) A. Gloskovskii, S. A. Nepijko, G. Schönhense, H. A. Therese, A. Reiber, H. C. Kandpal, G. H. Fecher, C. Felser, W. Tremel, M. Klimenkov
Spectroscopic and microscopic study of Vanadium oxide nanotubes
J. Appl. Phys. **101** (2007) 084301
- 227) S. A. Nepijko, M. Mundscha, G. Schönhense
Photoemission electron microscopy neodymium-iron-boron of $\text{Nd}_2\text{Fe}_{14}\text{B}$
Appl. Phys. A: Materials Science & Processing **86** (2007) 515-519
- 2006**
- 226) C. M. Schneider, A. Krasnyuk, S. A. Nepijko, A. Oelsner, G. Schönhense
Accessing fast magnetization dynamics by XPEEM: Status and perspectives
Journal of Magnetism and Magnetic Materials **304** (2006) 6-9
- 225) H. C. Kandpal, G. H. Fecher, C. Felser, and G. Schönhense
Electron correlation in the transition metal based Heusler compounds Co_2MnSi and Co_2FeSi
Phys. Rev. B **73** (2006) 094422
- 224) G. Schönhense, H. J. Elmers, S. A. Nepijko, C. M. Schneider
Time-resolved photoemission electron microscopy

In: Advances in Imaging and Electron Physics (Ed. P. Hawkes) **142** (2006) 159-323 (invited)

- 223) P. Bernhard, J. Maul, T. Berg, F. Wegelin, U. Ott, Ch. Sudek, H. Spiecker, S. Merchel, and G. Schönhense
Nondestructive full-field imaging XANES-PEEM analysis of cosmic grains
Phys. Rev. B **74** (2006) 075401
- 222) J. Maul, T. Berg, E. Marosits, G. Schönhense, and G. Huber
Statistical mechanics of fullerene coalescence growth
Phys. Rev. B **74** (2006) 161406 R
- 221) U. Neuhausler, A. Oelsner, M. Schicketanz, J. Slieh, N. Weber, M. Brzeska, A. Wonisch, T. Westerwalbesloh, H. Brückl, M. Escher, M. Merkel, G. Schönhense, U. Kleineberg, and U. Heinzmann
High-resolution actinic defect inspection for extreme ultraviolet lithography multilayer mask blanks by photoemission electron microscopy
Appl. Phys. Lett. **88** (2006) 053113/1-3
- 220) T. Berg, J. Maul, N. Erdmann, P. Bernhard, S. Schuppler, P. Nagel, C. Sudek, U. Ott, G. Schönhense
Coupling of imaging NEXAFS with secondary ion mass spectrometry for the chemical and isotopic analysis of presolar cosmic grains
Analytical and Bioanalytical Chemistry **386** (2006) 119-124
- 219) G. Schönhense, H. J. Elmers
PEEM With High Time Resolution – Imaging of Transient Processes and Novel Concepts of Chromatic and Spherical Aberration Correction,
Surf. and Interface Analysis **38** (2006) 1578-1587
- 218) P. Bernhard, J. Maul, U. Ott, Ch. Sudek, M. Escher, N. Weber, M. Merkel, B. Krömker, D. Funnemann, G. Schönhense
Trace Element Analysis in Presolar Stardust Grains via Full-field XPS-Imaging (NanoESCA)
Nucl. Instr. and Methods **B 246** (2006) 275-280
- 217) U. Kleineberg, J. Lin, U. Neuhausler, J. Slieh, U. Heinzmann, N. Weber, M. Escher, M. Merkel, A. Oelsner, D. Valsaitsev, G. Schönhense
Actinic EUVL mask blank defect inspection by EUV photoelectron microscopy
Proc. SPIE **6151**(1), 542-552 (2006)
- 216) G. H. Fecher, S. Wurmehl, H. C. Kandpal, G. Schönhense and C. Felser
Slater-Pauling Rule and Curie-Temperature of Co₂-based Heusler compounds
J. Appl. Phys. **99** (2006) 08J106
- 215) S. Wurmehl, G. H. Fecher, K. Kroth, F. Kronast, H. A. Dürr, Y. Takeda, Y. Saitoh, K. Kobayashi, H.-J. Lin, G. Schönhense, and C. Felser
Electronic structure and spectroscopy of the quaternary Heusler alloy Co₂Cr_{1-x}Fe_xAl
J. Phys. D: Appl. Phys. **39** (2006) 803-815
- 214) A. Gloskovskii, S. A. Nepijko, M. Cinchetti, G. Schönhense, G. H. Fecher, H. C. Kandpal, C. Felser, H. A. Therese, N. Zink, W. Tremel, A. Oelsner
Time-of-flight photoelectron spectromicroscopy of single MoS₂ nanotubes
J. Appl. Phys. **100** (2006) 084330
- 213) L. Frank, I. Müllerová, D. A. Valdaitsev, A. Gloskovskii, S. A. Nepijko, H.-J. Elmers, G. Schönhense
The origin of contrast in the imaging of doped areas in silicon by slow electrons
J. Appl. Phys. **100** (2006) 093712

- 212) G. Schönhense, H. J. Elmers, A. Krasnyuk, F. Wegelin, S. A. Nepijko, A. Oelsner, C. M. Schneider
Transient Spatio-Temporal Domain Patterns in Permalloy Microstructures Induced By Fast Magnetic Field Pulses
Nucl. Instr. and Methods **B 246** (2006) 1-12 (invited)
- 211) J. Lin, U. Neuhausler, J. Slieh, A. Brechling, U. Kleineberg, U. Heinzmann, A. Oelsner, D. Valdaitsev, G. Schönhense, N. Weber, M. Escher, M. Merkel
Actinic extreme ultraviolet lithography mask blank defect inspection by photoemission electron microscopy
J. Vac. Sci. Technol. **B 24** (2006) 2631-2635
- 210) J. Maul, I. Strachnov, S. Karpuk, P. Bernhard, A. Oelsner, G. Schönhense, G. Huber
Onset of Crater Formation During Short Pulse Laser Ablation
Appl. Phys. **A 82** (2006) 43-47
- 209) U. Neuhausler, J. Lin, A. Oelsner, M. Schicketanz, D. Valdaitsev, J. Slieh, N. Weber, M. Brzeska, A. Wonisch, T. Westerwalbesloh, A. Brechling, H. Brückl, M. Escher, M. Merkel, G. Schönhense, U. Kleineberg, U. Heinzmann
A new approach for actinic defect inspection of EUVL multilayer mask blanks: Standing wave photoemission electron microscopy
Microelectronic Engineering **83** (2006) 680-683

2005

- 208) A. Krasnyuk, F. Wegelin, S. A. Nepijko, H. J. Elmers, G. Schönhense, M. Bolte, C. M. Schneider
Self-trapping of magnetic oscillation modes in Landau flux-closure structures
Phys. Rev. Lett. **95** (2005) 207201
- 207) M. Cinchetti, A. Gloskovskii, S. A. Nepijko, G. Schönhense, H. Rochholz, M. Kreiter
Photoemission Electron Microscopy as a tool for the investigation of optical near fields
Phys. Rev. Lett. **95** (2005) 047601
- 206) J. Maul, I. Strachnov, S. Karpuk, T. Schilling, A. Oelsner, P. Bernhard, H. J. Elmers, G. Schönhense, G. Huber
Periodic Unmixing of a Binary Metallic Vapor
Phys. Rev. **B 72** (2005) 155431
- 205) U. Ott, Ch. Sudek, J. Maul, P. Bernhard, H.J. Elmers, G. Schönhense
Nano-ESCA: A valuable tool for studying pre-solar grains and other extraterrestrial materials
Lunar and Planetary Science **36** (2005) 1294 -95
- 204) S. A. Nepijko, N. N. Sedov, G. Schönhense
Measurement of electric fields on object surface in an emission electron microscope
in *Advances in Imaging and Electron Physics* (Ed. P. Hawkes), **136** (2005) 227-316 (invited)
- 203) G. H. Fecher, H. C. Kandpal, S. Wurmehl, C. Felser, and G. Schönhense
Design of magnetic materials. The electronic structure of the ordered, doped Heusler compound $\text{Co}_2\text{Cr}_{1-x}\text{Fe}_x\text{Al}$
J. Phys.: Condens. Matter **17** (2005) 7237
- 202) M. Klais, H.W. Gundel, G. Schönhense
Energy-resolved analysis of ferroelectric electron emission from TGS using emission electron Microscopy
Appl. Phys. **A 80** (2005) 545-49

