

Reviewed publications

Our graduate students are underlined and the journal impact factor (at the time of publication) is given in [brackets].

1. *Inverse-tunable Red Luminescence and Electronic Properties of Nitridoberylloaluminates $Sr_{2-x}Ba_x[BeAl_3N_5]:Eu^{2+}$ ($x=0-2$)*
E. Elzer, P. Strobel, V. Weiler, M.R. Amin, P.J. Schmidt, A. Moewes, W. Schnick to Chem. – Europ. J. (in press) <https://doi.org/10.1002/chem.202104121> [5.8]
2. *Detecting a Hierarchy of Deep level defects in the model semiconductor $ZnSiN_2$*
T. de Boer, J. Häusler, P. Strobel, T.D. Boyko, S.S. Rudel, W. Schnick, A. Moewes, J. Phys. Chem. C 1125, 27959-27965 (2021). [4.1]
3. *Tuning the Electronic Bandgap of Oxygen Bearing Cubic Zirconium Nitride: $c-Zr_3-x(N_{1-x}O_x)_4$*
T.D. Boyko, A. Zerr and A. Moewes, ACS Appl. Electr. Mat. 3, 4768-4773 (2021). [new journal]
4. *Comprehensive Band Gap and Electronic Structure Investigations of the Prominent Phosphors $M_2Si_5N_8$ ($M=Ca, Sr, Ba$) Determined Using Soft X-ray Spectroscopy and Density Functional Theory*
T.M. Tolhurst, C. Braun, W. Schnick, A. Moewes, J. Phys. Chem. C 125, 25799-25806 (2021). [4.1]
5. *Unraveling the Energy Levels of Eu^{2+} ions in $MBe_{20}N_{14}:Eu^{2+}$ ($M=Sr, Ba$) Phosphors*
M.R. Amin, E. Elzer, W. Schnick, and A. Moewes, J. Phys. Chem. C 125, 11828-11837 (2021). [4.1]
6. *Electronic Properties of Carbyne Chains: Experiment and theory*
T. de Boer, D. Zatsepin, D. Raikov, E.Z. Kurmaev, A.F. Zatsepin, A. Moewes, J. Phys. Chem. C 125, 8268-8273 (2021). [4.1]
7. *Understanding of luminescence properties using direct measurements on Eu^{2+} -doped wide band gap phosphors*
M.R. Amin, P. Strobel, A. Qamar, T. Giftthaler, W. Schnick, and A. Moewes, Adv. Opt. Mat. 8, 2000504 (2020). [8.3]
8. *Electronic Structure of Wide Band Gap Semiconductors Mg_2PN_3 and Zn_2PN_3*
Md.F. Al Fattah, M.R. Amin, M. Mallmann S. Kasap, W. Schnick, and A. Moewes J. Phys.: Cond. Matter 32, 405504 (2020). [2.7]
9. *Origin and control of room temperature ferromagnetism in Co, Zn -doped SnO_2 : oxygen vacancies and their local environment*
J. Ho, T. de Boer, B. Leedahl, D. Manikandan, R. Murugan, and A. Moewes, J. Mat. Chem. C 8, 4902-4908 (2020). [6.6]
10. *Direct Evidence of Charge Transfer upon Anion Intercalation in Graphite Cathodes through New Electronic Graphite States: An Experimental and Theoretical Study of Hexafluorophosphate*
T. de Boer, J. Lapping, J. Read, T. Fister, M. Balasubramanian, J. Cabana, and A. Moewes, Chemistry of Materials 32, 2036-2042 (2020). [10.2]
11. *A probe of Valence and Conduction Band Electronic Structure of Lead Oxide Films for Photodetectors*
A. Qamar, M. Amin, O. Grynko, O. Semeniuk, A. Reznik, and A. Moewes, ChemPhysChem 20, 3328-3335 (2019). [3.1]

12. *Energy band gaps and excited states in Si-QD/SiO_xR_yO_z (R= Si, Al, Zr) suboxide superlattices*
A.F. Zatsëpin, E.A. Buntov, D.A. Zatsëpin, E.Z. Kurmaev, V.A. Pustovarov, A.V. Ershov, N.W. Johnson, and A. Moewes, J. Phys.: Cond. Mat. 31, 415301-1-9 (2019). [2.7]
13. *Electronic Structure and Structural Defects in 3d-Metal doped In₂O₃*
J. Ho, J. Becker, B. Leedahl, D.W. Boukhvalov, I.S. Zhidkov, A.I. Khukharenko, E.Z. Kurmaev, S.O. Cholakh, N.V. Gavrilov, V.I. Brinzari, and A. Moewes, J. Mat. Sci.: Mat. in Electronics 30, 14091-14098 (2019). [2.2]
14. *Paving the way towards green catalytic materials for green fuels: impact of chemical species on Mo-based catalysts for hydrodeoxygenation*
D. Valencia, L. Díaz-García, L.F. Ramírez-Verduzco, A. Qamar, A. Moewes, and J. Aburto, RSC Advances 9, 18292-18301 (2019). [3.0]
15. *Fundamental Crystal Field Excitations in magnetic semiconductor SnO₂:Mn,Fe,Co,Ni*
B. Leedahl, D. McClosky, D.W. Boukhvalov, I.S. Zhidkov, A.I. Khukharenko, E.Z. Kurmaev, S.O. Cholakh, N.V. Gavrilov, V.I. Brinzari, and A. Moewes, Phys. Chem. Chem. Phys. 21, 11992-11998 (2019). [3.6]
16. *Bandgap and Electronic Structure Determination of Oxygen-Containing Ammonothermal InN: Experiment and Theory*
M.R. Amin, T. de Boer, P. Becker, J. Hertrampf, R. Niewa, and A. Moewes, J. Phys. Chem. C 123, 8943-8950 (2019). [4.3]
17. *Oxygen Vacancy Induced Structural Distortions in Black Titania: A unique Approach using Soft X-ray EXAFS at the O-K Edge*
B. Leedahl, T. de Boer, Y. Yuan, and A. Moewes, Chem. – A Europ. J. 25, 3272-3278 (2019). [5.2]
18. *Ultrasmall Au nanocatalysts supported on nitride carbon for electrocatalytic CO₂ reduction: the role of the carbon support in high selectivity*
L. Jin, B. Liu, P. Wang, H. Yao, L.A. Achola, P. Kerns, A. Lopes, Y. Yang, J. Ho, A. Moewes, Y. Pei, and J. He, Nanoscale 10, 14678-14686 (2018). [7.0]
19. *Luminescence of an Oxonitridoberyllate: A Study of Narrow-band Cyan Emitting Sr[Be₆ON₄]:Eu²⁺*
P. Strobel, T. de Boer, V. Weiler, P.J. Schmidt, A. Moewes, and W. Schnick, Chemistry of Materials 30, 3122-3130 (2018). [10.2]
20. *The Electronic structure of ε'-V₂O₅: an expanded band gap in a double-layered polymorph with increased interlayer separation*
T.M. Tolhurst, B. Leedahl, J.L. Andrews, S. Banerjee, A. Moewes, J. Mat. Chem. A 5, 23694-23703 (2017). [10.7]
21. *X-ray spectroscopic study of various lead oxides for direct conversion imaging*
A. Qamar, K. LeBlanc, J. Lin, Y. Pan, A. Reznik, A. Moewes, Scientific reports 7, 13159 1-10 (2017). [4.0]
22. *Direct measurements of Energy Levels and Correlation with Thermal Quenching behavior in Nitrides Phosphors*
T.M. Tolhurst, P. Strobel, P.J. Schmidt, W. Schnick, A. Moewes, Chem. Mat. 29, 7976-7983 (2017). [10.2]
23. *How functional groups change the electronic structure of graphdiyne: Theory and Experiment*