- 201) D. Neeb, A. Krasnyuk, A. Oelsner, S. A. Nepijko, H. J. Elmers, A. Kuksov, C. M. Schneider, G. Schönhense
Sub-nanosecond resolution XMCD-PEEM of magnetization processes in a Permalloy ring
J. Phys.: Condens. Matter **17** (2005) S1381-S1395
- 200) D. A. Valdaitsev, A. Kukunin, J. Prokop, H. J. Elmers, G. Schönhense
Growth and magnetic properties of ultra-thin Co(0001) films on patterned Mo(110)/ Al₂O₃(11-20) substrates
Appl. Phys. **A 80** (2005) 731-34
- 199) M. Escher, N. Weber, M. Merkel, Ch. Ziethen, P. Bernhard, G. Schönhense, S. Schmidt, F. Forster, F. Reinert, B. Krömker, D. Funnemann
NanoESCA: a novel energy filter for imaging X-ray photoemission spectroscopy
J. Phys.: Condens. Matter **17** (2005) S1329-1338
- 198) C. M. Schneider, A. Kuksov, A. Krasnyuk, A. Oelsner, S. A. Nepijko, G. Schönhense
Time-resolved X-ray photoemission electron microscopy: imaging magnetodynamics on the 100 ps scale and below
J. Electron. Spectr. Rel. Phenom., **144-147** (2005) 967-971
- 197) M. Cinchetti and G. Schönhense
Two-photon photoemission spectromicroscopy of noble metal clusters on surfaces studied using time-of-flight photoemission electron microscopy
J. Phys.: Condens. Matter **17** (2005) S1319-1328
- 196) M. Escher, N. Weber, M. Merkel, B. Krömker, D. Funnemann, S. Schmidt, F. Reinert, F. Forster, S. Hüfner, P. Bernhard, Ch. Ziethen, H. J. Elmers, G. Schönhense
NanoESCA: Imaging UPS and XPS with high energy resolution
J. Electron Spectrosc. Relat. Phenom. **144-147** (2005) 1179-1182
- 195) O. N. Martyanov, V. F. Yudanov, R. N. Lee, S. A. Nepijko, H. J. Elmers, C. M. Schneider, G. Schönhense
Ferromagnetic resonance investigation of collective phenomena in two-dimensional periodic arrays of Co particles
Appl. Phys. **A 81** (2005) 679-683
- 194) A. Oelsner, A. Krasnyuk, S. Nepijko, C.M. Schneider, G. Schönhense
Spatially resolved observation of dynamics in electrical and magnetic field distributions by means of a delayline detector and PEEM
J. Electron Spectrosc. Relat. Phenom., **144-147** (2005) 771-776.

2004

- 193) C. M. Schneider, A. Kuksov, A. Krasnyuk, A. Oelsner, D. Neeb, S. A. Nepijko, G. Schönhense, I. Mönch, R. Kaltfen, C. de Nadai, B. Brookes
Incoherent magnetization rotation observed in subnanosecond time-resolving x-ray photoemission electron microscopy
Appl. Phys. Lett. **85** (2004) 2562-2564
- 192) J. Prokop, D. A. Valdaitsev, A. Kukunin, M. Pratzer, G. Schönhense, H. J. Elmers
Strain induced magnetic anisotropies in Co films on Mo(110)
Phys. Rev. **B 70** (2004) 184423
- 191) H. J. Elmers, S. Wurmehl, G. H. Fecher, G. Jakob, C. Felser and G. Schönhense
Field dependence of Orbital Magnetic Moments in the Heusler compounds Co₂FeAl and Co₂Cr_{0.6}Fe_{0.4}Al

- Appl. Phys. **A 79** (2004) 557-563
- 190) S. Wurmehl, G. H. Fecher, H. C. Kandpal, K. Kroth, H.-J. Elmers, G. Schönhense, C. Felser, J. Morais, Y. Hwu, and R. Klauser
Charakterisierung von dotierten Heusler-Verbindungen: $\text{Co}_2\text{Cr}_{1-x}\text{Fe}_x\text{Al}$
Z. Anorg. Allg. Chem. **630** (2004) 1771
 - 189) H. J. Elmers, S. Wurmehl, G. H. Fecher, G. Jakob, C. Felser and G. Schönhense;
Enhanced orbital magnetic moments in the Heusler compounds Co_2CrAl , $\text{Co}_2\text{Cr}_{0.6}\text{Fe}_{0.4}\text{Al}$ and Co_2FeAl
J. Magn. Magn. Mater. **272-276** (2004) 758-759
 - 188) G. Schönhense
Surface magnetism studied by photoelectron spectromicroscopy with high spatial and time resolution
J. Electron Spectr. Rel. Phenom. **137-140** (2004) 769-783 (invited)
 - 187) P. Bernhard, Ch. Ziethen, R. Ohr, H. Hilgers, G. Schönhense
Investigations of the corrosion protection of ultrathin a-C and a-C:N overcoats for magnetic storage devices
Surf. and Coatings Techn. **180-181** (2004) 621-626
 - 186) A. Gloskovskii, D. Valdaitsev, S. A. Nepijko, N. N. Sedov, G. Schönhense
Electrical and emission properties of current-carrying silver cluster films detected by an emission electron microscope
Appl. Phys. **A 79** (2004) 707-712
 - 185) S. A. Nepijko, A. Oelsner, A. Krasnyuk, A. Gloskovskii, N. N. Sedov, C. M. Schneider, G. Schönhense
Lateral resolving power of a time-of-flight photoemission electron microscope
Appl. Phys. **A 78** (2004) 47-51
 - 184) A. Krasnyuk, A. Oelsner, S. A. Nepijko, N. N. Sedov, A. Kuksov, C. M. Schneider, G. Schönhense
Dynamics of magnetic stray fields at initial stage of magnetization reversal of micrometer-sized Co dots
Appl. Phys. **A 79** (2004) 1925-1930
 - 183) M. Dunin v. Przychowski, G. K. L. Marx, G. H. Fecher, G. Schönhense
A Spatially Resolved Investigation of Oxygen Adsorption on Polycrystalline Copper and Titanium by Means of Photoemission Electron Microscopy
Surf. Sci. **549** (2004) 37- 51
 - 182) M. Klais, D. Averty, H. W. Gundel, G. Schönhense
Visualization of field induced ferroelectric electron emission from TGS using emission electron microscopy
Appl. Phys. **A 78** (2004) 67-72
 - 181) M. Cinchetti, D. A. Valdaitsev, A. Gloskovskii, A. Oelsner, S. A. Nepijko, G. Schönhense
Photoemission time-of-flight spectromicroscopy of Ag nanoparticle films on Si(111)
J. Electron. Spectr. Rel. Phenom. **137-140** (2004) 249-257
 - 180) A. Oelsner, A. Krasnyuk, D. Neeb, S. A. Nepijko, A. Kuksov, C. M. Schneider, G. Schönhense
Magnetisation changes visualized using Photoemission Electron Microscopy
J. Electron Spectr. Rel. Phenom. **137-140** (2004) 751-756
 - 179) A. Kuksov, C. M. Schneider, A. Oelsner, A. Krasnyuk, D. Neeb, G. Schönhense, C. de Nadai,

N.B. Brookes

Investigating magnetisation dynamics in Permalloy Microstructures using time-resolved X-PEEM
J. Appl. Phys. **95** (2004) 6530-6532

- 178) A. Oelsner, A. Krasnyuk, G. H. Fecher, C. M. Schneider, G. Schönhense,
Image enhancement in photoemission electron microscopy by means of imaging time-of-flight analysis
J. Electron Spectr. Rel. Phenom. **137-140** (2004) 757-761

2003

- 177) H. J. Elmers, G. H. Fecher, D. Valdaitsev, S. A. Nepijko, A. Gloskovskii, G. Jakob, G. Schönhense, S. Wurmehl, T. Block, C. Felser, P.-C. Hsu and W.-L. Tsai and S. Cramm
Element specific magnetic moments from core-absorption magnetic circular dichroism of the doped Heusler alloy $\text{Co}_2\text{Cr}_{0.6}\text{Fe}_{0.4}\text{Al}$
Phys. Rev. **B 67** (2003) 104412/1-7.
- 176) M. Cinchetti, A. Oelsner, G.H. Fecher, H.J. Elmers, G. Schönhense
Observation of Cu surface inhomogeneities by multiphoton photoemission spectromicroscopy
Appl. Phys. Lett. **83** (2003) 1503-1505
- 175) M. Dunin v. Przychowski, H. Wiechert, G. K. L. Marx, G. Schönhense
Real-Space Observation of Xenon Adsorption and Desorption Kinetics on Graphite(0001) by Photoemission Electron Microscopy
Surf. Science **541** (2003) 46-58
- 174) A. Krasnyuk, A. Oelsner, S. A. Nepijko, A. Kuksov, C. M. Schneider, G. Schönhense
Time-resolved photoemission electron microscopy of magnetic field and magnetisation changes
Appl. Phys. **A 76** (2003) 863-868
- 173) C. Felser, B. Heitkamp, F. Kronast, D. Schmitz, S. Cramm, H. A. Dürr, H. J. Elmers, G. H. Fecher, S. Wurmehl, T. Block, D. Valdaitsev, S. A. Nepijko, A. Gloskovskii, G. Jakob, G. Schönhense and W. Eberhardt
Investigation of a novel material for magnetoelectronics: $\text{Co}_2\text{Cr}_{0.6}\text{Fe}_{0.4}\text{Al}$
J. Phys.: Condens. Matter **15** (2003) 7019-7027
- 172) S. A. Nepijko, A. V. Gloskovskii, N. N. Sedov, G. Schönhense
Measurement of the electric field distribution and potentials on the object surface in an emission electron microscope without restriction of the electron beams.
Journal of Microscopy **211** (2003) 89-94
- 171) A. Gloskovskii, D. A. Valdaitsev, S. A. Nepijko, G. Schönhense
Electrical and emission properties of current-carrying silver nanocluster films investigated by emission electron microscopy
Microsc. Microanal. **9**, Suppl.3 (2003) 176-177
- 170) S. A. Nepijko, M. Klais, G. Schönhense, N. Cramer, Z. Celinski, C. M. Schneider, S. Zennaro, N. Zema, N. N. Sedov
Micromagnetism of two-dimensional permalloy particles with different aspect ratio
Appl. Phys. **A 76** (2003) 809-815

2002

- 169) C. M. Schneider and G. Schönhense
Investigating Surface Magnetism by Means of Photoexcitation Electron Emission Microscopy (PEEM)

- Rep. Prog. Phys. **65** (2002) R1785-1839 (invited)
- 168) G. Schönhense and H. Spiecker
Correction of Chromatic and Spherical Aberrations in Electron Microscopy Utilizing the Time-Structure of Pulsed Excitation Sources
J. Vac. Sci. Technol. **B 20** (2002) 2526-2534
 - 167) M. Schicketanz, A. Oelsner, G. H. Fecher J. Morais, G. Schönhense
Magnetic Coupling of Alkali and Rare-Gas Films Adsorbed on a Ferromagnetic Surface
Surf. Rev. Lett. **9** (2002) 895-899
 - 166) O. Schmidt, M. Bauer, C. Wiemann, R. Porath, M. Scharte, O. Andreyev, G. Schönhense, M. Aeschlimann
Time-Resolved Two Photon Photoemission Electron Microscopy
Appl. Phys. **B 74** (2002) 223-227
 - 165) S. A. Nepijko, M. Klais, A. Oelsner, O. Schmidt, G. H. Fecher, G. Schönhense, U. Muschiol, C. M. Schneider, S. Zennaro, N. Zema, N. N. Sedov
New Applications of the Magnetic X-ray Circular Dichroism Method for Surface-Magnetism Investigations in a Photoemission Electron Microscope
Appl. Phys. **A 74** (2002) 295-298
 - 164) A. Oelsner, M. Schicketanz, G. H. Fecher, G. Schönhense, J. Morais
An Experimental Proof of the Back-Scattering Model for Dichroic Effects in VUV-Photoemission
Surf. Rev. Lett. **9** (2002) 889-893
 - 163) S. A. Nepijko, N. N. Sedov, O. Schmidt, G. H. Fecher, G. Schönhense
Size of Three-Dimensional Objects Measured by Means of Photoemission Electron Microscopy
Ann. Phys. **11** (2002)1, 39 – 48
 - 162) A. Oelsner, Ch. Ziethen, G. H. Fecher, G. Schönhense
Imaging of Dichroism in Photoemission Electron Microscopy at Non-Magnetic Materials Using Circularly Polarized Soft X-rays
Surf. Rev. Lett. **9** (2002) 509-513
 - 161) S. A. Nepijko, N. N. Sedov, G. Schönhense, U. Muschiol, C. M. Schneider, S. Zennaro, N. Zema
Resolution of an Emission Electron Microscope in the Presence of Magnetic Fields on the Object
Ann. Phys. **11** (2002) 6, 461-471
 - 160) G. Fecher, V. V. Kuznetsov, N. A. Cherepkov, G. Schönhense
Extension of the Atomic Model for Consideration of Photoemission From Solids and Adsorbed Atoms
J. Electron Spectr. Relat. Phenom. **122** (2002) 157-180
 - 159) G. H. Fecher, J. Braun, A. Oelsner, Ch. Ostertag, G. Schönhense
Dichroism in Angular-Resolved Photoemission from Pt(111)
Surf. Rev. Lett. **9** (2002) 883-888
 - 158) Ch. Ziethen, F. Wegelin, G. Schönhense, R. Ohr, M. Neuhäuser, H. Hilgers,
Soft X-ray Photoelectron Microscopy Used for the Characterisation of Stoichiometric Defects in Diamond, α -C and CN_x Thin Films
Diamond and Related Materials **11** (2002) 1068-1073
 - 157) G.H. Fecher, O. Schmidt, Y. Hwu, G. Schönhense
Multiphoton Photoemission Electron Microscopy Using Femtosecond Laser Radiation
J. Electron Spectr. Relat. Phenom. **126** (2002) 77-87