- N. Ketabi, T.M. Tolhurst, B. Leedahl, H. Liu, Y. Li, A. Moewes, *Carbon* 123, 1-7 (2017). [7.5]
24. *Recent Advances with Soft X-ray Absorption Spectroscopy*
A. Moewes, *Handbook of Solid State Chemistry*, 1st edition, 2017, Chapter 11 (pages 361-391) Wiley.
25. *Bulk vs. Surface Structure of 3d Metal impurities in Topological Insulator Bi_2Te_3*
B. Leedahl, D.W. Boukhvalov, E.Z. Kurmaev, A. Kukharenko, I.S. Zhidkov, N.V. Gavrilov, S.O. Cholakh, P. Huu Le, C. Wei Luo, and A. Moewes, *Scientific Reports* 7, 5758 (2017). [5.2]
26. *Tunability of room-temperature ferromagnetism in Spintronic semiconductors through nonmagnetic atoms*
B. Leedahl, Z. Talizadeh, K. LeBlanc, A. Moewes, *Phys. Rev. B* 96, 045202-1-5 (2017). [3.7]
27. *Designing Luminescence Materials and Band Gaps: A Soft X-ray spectroscopy and Density Functional Theory Study of $Li_2Ca_2[Mg_2Si_2N_6]:Eu^{2+}$ and $Ba[Li_2(Al_2Si_2)N_6]:Eu^{2+}$*
T.M. Tolhurst, P. Strobel, W. Schnick, A. Moewes, *J. Phys. Chem. C* 121, 14296-14301 (2017). [4.5]
28. *Structure-Induced Switching of the Band Gap, Charge Order and Correlation Strength in Ternary Vanadium Bronzes*
T.M. Tolhurst, J.L. Andrews, B. Leedahl, P.M. Marley, S. Banerjee, and A. Moewes, *Chemistry – A European Journal* 23, 9846-9856 (2017). [5.8]
29. *Intercalation-induced dimensional reduction and thickness-modulated electronic structure of a layered ternary vanadium oxide*
J.L. Andrews, L.R. De Jesus, T.M. Tolhurst, P. Marley, A. Moewes, S. Banerjee, *Chemistry of Materials* 29, 3285-3294 (2017). [9.4]
30. *The hardness of group 14 spinel nitrides revisited*
T.D. Boyko and A. Moewes, *Journal of the Ceramic Society of Japan* 124, 1063-1066 (2016). [0.83]
31. *Searching for pure iron in nature: magnetic and spectroscopy study of the Chelyabinsk meteorite*
B. Leedahl, A.V. Korolev, I.S. Zhidkov, S.L. Skorniyakov, V.I. Anisimov, A.S. Belozarov, A.I. Kukharenko, E.Z. Kurmaev, V.I. Grokhovskii, S.O. Cholakh, and A. Moewes, *RSC Advances* 6, 85844-85851 (2016). [3.3]
32. *Experiment-driven modeling of crystalline phosphorus nitride: wide ranging implications from a unique structure*
T.M. Tolhurst, C. Braun, T.D. Boyko, W. Schnick, A. Moewes, *Chemistry – A European Journal* 22, 10475-10483 (2016). [5.8]
33. *Tuning the electronic structure of graphene through nitrogen doping: Experiment and theory*
N. Ketabi, T. de Boer, M. Karakay, J. Zhu, A. Podila, A.M. Rao, E.Z. Kurmaev, and A. Moewes, *RSC Advances* 6, 56721-56727 (2016). [3.3]
34. *Contrasting 1D Tunnel Structured and 2D Layered Polymorphs of V_2O_5 : Relating Structure and Bonding to Band Gaps and Electronic Structure*

- T.M. Tolhurst, B. Leedahl, J.L. Andrews, P.M. Marley, S. Banerjee, and A. Moewes, Phys. Chem. Chem. Phys. 18, 15798-15806 (2016). [4.5]
35. *Band Gap and electronic structure of cubic, rhombohedral, and orthorhombic In_2O_3 polymorphs: Experiment and theory*
T. de Boer, M.F. Bekheet, A. Gurlo, R. Riedel, and A. Moewes, Phys. Rev. B 93, 155205 (2016). [3.7]
36. *Electronic structure, Band gap and thermal quenching of $Sr[Mg_3SiN_4]:Eu^{2+}$ and $Sr[LiAl_3N_4]:Eu^{2+}$*
T.M. Tolhurst, S. Schmiechen, P. Pust, P.J. Schmidt, W. Schnick, and A. Moewes, Adv. Opt. Mat. 4, 584-591 (2016). [7.2]
37. *Transition from Reconstruction toward Thin Film on the (110) Surface of Strontium Titanate*
Z. Wang, A. Loon, A. Subramanian, S. Gerhold, E. McDermott, J.A. Enterkin, M. Hieckel, B.C. Russell, R.J. Green, A. Moewes, J. Guo, P. Blaha, M.R. Castell, U. Diebold, and L.D. Marks, Nano Letters 16, 2407-2412 (2016). [13.8]
38. *Oxidized Monolayers of Epitaxial Silicene on Ag(111)*
N.W. Johnson, D. Muir and A. Moewes, Scientific Reports 6, 22510 (2016). [5.6]
39. *Linking the HOMO-LUMO Gap to Torsional Disorder in P3HT/PCBM Blends*
J.A. McLeod, A.L. Pitman, E.Z. Kurmaev, L.D. Finkelstein, I.S. Zhidkov, A. Savva, and A. Moewes, J. Chem. Phys. 143, 224704 (2015). [2.9]
40. *Selective Area Band Engineering of Graphene using Cobalt-Mediated Oxidation*
P. Bazylewski, V.L. Nguyen, R.P.J. Bauer, A.H. Hunt, E.J.G. McDermott, B.D. Leedahl, A.I. Kukharenko, S.O. Cholakh, E.Z. Kurmaev, P. Blaha, A. Moewes, Y.H. Lee, G.S. Chang, Sci. Reports 5, 15380 (2015). [5.6]
41. *Adjacent Fe-Vacancy Interactions as the Origin of Room Temperature Ferromagnetism in $(In_{1-x}Fe_x)_2O_3$*
R.J. Green, T.Z. Regier, B. Leedahl, J.A. McLeod, X.H. Xu, G.S. Chang, E.Z. Kurmaev, and A. Moewes, Phys. Rev. Lett. 115, 167401 (2015). [7.7]
42. *The characterization of Co-nanoparticles supported on graphene*
P. Bazylewski, D. Boukhvalov, A.I. Kukharenko, E.Z. Kurmaev, A. Hunt, A. Moewes, Y.H. Lee, S.O. Cholakh, and G.S. Chang, RSC Advances 5, 75600-75606 (2015). [3.8]
43. *Pronounced, reversible, and in situ modification of the electronic structure of graphene oxide via cooling below 160 K*
A. Hunt, E. McDermott, E.Z. Kurmaev and A. Moewes, J. Phys. Chem. Letters 6, 3163-3169 (2015). [7.5]
44. *Stability and Electronic Characteristics of Epitaxial Silicene Multilayers on Ag(111)*
N.W. Johnson, D. Muir, E.Z. Kurmaev, and A. Moewes. Adv. Func. Mat. 25, 4083-4090 (2015). [10.4]
45. *Band Gap and Electronic Structure of $MgSiN_2$ Determined Using soft X-ray Spectroscopy*
T. de Boer, T.D. Boyko, C. Braun, W. Schnick, and A. Moewes, physica status solidi – Rapid Research Letters 9 (4), 250-254 (2015). [2.4]
46. *Investigations of the Electronic Structure and Bandgap of the Next-generation LED-phosphor $Sr[LiAl_3N_4]:Eu^{2+}$ – Experiments and calculations*
T.M. Tolhurst, T.D. Boyko, P. Pust, N.W. Johnson, W. Schnick, and A. Moewes, Advanced Optical Materials 3, 546-550 (2015). [7.2]

47. *Electronic structure of Li_2RuO_3 studied by LDA+DMFT calculations and X-ray spectroscopy*
Z.V. Pchelkina, A.L. Pitman, A. Moewes, E.Z. Kurmaev, Teck-Yee Tan, J.-G. Park, and S.V. Streltsov, Phys. Rev. B 91, 115138 (2015). [3.7]
48. *Determination of the Critical Current Density in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films Measured by the Screening Technique Under Two Criteria*
F. Gamboa, I. Perez, J.A. Matutes-Aquino, A. Moewes, and V. Sosa, IEEE Transactions on Applied Superconductivity 25 (1), 8000105 (2015). [1.2]
49. *Study of the Structural Characteristics of 3d metals Cr, Mn, Fe, Co, Ni, and Cu Implanted in ZnO and TiO_2 – Experiment and Theory*
B. Leedahl, D.Z. Zatsepin, D.W. Boukhvalov, E.Z. Kurmaev, R.J. Green, I.S. Zhidkov, S.S. Kim, N.V. Gavrilov, S.O. Cholak, and A. Moewes, J. Phys. Chem. C 118, 28143-28151 (2014). [4.8]
50. *Electronic structure and spin trapping in LiMnAs and LiFeAs:Mn*
J.A. McLeod, E.Z. Kurmaev, I. Perez, R.J. Green, L.Y. Xing, X.C. Wang, C.-Q. Jin, and A. Moewes, J. Phys. Cond. Matt. 27, 015504 (2015). [2.2]
51. *Asymmetric pathways in the electrochemical conversion reaction of NiO as battery electrode with high storage capacity*
U. Boesenberg, M.A. Marcus, A.K. Shukla, T. Yi, E. McDermott, P.F. Teh, M. Srinivasan, A. Moewes, J. Cabana, Scientific Reports 4, 7133-7142 (2014). [5.1]
52. *The electronic structure of Zirconium in hydrided and oxidized states*
H. Akhiani, A Hunt, X. Cui, A. Moewes, and J. Szpunar, J. Alloys & Compounds 622, 463-470 (2015). [2.7]
53. *Electronic Structure of $\text{FeSe}_{1-x}\text{Te}_x$ Studied by X-ray Spectroscopy and Density Functional Theory*
I. Pérez, J.A. McLeod, R.J. Green, R. Escamilla, V. Ortiz, and A. Moewes, J. Phys. Chem. C 118, 25150-25157 (2014). [4.8]
54. *Electronic structure of Co-substituted FeSe superconductor probed by soft X-ray spectroscopy and density functional theory*
I. Perez, J.A. McLeod, R.J. Green, R. Escamilla, V. Ortiz, and A. Moewes, Phys. Rev. B 90, 014510 (2014). [3.7]
55. *The Metallic Nature of Epitaxial Silicene Monolayers on Ag(111)*
N.W. Johnson, P. Vogt, A. Resta, P. De Padova, I. Perez, D. Muir, E.Z. Kurmaev, G. Le Lay, and A. Moewes, Adv. Func. Mat. 24, 5253-5259 (2014). [10.4]
56. *A Reevaluation of the Role of Functional Groups in Modifying the Electronic Structure of Graphene Oxide*
A. Hunt, E.Z. Kurmaev, and A. Moewes, Advanced Materials 26, 4870-4874 (2014). [15.4]
57. *Measuring Partial Fluorescence Yield using Filtered Detectors*
T.D. Boyko, R.J. Green, A. Moewes, T.Z. Regier, J. Synchr. Rad. 21, 716-721 (2014). [3.0]
58. *Band gap engineering of graphene oxide by chemical modification*
A. Hunt, E.Z. Kurmaev, and A. Moewes, Carbon 75, 366-371 (2014). [6.2]
59. *Comment on “State-Dependent Electron Delocalization Dynamics at the Solute-Solvent Interface: Soft X-ray Absorption Spectroscopy and Ab Initio Calculations”*

- R.J. Green, D. Peak, A.J. Achkar, J.S. Tse, A. Moewes, D.G. Hawthorn, and T.Z. Regier, *Phys. Rev. Lett.* 112, 129301-1-2 (2014). [7.7]
60. *Local Structure of Fe Impurity Atoms in ZnO: Bulk versus Surface*
J.A. McLeod, D.W. Boukhvalov, D.Z. Zatsepin, R.J. Green, B. Leedahl, L. Chui, E.Z. Kurmaev, I.S. Zhidkov, L.D. Finkelstein, N.V. Gavrilov, S.O. Cholakh, and A. Moewes, *J. Phys. Chem. C* 118, 5336-5345 (2014). [4.8]
61. *Electronic Band gap reduction and intense luminescence in Co and Mn ion-implanted SiO₂*
R.J. Green, D.A. Zatsepin, D.J. St. Onge, E.Z. Kurmaev, N.V. Gavrilov, and A. Moewes, *J. Appl. Phys.* 115, 103708-1-7 (2014). [2.2]
62. *Structural defects induced by Fe-ion implantation in TiO₂*
B. Leedahl, D.A. Zatsepin, D.W. Boukhvalov, R.J. Green, J.A. McLeod, S.S. Kim, E.Z. Kurmaev, I.S. Zhidkov, N.V. Gavrilov, S.O. Cholakh, and A. Moewes, *J. Appl. Physics* 115, 053711-1-7 (2014). [2.2]
63. *The local crystal structure and electronic band gap of β -SiAlON*
T.D. Boyko, T. Groß, M. Schwarz, H. Fueß, and A. Moewes, *J. Materials Science* 49, 3242-3252 (2014). [2.3]
64. *Finite temperature effects on the X-ray absorption spectra of lithium compounds: first-principles interpretation of X-ray Raman measurements*
T.A. Pascal, U. Boesenberg, R. Kostecki, T.J. Richardson, T.-C. Weng, D. Sokaras, D. Nordlund, E. McDermott, A. Moewes, J. Cabana, and D. Prendergast, *J. Chem. Phys.* 140, 034107-1-13 (2014). [3.1]
65. *Modulation of the Band Gap of Graphene Oxide: The Role of AA-stacking*
A. Hunt, D.A. Dikin, E.Z. Kurmaev, Y.H. Lee, N.V. Luan, G.S. Chang, and A. Moewes, *Carbon* 66, 539-545 (2014). [6.2]
66. *Reduction of conductivity and ferromagnetism induced by Ag doping in ZnO:Co*
H. Bieber, S. Colis, G. Schmerber, V. Pierron-Bohnes, D.W. Boukhvalov, E.Z. Kurmaev, L.D. Finkelstein, P. Bazylewski, A. Moewes, G.S. Chang, A. Dinai, *Thin Solid Films* 545, 488-495 (2013). [1.9]
67. *Magnesium Double Nitride Mg₃GaN₃ and Binary Nitride Mg₃N₂ as New Host Lattices for Eu²⁺-Doping – Synthesis, Structural Studies, Luminescence and Band Gap Determination*
F. Hintze, N.W. Johnson, M. Seibald, D. Muir, A. Moewes, and W. Schnick, *Chem. Mat.* 25, 4044-4052 (2013). [8.5]
68. *X-ray Spectroscopic Study of the Conduction Band of K₃:Anthracene and K₃:Phenanthrene*
A. Pitman, J.A. McLeod, E. Khozmeni Sarbisheh, E.Z. Kurmaev, J. Müller, and A. Moewes, *J. Phys. Chem. C* 117, 1916-1921 (2013). [4.8]
69. *Electronic Structure of Spinel Nitride Compounds Si₃N₄, Ge₃N₄ and Sn₃N₄ with Tunable Band Gaps: Application to Light Emitting Diodes*
T.D. Boyko, A. Hunt, A. Zerr, and A. Moewes, *Phys. Rev. Lett.* 111, 097402-1-5 (2013). [7.7]
70. *Electronic structure of Copper Pnictides: Influence of Different Cations and Pnictogens*
J.A. McLeod, E.Z. Kurmaev, I. Perez, V.K. Anand, P. Kanchana Perera, D.C. Johnston, and A. Moewes, *Phys. Rev. B* 88, 014508-1-10 (2013). [3.8]