- 156) V. V. Kuznetsov, N. A. Cherepkov, G. H. Fecher, G. Schönhense
Angular Distributions and Dichroism of Photoelectrons Ejected from Fixed-in-Space Molecules of Definite Symmetry: Application to the C_{2v} Symmetry Group
J. Chem. Phys. **117** (2002) 7180
 - 155) C. M. Schneider, O. de Haas, D. Tietjen, U. Muschiol, N. Cramer, Z. Celinski, A. Oelsner, M. Klais, Ch. Ziethen, O. Schmidt, G. Schönhense, N. Zema, S. Zennaro
Size-Dependence of Magnetic Domain Patterns in Exchange-Biased Permalloy/NiO Microstructures
J. Phys. D: Appl. Phys. **35** (2002) 2472-2478
 - 154) S. A. Nepijko, N. N. Sedov, G. Schönhense, M. Escher
Use of Emission Electron Microscope for Potential Mapping in Semiconductor Microelectronics
J. of Microscopy **206** (2002) 132-38
 - 153) G. H. Fecher, V. V. Kuznetsov, N. A. Cherepkov, G. Schönhense
Influence of the Symmetry on the Circular Dichroism in Angular Resolved Core Level Photoemission
Appl. Phys. A **74** (2002) 295-98
- 2001**
- 152) C.M. Schneider, O. de Haas, U. Muschiol, N. Cramer, A. Oelsner, M. Klais, O. Schmid, G.H. Fecher, W. Jark, G. Schönhense
Photoemission Microscopy from Magnetically Coupled Thin Film Systems
J. Magn. Magn. Mater. **233** (2001) 14-20
 - 151) A. Oelsner, O. Schmidt, M. Schicketanz, M.J. Klais, G. Schönhense, V. Mergel, O. Jagutzki, H. Schmidt-Böcking
Microspectroscopy and imaging using a delayline-detector in time-of-flight photoemission microscopy
Rev. Sci. Instrum. **72** (2001) 3968-3974
 - 150) G. Schönhense, A. Oelsner, O. Schmidt, G. H. Fecher, V. Mergel, O. Jagutzki, H. Schmidt-Böcking
Time-Of-Flight Photoemission Electron Microscopy - A New Way To Chemical Surface Analysis
Surf. Sci. **480** (2001) 180-187
 - 149) M. Schicketanz, A. Oelsner, J. Morais, V. Mergel, H. Schmidt-Böcking, G. Schönhense
Electron-TOF-analyser for complete momentum analysis in photoemission from surfaces
Nucl. Instr. and Methods A **467-468** (2001) 1519-1522
 - 148) G. Schönhense
Magnetic Domain Imaging of Thin Metallic Layers Using PEEM
in: *Physics of Low-Dimensional Systems*, Ed. By J.L. Moran-Lopez, Kluwer Academic/Plenum Publishers, New York (2001) p. 309 – 333 (invited)
 - 147) M. Merkel, M. Escher, J. Settemeyer, D. Funnemann, A. Oelsner, Ch. Ziethen, O. Schmidt, M. Klais, G. Schönhense
Microspectroscopy and Spectromicroscopy with Photoemission Electron Microscopy Using a New Kind of Imaging Energy Filter
Surf. Sci. **480** (2001) 196-202
 - 146) S.A. Nepijko, N.N. Sedov, G. Schönhense
Microspectroscopy and Spectromicroscopy with Photoemission Electron Microscopy Using a New Kind of Imaging Energy Filter

- 145) G. H. Fecher, J. Morais, J. Liesegang, J. Braun, N. A. Cherepkov, A. Oelsner, M. Günther, M. Schicketanz, G. Schönhense
Spin Polarisation and Dichroism in ARUPS from Thin Rare Earth Films
J. Electron Spectrosc. Relat. Phenom. **114-116** (2001) 1171-1177
- 144) G. H. Fecher, B. Schmied, A. Oelsner, G. Schönhense
Temperature-dependent Angular Resolved UV-Photoemission Spectroscopy from CeNi₂Ge₂
J. Electron Spectrosc. Relat. Phenom. **114-116** (2001) 747-752
- 143) J. Morais, A. Oelsner, G. Schönhense, G. H. Fecher, R. Landers, A. de Siervo, G. G. Kleiman
Photoemission from Pt(111)-(hex)-Rb and Pt(111)-(4x1)-RbO Using Polarised Synchrotron Radiation
J. Electron Spectrosc. Relat. Phenom. **114-116** (2001) 345-350
- 142) S.A. Nepijko, N.N. Sedov, O. Schmidt, G. Schönhense, X. Bao, W. Huang
Imaging of Three-Dimensional Objects in Emission Electron Microscopy
Journal of Microscopy **202** (2001) 480-487
- 141) L. Singleton, R. Baron, G. K. L. Marx, G. Schönhense, A. Schmidt
Fabrication of a miniaturised objective lens for a Photoemission Electron Microscope (PEEM)
Conference Proceedings Microtec 2000, Hannover (2001) 699-704
- 140) R. Ohr, M. Neuhäuser, H. Hilgers, P. Pokrowsky, G. Schönhense, G. Dittmar
Ellipsometrische Charakterisierung von C-Schutzschichten für die Speichertechnologie
Vakuum in Forschung und Praxis **13** (2001) 277-285
- 139) F. Wegelin, Ch. Ziethen, G. Schönhense, M. Neuhäuser, R. Ohr, H. Hilgers
Defektanalyse von a-C- und CNx-Schichten mittels Röntgen-Photoemissions-Elektronenmikroskopie (X-PEEM)
Vakuum in Forschung und Praxis **13** (2001) 287-292

2000

- 138) G.K.L. Marx, H.J. Elmers, G. Schönhense
Magneto-Optical Linear Dichroism in Threshold Photoemission Electron Microscopy of Polycrystalline Fe Films
Phys. Rev. Lett. **84** (2000) 5888-91
- 137) S.K. Semenov, N.A. Cherepkov, G.H. Fecher, G. Schönhense
Generalization of Atomic RPA Method for Diatomic Molecules: N₂ Photoionization Cross Section Calculations
Phys. Rev. A **61** (2000) 032704 / 1 – 11
- 136) S.A. Nepijko, N.N. Sedov, G. Schönhense
Measurement of Magnetic Fields and Domain Structures Using a Photoemission Electron Microscope
In: *Advances in Imaging and Electron Physics* (Ed. P.Hawkes)
Vol. **113**, 205-248 (2000) (invited)
- 135) O. Schmidt, G.H. Fecher, Y. Hwu, G. Schönhense
The Spatial Distribution of Non-linear Effects in Sub-Threshold Photoemission from Metallic Adsorbates on Si(111)
Surf. Sci. **482-485** (2001) 687-692

- 134) M. Getzlaff, C. Westphal, J. Bansmann, G. Schönhense
Chalcogen adsorption and surface magnetism
J. Electron Spectrosc. Relat. Phenom. **107** (2000) 293-300
 - 133) L. Singleton, Y. Ansel, R. Baron, G. K. L. Marx, M. Nienhaus, F. Schmitz, G. Schönhense, A. Schmidt;
Miniaturized Objective Lens for a Photoelectron Emission Microscope
in *Micromachining Technology for Micro-Optics* Ed. S.H. Lee,
SPIE Proceedings Series **4179** (2000) 146-157
 - 132) S.A. Nepijko, N.N. Sedov, Ch. Ziethen, G. Schönhense, M. Merkel, M. Escher
Peculiarities of Imaging One- and Two-Dimensional Structures in an Emission Electron Microscope. I Theory
Journal of Microscopy **199** (2000) 124-129
 - 131) S.A. Nepijko, N.N. Sedov, G. Schönhense, M. Escher, Xinhe Bao, Weixin Huang
Resolution Deterioration in Emission Electron Microscopy due to Object Roughness
Ann. Phys. **9** (2000) 441-451
 - 130) Ch. Ziethen, O. Schmidt, G. K. L. Marx, G. Schönhense, R. Frömter, J. Gilles, J. Kirschner, C. M. Schneider, O. Gröning
Orbital Mapping of Carbon Thin Films by XANES-Spectromicroscopy
J. Electron Spectr. Relat. Phenom. **107**, 261-71 (2000)
 - 129) T. Schmitt, P. Guttman, O. Schmidt, P. Müller-Buschbaum, M. Stamm, G. Schönhense, G. Schmahl
Microscopy of Thin Polymer Blend Films of Polystyrene and Poly-n-buty-methacrylate
in *X-Ray Microscopy: Proceedings of the Sixth International Conference*
ed. by W. Meyer-Ilse et al. (2000), 245-249
- 1999**
- 128) G. Schönhense
Imaging of Magnetic Structures by Photoemission Electron Microscopy
J. Phys.: Condens. Matter **11**, 9517 – 9547 (1999) (invited)
 - 127) W. Grahneis, Ch. Ziethen, G. H. Fecher, G. Schönhense
Combined chemical Microanalysis using SAM and X-PEEM
Jap. J. Appl. Phys. Suppl. **38-1**, 317 (1999)
 - 126) G. H. Fecher, J. Braun, N. A. Cherepkov, L. V. Chernysheva, Th. Jentzsch, J. Morais, A. Oelsner, Ch. Ostertag, J. Paul, H. Ufer, G. Schönhense
Dichroism in Angular Resolved VUV-Photoemission from the (0001) Surfaces of Thin Gd and Nd Films Epitaxially Grown on W(110)
European Phys. J. B. **11**, 161-175 (1999)
 - 125) U. Kleineberg, D. Menke, F. Hamelmann, U. Heinzmann, O. Schmidt, G. H. Fecher, G. Schönhense
Photoemission Microscopy with Microspot-XPS by use of Undulator Radiation and a High-Throughput Multilayer Monochromator at BESSY
J. Electron Spectr. Relat. Phenom. **101-103**, 931-936 (1999)
 - 124) V. V. Kuznetsov, N. A. Cherepkov, G. H. Fecher, G. Schönhense
Angular Distribution of Photoelectrons ejected from fixed-in-space molecules of C_{3v} symmetry group
Journal of Chem. Phys. **110**, 9997-10007 (1999)

- 123) A. Oelsner, G. H. Fecher, M. Schicketanz, G. Schönhense
Determining the Optical Properties Of Adsorbate Covered Surfaces By Dichroism in VUV-Photoemission
Surf. Sci. **433-435**, 53-57 (1999)
- 122) G. H. Fecher, B. Schmied, G. Schönhense
Temperature Dependent ARUPS from the Heavy Fermion Compound CeNi₂Ge₂(001)
J. Electron Spectr. Relat. Phenom. **101-103**, 771-776 (1999)
- 1998**
- 121) M. Getzlaff, G. Schönhense
Electronic structure of terpene derivatives
J. Electron Spectrosc. Relat. Phenom. **95**, 225 (1998)
- 120) M. Getzlaff, B. Schmied, M. Wilhelm, U. Kübler, G. H. Fecher, J. Bansmann, L. Lu, G. Schönhense
k-resolved electronic properties of ternary heavy fermion system
Phys. Rev. B. **58**, 9670 (1998)
- 119) M. Getzlaff, B. Heidemann, J. Bansmann, C. Westphal, G. Schönhense
A variable-angle electron spin polarization detection system
Rev. Sci. Instrum. **69**, 3913-3923 (1998)
- 118) M. Getzlaff, J. Bansmann, G. Schönhense
Oxygen on Fe(110): Magnetic properties of the adsorbate system
J. Magn. Magn. Mater. **192**, 458 (1998)
- 117) W. Swiech, R. Frömter, C. M. Schneider, W. Kuch, Ch. Ziethen, O. Schmidt, G. H. Fecher, G. Schönhense, J. Kirschner
Magnetically resolved and element specific imaging with photoelectrons using an immersion lens column
in: *Electron Microscopy 1998, Vol. II*, IOP Bristol and Philadelphia (1998) p. 511 ff
- 116) W. Kuch, R. Frömter, J. Gilles, D. Hartmann, Ch. Ziethen, C. M. Schneider, G. Schönhense, W. Swiech, J. Kirschner
Element-selective magnetic imaging in exchange-coupled systems by magnetic photoemission microscopy
Surf. Rev. and Lett. **5**, 1241-1248 (1998)
- 115) H. Spiecker, O. Schmidt, Ch. Ziethen, D. Menke, U. Kleineberg, R. G. Ahuja, M. Merkel, U. Heinzmann, G. Schönhense
Time-Of-Flight Photoelectron Emission Microscopy TOF-PEEM-First Results
Nucl. Instr. and Meth. A **406**, 499-506 (1998)
- 114) G. Fecher, A. Oelsner, M. Schicketanz, G. Schönhense
The Dependence of Dichroism in VUV-Photoemission on the Optical Properties of Adsorbates: Cs Monolayer on W(110)
J. Electron Spectr. Relat. Phenom. **88-91**, 185-190 (1998)
- 113) B. Schmied, G. H. Fecher, C. M. Schneider, G. Schönhense
Preparation of Thin Layers of the Ternary Heavy Fermion System CeNi₂Ge₂
Applied Physics A **66**, 385-391 (1998)
- 112) J. Bansmann, M. Getzlaff, G. Schönhense, M. Fluchtmann, J. Braun

Valence Band Photoemission from Thin Iron Films - A Comparison of Experimental and Theoretical Results

Surface Science **402-404**, 365-370 (1998)

- 111) Ch. Ziethen, O. Schmidt, G. H. Fecher, C. M. Schneider, G. Schönhense, R. Frömter, M. Seider, K. Grzelakowski, M. Merkel, D. Funnemann, W. Swiech, H. Gundlach, J. Kirschner
Fast Elemental Mapping and Magnetic Imaging with High Lateral Resolution Using a Novel Photoemission Microscope
J. Electron Spectr. Relat. Phenom. **88-91**, 983-989 (1998)
- 110) O. Schmidt, Ch. Ziethen, G. H. Fecher, M. Merkel, M. Escher, D. Menke, U. Kleineberg, U. Heinzmann, G. Schönhense
Chemical Microanalysis by Selected-Area ESCA Using an Electron Energy Filter in a Photoemission Microscope
J. Electron Spectrosc. Relat. Phenom. **88-91**, 1009-1014 (1998)
- 1997**
- 109) M. Getzlaff, G. Schönhense
Electronic structure of adsorbed organic molecules
Surf. Sci. **377-379**, 187 (1997)
- 108) B. Schmied, M. Wilhelm, U. Kübler, M. Getzlaff, G. H. Fecher, G. Schönhense
Angular-resolved electron spectroscopy from (110) surfaces of ternary Ce-based intermetallics: CePd₂Si₂ and CeNi₂Ge₂
Surf. Sci. **377-379**, 251-255 (1997)
- 107) G. K. L. Marx, V. Gerheim, G. Schönhense
Multipole Wienfilter for a High-Resolution X-PEEM
J. Electron Spectr. Relat. Phenom. **84**, 251-261 (1997)
- 106) B. Schmied, M. Wilhelm, U. Kübler, M. Getzlaff, G. H. Fecher, G. Schönhense
Clean and ordered surfaces of CeNi₂Ge₂ layers on W(110)
Fresenius J. Anal. Chem. **358**, 141-143 (1997)
- 105) B. Schmied, M. Wilhelm, U. Kübler, M. Getzlaff, G. H. Fecher, G. Schönhense
Electron-spectroscopic investigations on ternary HFS: CeT₂X₂
Physica B **230-232**, 290-293 (1997)
- 104) W. Swiech, G. H. Fecher, Ch. Ziethen, O. Schmidt, G. Schönhense, K. Grzelakowski, C. M. Schneider, R. Frömter, J. Kirschner
Recent Progress in Photoemission Microscopy with Emphasis on Chemical and Magnetic Sensitivity
J. Electron Spectr. Relat. Phenom. **84**, 171-188 (1997)
- 103) G. H. Fecher, Ch. Grünewald, M. Merkel, Ch. Ostertag, A. Oelsner, G. Schönhense, Th. Jentzsch, H. J. Jüpner
Circular Dichroism in Angular Resolved Photoemission from Pure and Rb-doped C₆₀ and C₂₂H₁₄ Layers on Platinum and Tungsten
Thin Solid Films **303**, 58-65 (1997)
- 102) Ch. Ostertag, J. Paul, N. A. Cherepkov, A. Oelsner, G. H. Fecher, G. Schönhense
Dichroism in VUV-Photoemission from the (001)-Surfaces of Ultrathin Gd and Nd Films on W(110)
Surf. Sci. **377-379**, 427-431 (1997)

- 101) M. Schicketanz, A. Oelsner, J. Morais, Th. Jentzsch, G. H. Fecher, G. Schönhense
The Dependence of Circular Dichroism in Photoemission on the Optical Properties of Cs Monolayers on Pt(111)
Surf. Sci. **377-379**, 432-435 (1997)
- 100) M. Getzlaff, J. Bansmann, J. Braun, G. Schönhense
Surface Magnetism of Iron on W(110)
Z. Phys. B **104**, 11-20 (1997)
- 99) C. M. Schneider, R. Frömter, Ch. Ziethen, W. Swiech, N. B. Brookes, G. Schönhense, J. Kirschner
Magnetic Domain Imaging with a Photoemission Microscope
Mat. Res. Soc. Symp. Proc. **475**, 381-393 (1997)