71. *Fast electron dynamics in vanadates measured by resonant inelastic x-ray scattering*
G. Herrera, J. Jimenez-Mier, R.G. Wilks, A. Moewes, W. Yang, J. Denlinger, *Materials Letters*. 107, 144-146 (2013). [2.2]
72. *Excited states in yttrium orthovanadate YVO_4 measured by soft X-ray absorption spectroscopy*
G. Herrera, J. Jimenez-Mier, R.G. Wilks, A. Moewes, W. Yang, J. Denlinger, *J. Mat. Sci.* 48, 6437-6444 (2013). [2.2]
73. *Electronic band gap reduction in Manganese Carbodiimide: $MnNCN$*
T.D. Boyko, R.J. Green, R. Dronskowski, and A. Moewes, *J. Phys. Chem. C* 117, 12754-12761 (2013). [4.8]
74. *Band gap tuning in ZnO Through Ni doping via spray pyrolysis*
S.C. Das, R.J. Green, J. Podder, G.S. Chang, and A. Moewes, *J. Phys. Chem. C* 117, 12745-12753 (2013). [4.8]
75. *Band gap tuning in Poly(triazine imide), a Non-metallic Photocatalyst*
E.J. McDermott, E. Wirnhier, W. Schnick, K.S. Viridi, C. Scheu, and A.Y. Kauffmann, W.D. Kaplan, E.Z. Kurmaev, and Moewes, *J. Phys. Chem. C* 117, 8806-8812 (2013). [4.8]
76. *The formation of Ti-O tetrahedra and band gap reduction in SiO_2 via pulsed ion implantation*
R.J. Green, D.A. Zatsepin, A. Hunt, E.Z. Kurmaev, N.V. Gavrilov, and A. Moewes, *J. Appl. Physics* 113, 103704-1-4 (2013). [2.2]
77. *Optimizing and characterizing grating efficiency for a soft X-ray spectrometer*
M. Boots, D. Muir and A. Moewes, *J. Synchr. Rad.* 20, 272-285 (2013). [2.2]
78. *Predicting the band gap of ternary oxides containing $3d^{10}$, $3d^0$ metals*
J.A. McLeod, D.A. Zatsepin, E.Z. Kurmaev, A. Wypych, I. Bobovska, A. Opasinka, S.O. Cholakh, and A. Moewes, *Phys. Rev. B* 86, 195207-1-7 (2012). [3.8]
79. *Chemical bonding and hybridization in 5p binary oxides*
J.A. McLeod, N.A. Skorikov, L.D. Finkelstein, E.Z. Kurmaev, and A. Moewes, *J. Phys. Chem. C* 116, 24248-24254 (2012). [4.8]
80. *Interplay of ballistic and chemical effects in the formation of structural defects for Sn and Pb implanted silica*
R.J. Green, A. Hunt, D.A. Zatsepin, D.W. Boukhvalov, J.A. McLeod, E.Z. Kurmaev, N.A. Skorikov, N.V. Gavrilov, and A. Moewes, *J. Non-Cryst. Solids* 358, 3187-3192 (2012). [1.6]
81. *Room Temperature Ferromagnetism via unpaired dopant electrons and p-p coupling in carbon-doped In_2O_3 : Experiment and Theory*
R.J. Green, D.W. Boukhvalov, E.Z. Kurmaev, L.D. Finkelstein, H.W. Ho, K.B. Ruan, L. Wang, and A. Moewes, *Phys. Rev. B* 86, 115212-1-8 (2012). [3.8]
82. *Electronic Structure of Titanium monoxide with randomly distributed vacancies*
M.A. Korotin, A.V. Efremov, E.Z. Kurmaev and A. Moewes, *JETP letters* 95, 641-646 (2012). [1.5]
83. *Epoxide Speciation and Functional Group Distribution in Graphene Oxide Paper-like Materials*
A. Hunt, D.A. Dikin, E.Z. Kurmaev, T.D. Boyko, P. Bazylewski, G.S. Chang, and A. Moewes, *Advanced Functional Materials* 22, 3950-3957 (2012). [10.2]