1996

- 98) G. Schönhense, J. Hormes
Photoionization of Oriented Systems and Circular Dichroism
in: *VUV-and soft X-ray photoionization*, Eds. U. Becker, D. A. Shirley
Plenum Press, New York (1996) p. 607-652 (Review)
- 97) M. Getzlaff, J. Bansmann, J. Braun, G. Schönhense
Spin resolved photoemission study of Co(0001) films
J. Magn. Magn. Mater. **161**, 70 (1996)
- 96) J. Bansmann, M. Getzlaff, Ch. Ostertag, G. Schönhense
Magnetic circular and linear dichroism in VUV-photoemission from thin iron films on W(110)
Surf. Sci. **352-354**, 898 (1996)
- 95) M. Getzlaff, J. Paul, J. Bansmann, Ch. Ostertag, G. H. Fecher, G. Schönhense
Oxygen adsorbed on rare earth surfaces
Surf. Sci. **352-354**, 123 (1996)
- 94) M. Getzlaff, J. Bansmann, G. Schönhense
Spin resolved photoemission study of oxygen on thin cobalt films
J. Electr. Spectr. Relat. Phen. **77**, 197 (1996)
- 93) Ch. Ostertag, A. Oelsner, M. Schicketanz, O. Schmidt, G.H. Fecher, G. Schönhense
Circular Dichroism in Photoemission from Xe and Kr on Pt(111)
Surf. Sci. **352-354**, 179 (1996)

1995

- 92) G. H. Fecher, A. Oelsner, Ch. Ostertag, G. Schönhense
Investigation of Alkali metals and Noble gases adsorbed on Transition metals using circular dichroism in angular resolved photoemission
J. Electron Spectr. Relat. Phenom. **76**, 289 (1995)
- 91) G. H. Fecher, A. Oelsner, Ch. Ostertag, G. Schönhense
Enhancement of circular dichroism in photoemission from adsorbates by photoelectron diffraction
J. Electron Spectr. Relat. Phenom. **76**, 97-102 (1995)
- 90) M. Getzlaff, J. Bansmann, G. Schönhense
CO interactions with ferromagnetic surfaces
J. Chem. Phys. **103**, 6691 (1995)

- 89) J. Bansmann, M. Getzlaff, G. Schönhense
Photoemission from Co/W(110) with unpolarized und circularly polarized radiation
J. Magn. Magn. Mater. **148**, 60 (1995)
 - 88) Ch. Ostertag, J. Bansmann, Ch. Grünewald, Th. Jentzsch, A. Oelsner, G. H. Fecher, G. Schönhense
The influence of a linear photon polarisation on measurements of the circular dichroism in photoemission
Surf. Sci. **331-333**, 1197 (1995)
 - 87) A. Oelsner, G. H. Fecher, Ch. Ostertag, Th. Jentzsch, G. Schönhense
Dichroic effects in photoemission from pure and oxidised Rubidium and Potassium monolayers on Platinum (111)
Surf. Sci. **331-333**, 349 (1995)
 - 86) M. Getzlaff, N. A. Cherepkov, G. Schönhense
Xenon on ferromagnetic surfaces - a spin resolved photoemission study-
Phys. Rev. B **52**, 3421 (1995)
 - 85) M. Getzlaff, J. Bansmann, G. Schönhense
Adsorbates on thin iron (100) films
Fresenius J. Anal. Chem. **353**, 748 (1995)
 - 84) M. Getzlaff, J. Bansmann, G. Schönhense
Oxygen on Fe(100) and Fe(110)
Fresenius J. Anal. Chem. **353**, 743 (1995)
 - 83) M. Getzlaff, G. Schönhense
Magnetic exchange effects of adsorbates on thin Fe(110) films
Surf. Sci. **331-333**, 213 (1995)
 - 82) M. Getzlaff, J. Bansmann, G. Schönhense
Photoemission from Fe/W(110)
J. Magn. Magn. Mater. **140-144**, 669 (1995)
 - 81) M. Getzlaff, J. Bansmann, G. Schönhense
A study of the oxidation states of Co(0001)
J. Magn. Magn. Mater. **140-144**, 729 (1995)
 - 80) J. Bansmann, Ch. Ostertag, G. Schönhense, N. A. Cherepkov, V. V. Kuznetsov, A. A. Pavlychev
Circular dichroism in X-ray photoemission from Pd(111) and CO/Pd(111)
Z.Phys. D **33**, 257-264 (1995)
 - 79) M. Getzlaff, J. Bansmann, G. Schönhense
The electronic structure of benzene adsorbed on thin Fe(110) and Co(0001)films
Surf. Sci. **323**, 118 (1995)
- 1994**
- 78) V. Gerheim, G. Marx, G. Schönhense
The possibilities of a multipole Wien filter built in an emission electron microscope
in: *Electron Microscopy 1994*, Eds. B. Jouffrey und C. Colliex,
Les Editions de Physique, Les Ulis, 1994, **1**, 251
 - 77) G. K. L. Marx, M. D. v. Przychowski, B. Krömker, Ch. Ziethen, G. Schönhense
Construction of a UHV Emission Electron Microscope with Preparation Chamber

in: *Electron Microscopy 1994*, Eds. B. Jouffrey and C. Colliex, Les Editions de Physique, Les Ulis, 1994, **1**, 239

- 76) C. Westphal, F. Fegel, J. Bansmann, M. Getzlaff, G. Schönhense, J. A. Stephens, V. McKoy
Orientation and substrate interaction of adsorbed CO and NO molecules probed by circular dichroism in the angular distribution of photoelectrons
Phys. Rev. B **50**, 17534 (1994)
- 75) G. H. Fecher, J. Bansmann, Ch. Grünewald, A. Oelsner, Ch. Ostertag, G. Schönhense
Oxidation of rubidium at platinum (111)
Surf. Sci. **307-309**, 70 (1994)
- 74) M. Getzlaff, Ch. Ostertag, G. H. Fecher, N. A. Cherepkov, G. Schönhense
Magnetic dichroism in photoemission with unpolarized light
Phys. Rev. Lett. **73**, 3030 (1994)
- 73) M. Getzlaff, J. Bansmann, G. Schönhense
Magnetic interactions in different oxidation states of thin cobalt films
J. Magn. Magn. Mater. **131**, 304 (1994)

1993

- 72) G. Schönhense, H. C. Siegmann
Transmission of electrons through ferromagnetic material and applications to detection of electron spin polarization
Ann. Phys. **2**, 465 (1993)
- 71) G. Marx, M. D. von Przychowski, W. Grahneis, G. Schönhense
Bericht über den Aufbau des Mainzer Emissionselektronenmikroskopes
Optik, Suppl. **5** (94) 135 (1993)
- 70) M. Getzlaff, J. Bansmann, G. Schönhense
Iodine on a magnetized iron film - evidence for a magnetic coupling
Phys. Lett. A **182**, 153 (1993)
- 69) M. Getzlaff, J. Bansmann, G. Schönhense
Spin-resolved photoemission from physisorbed xenon on ferromagnetic surfaces: evidence for magnetic interactions
Phys. Rev. Lett. **71**, 793 (1993)
- 68) M. Getzlaff, J. Bansmann, G. Schönhense
Spin polarization effects for electrons passing through thin iron and cobalt films
Sol. State Commun. **87**, 467 (1993)
- 67) N. A. Cherepkov, G. Schönhense
Linear dichroism in photoemission from oriented molecules
Europhys. Lett. **24** (1993) 79

1991-92

- 66) J. Bansmann, M. Getzlaff, C. Westphal, F. Fegel, G. Schönhense
Magnetic circular dichroism in valence-band photoemission from Fe(100)
J. Magn. Magn. Mat. **104-107**, 1691 (1992)
- 65) G. Schönhense
Circular dichroism in photoemission from oriented molecules at surfaces

in Proceedings of the International Workshop on Photoionization IWP 92
 U. Becker und U. Heinzmann (Eds.)
 AMS Press, New York (1992) 217-220

- 64) M. Getzlaff, J. Bansmann, C. Westphal, G. Schönhense
Exchange splitting of adsorbate-induced bands on thin iron films
 J. Magn. Magn. Mat. **104-107**, 1781 (1992)
- 63) J. Bansmann, M. Getzlaff, C. Westphal, F. Fegel, G. Schönhense
Magnetic circular dichroism in valenceband photoemission from iron (100)
 Surf. Sci. **269/270** (1992) 622
- 62) J. Bansmann, Ch. Ostertag, G. Schönhense, F. Fegel, C. Westphal, M. Getzlaff, F. Schäfers, H. Petersen
Circular Dichroism in X-ray Photoemission from Core-Levels of Non-Magnetic Species
 Phys. Rev. B **46**, 13496 (1992)
- 61) T. Döhring, G. Schönhense, U. Heinzmann
A Circular Polarizer for the Region of Windowless VUV-Radiation
 Meas. Sci. Technol. **3**, 91-97 (1992)
- 60) G. Schönhense, C. Westphal, J. Bansmann, M. Getzlaff
Circular Dichroism in Photoemission from Nonmagnetic Low-Z Solids: A Conspicuous Effect of the Photon Spin
 Europhys. Letters **17**, 727-732 (1992)
- 59) N. A. Cherepkov, G. Schönhense
Linear Dichroism in the Angular Distribution of Photoelectrons from Oriented Molecules
 A. Beswick (Ed.), *Synchrotron Radiation and Dynamic Phenomena 1992*, p. 67-69
- 58) J. Bansmann, M. Getzlaff, C. Westphal, G. Schönhense
Surface Hysteresis Curves of Fe (110) and Fe (100) Crystals in Ultrahigh Vacuum - Evidence of Adsorbate Influences
 J. Magn. Magn. Mater. **117**, 38 (1992)
- 57) C. Westphal, J. Bansmann, M. Getzlaff, G. Schönhense, N. A. Cherepkov, M. Braunstein, V. McKoy, R. L. Dubs
Circular Dichroism in Photoemission from Oriented Molecules at Surfaces
 Surface Science **253**, 205-219 (1991)
- 56) G. Schönhense, C. Westphal, J. Bansmann, M. Getzlaff, J. Noffke, L. Fritsche
Circular Dichroism in Photoemission from Surfaces
 Surface Science **251/252**, 132-135 (1991)

1989-90

- 55) G. Schönhense
Spin-Dependent Effects in Photoemission
 Vacuum **41**, 506-510 (1990)
- 54) B. Vogt, B. Kessler, N. Müller, G. Schönhense, B. Schmiedeskamp, U. Heinzmann
Spin-Resolved Photoemission from Xe/Pd(111) for Coverages up to one Layer-vanishing Splitting of the $p_{3/2}$ Hole State and Lack of Subthreshold Resonances for the Dilute Phase
 Phys. Rev. Letters **64**, (1990)
- 53) G. Schönhense

Circular Dichroism and Spin Polarization in Photoemission from Adsorbates and Non-Magnetic Solids

Physica Scripta T31, 255-275 (1990) (invited)

- 52) A. Mank, M. Drescher, T. Huth-Fehre, G. Schönhense, N. Böwering, U. Heinzmann
Photoelectron Dynamics of HI Ionized by Coherent VUV Radiation
J. Electron Spectrosc. Relat. Phenom. **52**, 661-670 (1990)
- 51) C. Westphal, J. Bansmann, M. Getzlaff, G. Schönhense
Experimental Observation of Circular Dichroism in Photoemission
Vacuum **41**, 87-89 (1990)
- 50) C. Westphal, J. Bansmann, M. Getzlaff, G. Schönhense
Information on Structure and Photoemission Dynamics of Molecular Adsorbates from Circular Dichroism in Photoemission
J. Electron Spectrosc. Relat. Phenom. **52**, 613-622 (1990)
- 49) M. Donath, G. Schönhense, K. Ertl, V. Dose
Influence of Surface Roughness and Chemisorption on Magnetic Hysteresis Curves of a Ni(110)-Surface Observed by Spin-Resolved Inverse Photoemission
Appl. Phys. A **50**, 49 (1990)
- 48) A. Mank, M. Drescher, T. Huth-Fehre, G. Schönhense, N. Böwering, U. Heinzmann
Angular Distribution of Photoelectrons from HI by Polarized, Coherent VUV Radiation
J. Phys. B **22**, L487 (1989)
- 47) C. Westphal, J. Bansmann, M. Getzlaff, G. Schönhense
Circular Dichroism in the Angular Distribution of Photoelectrons from oriented CO Molecules
Phys. Rev. Lett. **63**, 151 (1989)

1987-88

- 46) G. Schönhense, M. Getzlaff, C. Westphal, B. Heidemann, J. Bansmann
Exchange Splitting of Adsorbate-induced Bands in Chemisorption on Ferromagnetic 3d-Metals
Journal de Physique C8, **49**, 1643 (1988)
- 45) G. Schönhense, M. Donath, U. Kolac, V. Dose
Exchange-Splitting of an Oxygen 2p-derived Band at Ni(110)
Surf. Sci. **206**, L888 (1988)
- 44) F. Schäfers, Ch. Heckenkamp, G. Schönhense, U. Heinzmann
Energy dependence of the Electron Spinpolarisation Parameters for Hg 5d Photoionization with Circularly Polarized Light
J. Phys. B **21**, 769 (1988)
- 43) B. Schmiedeskamp, B. Kessler, N. Müller, G. Schönhense, U. Heinzmann
Spin-Resolved Photoemission from Pd(111)
Solid State Commun. **65**, 665 (1988)
- 42) T. Huth, A. Mank, N. Böwering, G. Schönhense, R. Wallenstein, U. Heinzmann
Photoelectron Emission from HI using Narrow-Band, Polarized, Coherent VUV-Radiation
in: *Electronic and Atomic Collisions* (Ed. H.B. Gilbody, W. R. Newell, T. H. Read, A. C. H. Smith), Elsevier (1988), p. 607
- 41) N. Böwering, T. Huth, A. Mank, M. Müller, G. Schönhense, R. Wallenstein, U. Heinzmann
Photoelectron Spectroscopy of HI and Photoemission Following Narrowband VUV Excitation

in: *Physics of Atoms and Molecules* (Ed. P. G. Burke und J. B. West), Plenum Publishing Co., London 1988

- 40) B. Kessler, A. Evers, K. Horn, N. Müller, B. Schmiedeskamp, G. Schönhense, U. Heinzmann
Determination of xenon valence and conduction bands using spin-polarized photoemission
Phys. Rev. Lett. **59**, 331 (1987)
- 39) G. Schönhense, B. Kessler, N. Müller, B. Schmiedeskamp, U. Heinzmann
Electronic Resonance in Rare-Gas Adsorbates Observed by Spin-Resolved Electron Spectroscopy
Physica Scripta **35**, 541 (1987)
- 38) N. Müller, B. Kessler, B. Schmiedeskamp, G. Schönhense, U. Heinzmann
Spin-resolved photoemission from Ir(111): Transitions into a secondaryband and energetic position of the final state bands
Solid State Commun. **61**, 187 (1987)

1985-86

- 37) G. L. Bona, F. Meier, G. Schönhense, M. Aeschlimann, M. Stampanoni, G. Zampieri, H. C. Siegmann
Spin Polarized Photoemission from Iron by Pulsed Laser Radiation
Phys. Rev. B **34**, 7784 (1986)
- 36) G. Schönhense
Photoelectron Spin-Polarization Spectroscopy: A New Method in Adsorbate Physics. The Model Case of Physisorbed Rare Gases
Appl. Phys. A **41**, 39-60 (1986) (invited)
- 35) G. Schönhense, U. Heinzmann
Reply on the Comment by C. P. Flynn
Phys. Rev. Lett. **57**, 268 (1986)
- 34) Ch. Heckenkamp, F. Schäfers, G. Schönhense, U. Heinzmann
Experimental Characterization of the Xe 5p Photoionization by Angle- and Spin-Resolved Photoelectron Spectroscopy
Z Phys. D **2**, 257 (1986)
- 33) G. Schönhense, A. Evers, U. Heinzmann
Sharp photon-induced $np \rightarrow (n+1)s$ resonance in Xe and Kr monolayers observed by spin-resolved electron spectroscopy
Phys. Rev. Lett. **56**, 512 (1986)
- 32) F. Schäfers, W. Peatman, A. Evers, Ch. Heckenkamp, G. Schönhense, U. Heinzmann
High-flux normal incidence monochromator for circularly polarized synchrotron radiation
Rev. Sci. Instrum. **57** (6), 1032 (1986)
- 31) Ch. Heckenkamp, A. Evers, F. Schäfers, G. Schönhense, U. Heinzmann
A rotatable electron spectrometer system for spin- and ange-resolved photo-emission experiments with circularly polarized synchrotron radiation
Nucl. Instruments and Methods A **246**, 500 (1986)
- 30) G. Schönhense, H. Heinzmann
Spin-resolved photoemission from nonmagnetic metals and adsorbates
in *Polarized electrons in surface physics*, Hrsgb. R. Feder
World Scientific, Singapore (1985) Chapter 11, p. 468-512 (Review)