84. *Formation of Mn-oxide clusters in Mn⁺-implanted SiO₂ probed by soft X-ray emission and absorption spectroscopy*
D.A. Zatsepin, A. Moewes, A. Hunt, N.V. Gavrilov, E.Z. Kurmaev, and S.O. Cholakh, *Vacuum* 86, 1615-1617 (2012). [1.3]
85. *Band gap Engineering in TiO₂-based Ternary Oxides*
J.A. McLeod, R.J. Green, E.Z. Kurmaev, N. Kumada, A.A. Belik, and A. Moewes, *Phys. Rev. B* 85 195201-1-8 (2012). [3.7]
86. *Effect of 3d-doping on the electronic structure of BaFe₂As₂*
J.A. McLeod, A. Buling, R.J. Green, T.D. Boyko, N.A. Skorikov, E.Z. Kurmaev, M. Neumann, L.D. Finkelstein, N. Ni, A. Thaler, S.L. Bud'ko, P.C. Canfield, and A. Moewes, *J. Phys.: Cond. Matt.* 24, 215501-1-11 (2012). [2.6]
87. *Oxygen-vacancy-induced ferromagnetism in undoped SnO₂ thin films*
G.S. Chang, J. Forrest, E.Z. Kurmaev, A.N. Morozovska, M.D. Glinchuk, J.A. McLeod, A. Moewes, T.P. Surkova, and N.H. Hong, *Phys. Rev. B* 85, 165319-1-4 (2012). [3.7]
88. *Structural and band gap investigation of GaN:ZnO heterojunction solid solution photocatalyst probed by soft X-ray spectroscopy*
E.J. McDermott, E.Z. Kurmaev, T.D. Boyko, L.D. Finkelstein, R.J. Green, K. Maeda, K. Domen, and A. Moewes, *J. Phys. Chem. C* 116, 7694-7700 (2012). [4.8]
89. *Structural ordering in a silica glass matrix under Mn ion implantation*
D.A. Zatsepin, R.J. Green, A. Hunt, E.Z. Kurmaev, N.V. Gavrilov, and A. Moewes, *J. Phys.: Cond. Matt.* 24, 185402-1-7 (2012). [2.6]
90. *Selective response of Mesoporous Silicon to Adsorbants with Nitro Groups*
J.A. McLeod, E.Z. Kurmaev, P.V. Sushko, T.D. Boyko, I.A. Levitsky, and A. Moewes, *Chemistry – A European Journal* 18, 2912-2922 (2012). [5.9]
91. *Spectroscopic Characterization of a Multi-Band Complex Oxide: Insulating and Conducting Cement 12CaO·7Al₂O₃*
J.A. McLeod, A. Buling, E.Z. Kurmaev, P.V. Sushko, M. Neumann, L.D. Finkelstein, S.-W. Kim, H. Hosono, and A. Moewes, *Phys. Rev. B* 85, 045204-1-8 (2012). [3.7]
92. *X-ray absorption and emission spectroscopic investigation of Mn doped ZnO films*
J. Jin, G.S. Chang, Y.X. Zhou, X.Y. Zhang, D.W. Boukhvalov, E.Z. Kurmaev, and A. Moewes, *Appl. Surf. Science* 257, 10748-10751 (2011). [2.1]
93. *Electronic structure of Lithium metagallate*
N. Johnson, J.A. McLeod and A. Moewes, *J. Phys. Cond. Matt.* 23, 445501-6 (2011). [2.6]
94. *Anion ordering in spinel-type gallium oxonitride*
T.D. Boyko, C.E. Zvoriste, I. Kinski, R. Riedel, S. Hering, H. Huppertz, and A. Moewes, *Phys. Rev. B* 84, 085203-1-6 (2011). [3.7]
95. *Boron enhanced synthesis of Ti-hydride nanoparticles by milling Ti/B in hydrogen flow*
C. Borchers, T.I. Khomenko, A.V. Leonov, O.S. Morozova, J. Cizek, I. Prochazka, A.S. Shkvarin, E.Z. Kurmaev, and A. Moewes, *Current Nanoscience* 7, 757-769 (2011). [1.9]
96. *Pb⁺ implanted SiO₂ probed by soft X-ray emission and absorption spectroscopy*
D.Z. Zatsepin, A. Hunt, A. Moewes, E.Z. Kurmaev, N.V. Gavrilov, I.S. Zhidkov, and S.O. Cholakh, *Journal of Non-crystalline solids* 357, 3381-3384 (2011). [1.5]
97. *Electronic Structure of the Si-C-N Amorphous Films*

- D.A. Zatsepin, E.Z. Kurmaev, A. Moewes, and S.O. Cholakh, *Physics of the Solid State* 53, 1806-1810 (2011). [0.73]
98. *Nature of the electronic states involved in the chemical bonding and superconductivity at high pressure in SnO*
J.A. McLeod, A.V. Lukoyanov, E.Z. Kurmaev, L.D. Finkelstein, and A. Moewes, *JETP Letters* 94, 146-150 (2011). [1.6]
99. *Molecular orientation and optical luminescence properties of soluble star-shaped oligothiophene molecules for organic electronics applications*
R.G. Wilks, G.S. Chang, K.H. Kim, D.H. Choi, and A. Moewes, *J. Electr. Spectr. Rel. Phen.* 184, 355-359 (2011). [1.8]
100. *Electron dynamics of transition metal compounds studied with resonant soft x-ray scattering*
J. Jimenez-Mier, G. Herrera-Perez, P. Olalde-Velasco, G. Carabali, E. Chavira, P. de la Mora, W.L. Yang, J. Denlinger, A. Moewes, R. Wilks, Proceedings of 6th International Symposium on Radiation Physics, March 7-10, 2010 Zacatecas, Mexico) – *Revista Mexicana de la Fisica* 57, 6-13 (2011). [0.3]
101. *Identifying Local Dopant Structures and their Impact on Magnetic Properties in Spintronic Materials*
R.J. Green, G.S. Chang, X.Y. Zhang, A. Dinia, E.Z. Kurmaev, and A. Moewes, *Phys. Rev. B* 83, 115207-1-6 (2011). [3.8]
102. *Ca₃N₂ and Mg₃N₂: unpredicted high-pressure behaviour of binary nitrides*
C. Braun, S. Börger, T. Boyko, G. Miehe, H. Ehrenberg, P. Höhn, A. Moewes, and W. Schnick, *Journal of the American Chemical Society* 133, 4307-4315 (2011). [10.7]
103. *Valence Structure of Alkaline and Post-Transition Metal Oxides*
J.A. McLeod, R.J. Green, N.A. Skorikov, L.D. Finkelstein, M. Abu-Samak, E.Z. Kurmaev, and A. Moewes, *Oxide-based Materials and Devices II Book Series: Proceedings of SPIE 7940, 79400R* (2011).
104. *Appearance of Ferromagnetism in Co-Doped CeO₂ Diluted Magnetic Semiconductors Prepared by Solid State Reaction*
A. Bouaine, R.J. Green, S. Colis, P. Bazylewski, G.S. Chang, A. Moewes, E.Z. Kurmaev, and A. Dinia, *Journal of Physical Chemistry C* 115, 1566-1560 (2011). [4.5]
105. *Evaluation of Antioxidant Activity and Electronic Structure of Aspirin and Paracetamol*
W. Motozaki, Y. Nagatani, Y. Kimura, K. Endo, T. Takemura, E. Z. Kurmaev, A. Moewes. *J. Mol. Struct.* 985, 63-69 (2011). [1.6]
106. *Charge transfer and band gap of ferrocene intercalated into TiSe₂*
A.N. Titov, Y.M. Yarmoshenko, P. Bazylewski, M.V. Yablonskikh, E.Z. Kurmaev, R. Wilks, A. Moewes, V.A. Tsurin, V.V. Fedorenko, O.N. Suvorova, S.Yu. Ketkov, M. Neumann, and G.S. Chang, *Chem. Phys. Lett.* 497, 187-190 (2010). [2.3]
107. *RIXS approach to local environment around impurity atoms in diluted magnetic semiconductors and dielectrics*
G.S. Chang, E.Z. Kurmaev, L.D. Finkelstein, A. Moewes, and A. Dinia, *J. Electr. Spectr. Rel. Phen.* 181, 202-205 (2010) [0.9] (ICISS-11 conference)
108. *Material Properties and Structural Characterization of M₃Si₆O₁₂N₂:Eu²⁺ (N=Ba, Sr) – A Comprehensive Study on a promising green phosphor for pc-LEDs*

- C. Braun, S.L. Börger, M. Seibald, G. Miede, P.J. Schmidt, T.D. Boyko, O. Oeckler, A. Moewes, and W. Schnick, *Chemistry – A European Journal* 16, 9646-9657 (2010). [5.4]
109. *Correlation effects in Ni 3d states of LaNiPO*
A.V. Lukoyanov, S.L. Skornyakov, J.A. McLeod, M. Abu-Samak, R.G. Wilks, E.Z. Kurmaev, and A. Moewes, N.A. Skorikov, Yu.A. Izyumov, L.D. Finkelstein, V.I. Anisimov, and D. Johrendt, *Phys. Rev. B* 81, 235121-1-5 (2010). [3.5]
110. *Band gaps and Electronic structure of alkaline-earth and post-transition metal oxides*
J.A. McLeod, R.G. Wilks, N.A. Skorikov, L.D. Finkelstein, M. Abu-Samak, E.Z. Kurmaev, and A. Moewes, *Phys. Rev. B* 81, 245123-1-9 (2010). [3.5]
111. *Electronic structure of Mn in (Zn,Mn)O probed by resonant X-ray emission spectroscopy*
J. Jin, G.S. Chang, W. Xu, Y.X. Xu, D.W. Boukhvalov, L.D. Finkelstein, E.Z. Kurmaev, X.Y. Zhang, and A. Moewes, *Sol. State Comm.* 150, 1065-68 (2010). [1.8]
112. *Class of tunable wide band gap semiconductors γ -(Ge_xSi_{1-x})₃N₄*
T.D. Boyko, E. Bailey, A. Moewes, and P.F. McMillan, *Phys. Rev. B* 81, 155207-1-8 (2010). [3.5]
113. *Interfacial Properties and Characterization of Sc/Si Multilayers*
T. Shendruk, A. Moewes, E.Z. Kurmaev, P. Ochinnikov, H. Maury, J.-M. Andre, K. Le Gruen, and P. Jonnard, *Thin Solid Films* 518, 3808-3812 (2010). [1.7]
114. *Electronic structure of BiMeO₃ multiferroics and related oxides*
J.A. McLeod, Z.V. Pchelkina, L.D. Finkelstein, E.Z. Kurmaev, R.G. Wilks, A. Moewes, I.V. Solovyev, A.A. Belik, and E. Takayama-Muromachi, *Phys. Rev. B* 81, 144103-1-10 (2010). [3.5]
115. *Valence band structure and X-ray spectra of oxygen deficient ferrites SrFeO_x*
V.R. Galakhov, E.Z. Kurmaev, M. Neumann, J.A. McLeod, A. Moewes, I.A. Leonidov, V.L. Kozhevnikov, and K. Kuepper, *J. Phys. Chem. C* 110, 5154-5159 (2010). [4.2]
116. *Element-specific electronic structure of Mn dopants and ferromagnetism of (Zn,Mn)O thin film*
J. Jin, G.S. Chang, D.W. Boukhvalov, X.Y. Zhang, L.D. Finkelstein, W. Xu, Y.X. Zhou, E.Z. Kurmaev, and A. Moewes, *Thin Solid Films* 518, 2825-2829 (2010). [1.7]
117. *Electronic properties of pyroxenes NaCrSi₂O₆ and NaFeSi₂O₆*
S.V. Streltsov, J. McLeod, A. Moewes, G.J. Redhammer, and E.Z. Kurmaev, *Phys. Rev. B* 81, 045118-1-5 (2010). [3.5]
118. *Metal-insulator transition in NiS_{2-x}Se_x*
J. Kunes, L. Baldassarre, B. Schächner, K. Rabia, C.A. Kuntscher, Dm.M. Korotin, V.I. Anisimov, J.A. McLeod, E.Z. Kurmaev, and A. Moewes, *Phys. Rev. B* 81, 03512201-6 (2010). [3.5]
119. *Structural models of FeSe_x*
E.Z. Kurmaev, J.A. McLeod, N.A. Skorikov, L.D. Finkelstein, A. Moewes, M.A. Korotin, Yu.A. Izyumov, Y.L. Xie, G. Wu, and X.H. Chen, *J. Phys.: Cond. Matt.* 21, 435702-1-6 (2009). [2.0]
120. *Effect of N, C and B interstitial atoms on local bonding structure in mechanically activated TiH₂/h-BN, TiH₂/C and TiH₂/B mixtures*

- O.S. Morozova, T.I. Khomenko, Ch. Borchers, A.V. Leonov, E.Z. Kurmaev, A. Moewes, *J. Alloys & Compounds* 483, 309-312 (2009). [2.1] (14th International Symposium on Metastable and Nano-Materials)
121. *Contribution of Fe 3d-states to the Fermi level of CaFe₂As₂*
E.Z. Kurmaev, J.A. McLeod, A. Buling, N.A. Skorikov, A. Moewes, M. Neumann, Yu.A. Izyumov, N. Ni, and P.C. Canfield, *Phys. Rev. B* 80, 054508-1-6 (2009). [3.5]
122. *Identifying valence structure in LiFeAs and NaFeAs with core-level spectroscopy*
E.Z. Kurmaev, J.A. McLeod, N.A. Skorikov, L.D. Finkelstein, A. Moewes, Yu.A. Izyumov, and S. Clarke, *J. Phys.: Cond. Matt.* 21, 345701-6 (2009). [2.0]
123. *Strength of correlation in pnictides and its assessment by theoretical calculations and spectroscopy experiment*
V.I. Anisimov, E.Z. Kurmaev, A. Moewes, and I.A. Izyumov, *Physica C* 469, 442-447 (2009). [1.079]
124. *A comparative theoretical and experimental study of the radiation induced decomposition of Glycine*
R.G. Wilks, J.B. MacNaughton, H.-B. Kraatz, T. Regier, R.I.R. Blyth, and A. Moewes *J. Phys. Chem. A* 113, 5360-5366 (2009). [2.918]
125. *Electronic structure of hydrogenated amorphous Si_{1-x}N_x films using soft X-ray emission and absorption measurements*
T. Boyko, S. Kasap, R. Johanson, S. Kobayashi, T. Aoki, and A. Moewes, *Physica Status Solidi A* 206, 935-939 (2009). [1.214]
126. *Ti/C and Ti/B Nanocomposites: Comparison of Sorption-Desorption Properties*
O.S. Morozova, T.I. Khomenko, A.V. Leonov, C. Borchers, E. Kurmaev, A. Moewes, *J. Solid State Phenomena* 151, 203-207 (2009).
127. *Co and Al co-doping for ferromagnetism in ZnO:Co diluted magnetic semiconductors*
G.S. Chang, E.Z. Kurmaev, D.W. Boukhvalov, L.D. Finkelstein, A. Moewes, H. Bieber, S. Colis, and A. Dinia, *J. Phys.: Cond. Matt.* 21, 056002-1-5 (2009). [1.886]
128. *Thermodynamic and kinetic factors effecting hydrogen absorption on metal hydrides*
M. Reda and A. Moewes, *International Journal of Hydrogen Energy* 33, 7505-7506 (2008). [2.725]
129. *Determining the sp²/sp³ bonding concentrations of carbon films using X-ray absorption spectroscopy*
T. Hamilton, R.G. Wilks, M.V. Yablonskikh, Q. Yang, M. Foursa, A. Hirose, V.N. Vasilets, and A. Moewes, *Canadian Journal of Physics* 86, 1401-1407 (2008). [0.886]
130. *Characterization of oxide layers formed on electrochemically treated Ti by using soft X-ray absorption measurements*
R.G. Wilks, E. Santos Jr., E.Z. Kurmaev, M.V. Yablonskikh, A. Moewes, N.K. Kuromoto, and G.A. Soares, *J. Electr. Spectr. Rel. Phen.* 169, 46-50 (2009). [1.082]
131. *X-ray emission and photoluminescence Spectroscopy of nanostructured Silica with implanted copper ions*
D.A. Zatsepin, V.S. Kortov, E.Z. Kurmaev, N.V. Gavrilov, R.G. Wilks, and A. Moewes, *Phys. Solid State* 50, 2322-2326 (2008). [0.65]
132. *Unipolar-to-ambipolar conversion of rubrene thin-film transistors by organosilene self-assembled monolayer*