- 29) G. L. Bona, F. Meier, G. Schönhense, H. C. Siegmann
Completely polarized electrons emitted from polycrystalline iron upon pulsed laser irradiation
Phys. Rev. Lett. **55**, 1121 (1985), Erratum: 57, 653 (1986)
- 28) A. Evers, G. Schönhense, U. Friess, F. Schäfers, U. Heinzmann
Influence of temperature and of physisorbed Xe/Kr on the spin resolved photo-emission from Pt(111)
Surf. Science **162**, 96 (1985)
- 27) Ch. Heckenkamp, F. Schäfers, G. Schönhense, U. Heinzmann
Resonance of the photoelectron spin-polarization parameters in the 5p auto-ionization range of xenon
Phys. Rev. A **32**, 1252 (1985)
- 26) H. P. Oepen, K. Hünlein, J. Kirschner, A. Evers, F. Schäfers, G. Schönhense, U. Heinzmann
Experimental symmetry analysis of energy bands near critical points in Pt using spin- and momentum-resolved photoemission
Phys. Rev. B **31**, 6846 (1985)
- 25) S. Kaesdorf, G. Schönhense, U. Heinzmann
Experimental angular-resolved photoelectron spectroscopy of free oriented CH₃I molecules
Phys. Rev. Lett. **54**, 885 (1985)
- 24) G. Schönhense, A. Evers, U. Friess, F. Schäfers, U. Heinzmann
Highly spin-polarized photoemission near threshold from physisorbed xenon and krypton atoms
Phys. Rev. Lett. **54**, 547 (1985)

1983-84

- 23) G. Schönhense, F. Schäfers, Ch. Heckenkamp, U. Heinzmann, M. A. Baig
Singlet-triplet mixing in Hg 6s photoionisation via autoionising transitions
J. Phys. B **17**, L 771 (1984)
- 22) A. Evers, F. Schäfers, G. Schönhense, U. Heinzmann, H. P. Oepen, K. Hünlein, J. Kirschner, G. Borstel
Characterization of symmetry properties of Pt(111) electron bands by means of angle-, energy-, and spin-resolved photoemission with circularly polarized synchrotron radiation
Phys. Rev. Lett. **52**, 1559 (1984)
- 21) G. Schönhense, V. Dzidzonou, S. Kaesdorf, U. Heinzmann
Spin-polarized photoelectrons from randomly-oriented halogen molecules by unpolarized radiation
Phys. Rev. Lett. **52**, 811 (1984)
- 20) Ch. Heckenkamp, F. Schäfers, G. Schönhense, U. Heinzmann
Angular dependence of the spin-polarization transfer from circularly polarized synchrotron radiation onto photoelectrons from atomic Xe 5p⁶
Phys. Rev. Lett. **52**, 421 (1984)
- 19) G. Schönhense, U. Heinzmann
Evidence of strong interchannel coupling in Hg 5d photoionization by "experimental" transition matrix elements
Phys. Rev. A **29**, 987 (1984)
- 18) H. Rinneberg, J. Neukammer, U. Majewski, G. Schönhense

High-resolution electron spectroscopy of laser-excited Ba Rydberg atoms

Phys. Rev. Lett. **51**, 1546 (1983)

- 17) F. Schäfers, G. Schönhense, U. Heinzmann
Analysis of Ar 3p⁶ and Kr 4p⁶ photoionization from photoelectron spinpolarization data
Phys. Rev. A **28**, 802 (1983)
- 16) G. Schönhense
Magnetic-field-free vapor furnace for photoelectron spectroscopy. I. temperatures up to 900 K
Rev. Sci. Instrum. **54**, 419 (1983)
- 15) A. Eyers, J. Kirschner, N. Müller, H. P. Oepen, F. Schäfers, G. Schönhense, U. Heinzmann
Angle-, energy- and spin-resolved photoemission on nonmagnetic solids using circularly polarized Synchrotron radiation
Annals of the Israel Physical Society **6**, 354 (1983)
- 14) Ch. Heckenkamp, F. Schäfers, G. Schönhense, U. Heinzmann
First angle-resolved measurements of spin polarization transfer (Fano effect) from circularly polarized vuv radiation onto photoelectrons at rare gas atoms
Annals of the Israel Physical Society **6**, 115 (1983)
- 13) S. Kaesdorf, G. Schönhense, U. Heinzmann
Angle- and spin-resolved photoelectron spectroscopy on some halogen molecules
Annals of the Israel Physical Society **6**, 179 (1983)
- 12) A. Eyers, Ch. Heckenkamp, F. Schäfers, G. Schönhense, U. Heinzmann
A high flux normal incidence monochromator for circularly polarized synchrotron radiation
Nucl. Instruments and Methods **208**, 303 (1983)
- 11) G. Schönhense, U. Heinzmann
A capillary discharge tube for the production of intense vuv resonance radiation
J. Phys. E **16**, 74 (1983)

1979-82

- 10) G. Schönhense, U. Heinzmann, J. Kessler, N. A. Cherepkov
Photoelectron polarization in Hg 6s² subshell ionized with unpolarized light: New aspect of the Fano effect
Phys. Rev. Lett. **48**, 603 (1982)
- 9) F. Schäfers, G. Schönhense, U. Heinzmann
Analysis of autoionization resonance in the Hg 6s²-photoionization by measurements of photoelectropolarization
Z Physik A **304**, 41 (1982)
- 8) G. Schönhense, F. Schäfers, U. Heinzmann, J. Kessler
Angle- and spin-resolved photoelectron spectroscopy of the Hg 5d¹⁰ subshell
Z. Physik A **304**, 31 (1982)
- 7) Ch. Heckenkamp, U. Heinzmann, G. Schönhense, D. D. Burgess, A. P. Thorne, J.E.G. Wheaton
A laser-generated plasma as a source of vuv continuum radiation for photoelectron spectroscopy
J. Phys. D **14**, L 203 (1981)
- 6) G. Schönhense
Photoelectron angular distribution for mercury 5d and cadmium 4d

- J. Phys. B **14**, L 187 (1981)
- 5) U. Heinzmann, B. Osterheld, F. Schäfers, G. Schönhense
Spin-polarised photoelectron produced from CH₃Br molecules by unpolarised and circularly polarised vuv radiation
 J. Phys. B **14**, L 79 (1981)
 - 4) U. Heinzmann, G. Schönhense, A. Wolcke
Spin polarized photoelectrons from unpolarized lead atoms exposed to unpolarized radiation
 in *Coherence and correlation in atomic collisions*
 Ed. H. Kleinpoppen und J. F. Williams
 Plenum Press, New York und London (1980) p. 607 ff
 - 3) U. Heinzmann, G. Schönhense, J. Kessler
Wavelength dependence of polarisation of photoelectrons ejected by unpolarized vuv radiation from argon and krypton atoms
 J. Phys. B **13**, L 153 (1980)
 - 2) G. Schönhense
Angular dependence of the polarization of photoelectrons ejected by plane- polarized radiation from argon and xenon atoms
 Phys. Rev. Lett. **44**, 640 (1980)
 - 1) U. Heinzmann, G. Schönhense, J. Kessler
Polarization of photoelectrons ejected by unpolarized light from xenon atoms
 Phys. Rev. Lett. **42**, 1603 (1979)