- J.H. Seo, G.S. Chang, R.G. Wilks, C.N. Whang, K.H. Chae, S.J. Cho, K.-H. Yoo, and A. Moewes, *J. Phys. Chem. B* 112, 16266 (2008). [4.086]
133. *X-ray spectra and electronic structures of the iron arsenide superconductors $RFeAsO_{1-x}F_x$ ($R=La, Sm$)*
E.Z. Kurmaev, R.G. Wilks, A. Moewes, N.A. Skorikov, Yu.A. Izyumov, L.D. Finkelstein, R.H. Li, and X.H. Chen, *Phys. Rev. B* 78, 220503R 1-4 (2008). [3.17]
134. *Ti/C and Ti/h-BN nanocomposites: comparison of hydrogen sorption/desorption properties*
C. Borchers, O.S. Morozova, T.I. Khomenko, A.V. Leonov, E.Z. Kurmaev, A. Moewes, and A. Pundt, *Chem. Phys. Lett.* 465, 82-85 (2008). [2.207]
135. *Influence of 2-mercapto-5-nitrobenzimidazole treatment on the electronic characteristics of bottom-contact organic field-effect transistors*
D.S. Park, W.C., S.W. Cho, J.H. Seo, I.S. Jeong, T.W. Kim, G.S. Chang, A. Moewes, K.H. Chae, K. Jeong, K.-H. Yoo, and C.N. Whang, *Organic Electronics* 9, 1010-1016 (2008). [3.879]
136. *X-ray spectra and electronic structure of Sc and Ti dihydrides*
A.V. Galakhov, L.D. Finkelstein, E.Z. Kurmaev, R.G. Wilks, A. Moewes, V.K. Fedotov *J. Phys.: Cond. Matt.* 20, 335224-1-6 (2008). [1.886]
137. *Characterization of chemically treated bioactive Ti using soft X-ray fluorescence*
E.Z. Kurmaev, R.G. Wilks, R. Filby, A. Moewes, L. Müller, and F.A. Müller, *Materials Science and Engineering C* 29, 136-139 (2009). [1.486]
138. *Defect-induced Ferromagnetism in Mn-doped Cu_2O*
G.S. Chang, E.Z. Kurmaev, D.W. Boukhvalov, A. Moewes, L.D. Finkelstein, M. Wei, and J.L. MacManus-Driscoll, *J. Phys.: Cond. Matt.* 20, 215215 (2008). [1.886]
139. *X-ray spectra and electronic structure of FeAs superconductors*
E.Z. Kurmaev, R.G. Wilks, A. Moewes, N.A. Skorikov, Yu.A. Izyumov, L.D. Finkelstein, R.H. Li, and X.H. Chen, arXiv:0805.0668v1 [cond-matt.supr-con] 2008.
140. *Oxygen X-ray emission and absorption spectra as a probe of electronic structure in strongly correlated systems*
E.Z. Kurmaev, R.G. Wilks, A. Moewes, L.D. Finkelstein, and S.N. Shamin, *Phys. Rev. B* 77, 165127-1-5 (2008). [3.17]
141. *Effect of h-BN additive on hydrogen sorption by Ti under mechanical treatment in H_2/He flow*
C. Borchers, O.S. Morozova, T.I. Khomenko, A.V. Leonov, A.V. Postnikov, E.Z. Kurmaev, A. Moewes, and A. Pundt, *J. Phys. Chem. C* 112, 5869-5879 (2008). [4.009]
142. *Energy Band structure and X-ray Spectra of Phenakite Be_2SiO_4*
I.R. Shein, R. Wilks, A. Moewes, E.Z. Kurmaev, D.A. Zatsepin, A.I. Kukharenko, and S.O. Cholakh, *Phys. Sol. State* 50, 615-620 (2008). [0.65]
143. *The attachment of Amino Fragment to purine: Inner-shell structures and spectra*
S. Saha, F. Wang, J.B. MacNaughton, A. Moewes, and D.P. Chong, *Journal of Synchrotron Radiation* 15, 151-157 (2008). [2.978]
144. *Substituent Effects in the Iron 2p and Carbon 1s edge Near-Edge X-ray Absorption Fine Structure (NEXAFS) Spectroscopy of Ferrocene Compounds*
E. Otero, R.G. Wilks, T. Regier, R. Blyth, A. Moewes, and S.G. Urquhart, *J. Phys. Chem. A* 112, 624-634 (2008). [2.918]

145. *Effects of NH₃, O₂, and N₂ co-implantation on Cu out-diffusion and antimicrobial properties of copper plasma-implanted polyethylene*
W. Zhang, J. Ji, Y. Zhang, Q. Yan, E.Z. Kurmaev, A. Moewes, J. Zhao, P.K. Chu, Applied Surface Science 253 8981-8985 (2007). [1.406]
146. *Probing Interfacial characteristics of rubrene/pentacene and pentacene/rubrene bilayers with soft X-ray spectroscopy*
J.H. Seo, T.M. Pedersen, G.S. Chang, S.W. Cho, K.-H. Yoo, S.J. Cho, A. Moewes, and C.N. Whang, J. Phys. Chem. B 111, 9513-9518 (2007).
147. *Ti/C and Ti/h-BN nanocomposites: comparison of hydrogen sorption/desorption properties*
O.S. Morozova, T.I. Khomenko, A.V. Leonov, Ch. Borchers, E.Z. Kurmaev, and A. Moewes, Chemistry for Sustainable Development 15, 203-211 (2007).
148. *Local electronic structure of Mn dopants in ZnO probed by resonant inelastic scattering*
G.S. Chang, E.Z. Kurmaev, S.W. Jung, H.-J. Kim, G.-C. Yi, S.-I. Lee, M.V. Yablonskikh, T.M. Pedersen, A. Moewes, and L.D. Finkelstein, J. Phys.: Cond. Matt. 19, 276210-1-8 (2007).
149. *Effect of Co and O defects on the magnetism in Co-doped ZnO: Experiment and Theory*
G.S. Chang, E.Z. Kurmaev, D.W. Boukhvalov, L.D. Finkelstein, S. Colis, T.M. Pedersen, A. Moewes, and A. Dinia, Phys. Rev. B 75, 195215-1-7 (2007).
150. *Electronic structure of NPB and BCP molecules probed by X-ray emission spectroscopy*
J.H. Seo, C.Y. Kim, S.J. Kang, K.-H. Yoo, C.N. Whang, A. Moewes, and G.S. Chang Journal of Chemical Physics 126, 064706-1-5 (2007).
151. *Optical XAFS of ZnO Nanowires at the Zn K-edge and Related Phenomena*
F. Heigl, X.H. Jeff Sun, S. Lam, T.-K. Sham, R. Gordon, D. Brewe, R. Rosenberg, G. Shenoy, M. Yablonskikh, J. MacNaughton, and A. Moewes, CP 882 X-ray Absorption Fine Structure – XAFS13, American Institute of Physics, 734-736 (2007).
152. *Post-annealing effect on the electronic structure of Mn atoms in Ga_{1-x}Mn_xAs probed by resonant inelastic X-ray scattering*
G.S. Chang, E. Z. Kurmaev, L.D. Finkelstein, H.K. Choi, W.O. Lee, Y.D. Park, T. Pedersen, A. Moewes, J. Phys.: Cond. Matt. 19, 076215-1-6 (2007).
153. *Electronic structure of a Mn₁₂ molecular magnet: Theory and experiment*
D.W. Boukhvalov, M. Al-Saquer, E.Z. Kurmaev, A. Moewes, V.R. Galakhov, L.D. Finkelstein, S. Chiuzbăian, M. Neumann, V.V. Dobrovitski, M.I. Katsnelson, A.I. Lichtenstein, B.N. Harmon, J.M. Northier, and N. Dalal, Phys. Rev. B 75, 014419-1-4 (2007).
154. *X-ray Photoelectron and Carbon K α emission measurements and calculations of O-, CO, N-, and S-containing Substances*
S. Shimada, T. Hiroi, T. Ida, M. Mizuno, K. Endo, E.Z. Kurmaev, and A. Moewes, J. of Polymer Science B: Polymer Physics 45, 162-172 (2007).
155. *An X-ray emission and density functional theory study of Zn_{1-x}Mn_xS*
R.G. Wilks, E.Z. Kurmaev, L.M. Sandratskii, A.V. Postnikov, L.D. Finkelstein, T.P. Surkova, S.A. Lopez-Rivera, and A. Moewes, J. Phys.: Cond. Matt. 18, 10405-10412 (2006).

156. *Buffer layer effect on the structural and electrical properties of rubrene-based organic thin-film transistors*
J.H. Seo, D.S. Park, S.W. Cho, C.Y. Kim, W.C. Jang, C.N. Whang, K.-H. Yoo, G.S. Chang, T. Pedersen, A. Moewes, K.H. Chae, S. J. Cho, Appl. Phys. Lett. 89, 163505-1-3 (2006).
157. *Experimental and Theoretical Investigation of the Electronic Structure of 5-Fluorouracil Compounds*
J.B. MacNaughton, R.G. Wilks, J.S. Lee, and A. Moewes, J. Phys. Chem. B 110, 18180-18190 (2006).
158. *Soft X-ray absorption and emission characterization of nanodiamond prepared by explosive detonation*
T. Hamilton, E.Z. Kurmaev, S.N. Shamin, P.Y. Detkov, S.I. Chukhaeva, and A. Moewes, Diamond and Related Materials 16, 350-352 (2007).
159. *X-ray absorption of nitrogen doped amorphous carbon films for determining sp^2/sp^3 bonding concentrations*
T. Hamilton, A. Moewes, M. Foursa, and A. Hirose, Radiation Physics and Chemistry 75, 1613-1616 (2006).
160. *Probing changes in the Mn 3d band of $Sm_{0.525}Sr_{0.475}MnO_3$ induced by oxygen isotope substitution*
G.S. Chang, E.Z. Kurmaev, L.D. Finkelstein, N.A. Babushkina, A. Moewes, and T.A. Callcott, Phys. Rev. B 74, 125105-1-4 (2006).
161. *Solid versus solution: Examining the electronic structure of metallic DNA with soft X-ray spectroscopy and density functional theory*
J.B. MacNaughton, M.V. Yablonskikh, A.H. Hunt, E.Z. Kurmaev, J.S. Lee, S.D. Wettig, and A. Moewes, Phys. Rev. B 74, 125101-1-5 (2006).
162. *Dependence of DNA Electronic Structure on Environmental and Structural Variations*
J.B. MacNaughton, A. Moewes, J.S. Lee, S.D. Wettig, H.-B. Kraatz, L. Ouyang, W.-Y. Ching, J. Phys. Chem. B 110, 15742-15748 (2006).
163. *X-ray 2p photoelectron and L_α resonant X-ray emission spectra of the 3d metals in Ni_2MnZ ($Z=In, Sn, Sb$) Heusler alloys*
M.V. Yablonskikh, A. Moewes, J. Braun, M.T. Kuchel, A.V. Postnikov, M. Neumann, J.D. Denlinger, and E.I. Shreder, Phys. Rev. B 74, 085103-1-11 (2006).
164. *Electronic structures of $LiFePO_4$ and $FePO_4$ studied using resonant inelastic X-ray scattering*
A. Hunt, W.-Y. Ching, Y.-M. Chiang, and A. Moewes, Phys. Rev. B 73, 205120-1-10 (2006).
165. *Electronic structure and charge carriers in metallic DNA investigated by soft X-ray spectroscopy*
J.B. MacNaughton, E.Z. Kurmaev, L.D. Finkelstein, J.S. Lee, S.D. Wettig, and A. Moewes, Phys. Rev. B 73, 205114-1-7 (2006).
166. *Clustering of impurity atoms in Co-doped anatase TiO_2 thin films probed with soft X-ray fluorescence*
G.S. Chang, E.Z. Kurmaev, D.W. Boukvalov, L.D. Finkelstein, D.H. Kim, T.-W. Noh, A. Moewes, and T.A. Callcott, J. Phys. Cond. Matt. 18, 4243-4251 (2006).

167. *Combined X-ray absorption spectroscopy and density functional theory examination of ferrocene labeled peptides*
R.G. Wilks, J.B. MacNaughton, H.-B. Kraatz, T. Regier, and A. Moewes, *J. Phys. Chem. B* 110, 5955-5965 (2006).
168. *Uniaxial in-plane magnetic anisotropy of a CoPt film induced by ion irradiation*
G.S. Chang, A. Moewes, S.H. Kim, J. Lee, K. Jeong, C.N. Whang, D.-H. Kim, and S.C. Shin, *Appl. Phys. Lett.* 88, 092504-1-3 (2006).
169. *On the bonding situation in $TlCo_2Se_2$*
M.V. Yablonskikh, R. Berger, U. Gelius, R. Lizarraga, T.B. Charikova, and E.Z. Kurmaev, and A. Moewes, *J. Phys. Cond. Matt.* 18, 1757-1768 (2006).
170. *The Origin of an Elastic Line in the L_3 X-ray Emission Spectrum of Metallic Manganese*
L.D. Finkelstein, I.A. Nebraskov, A.V. Lukoyanov, E.Z. Kurmaev, V.I. Anisimov, S. Kucas, A. Kynien, A. Moewes, J.-L. Wang, and Z. Zeng, *Physics of the Solid State* 48, 420-426 (2006).
171. *Influence of Graphite Addition on the Reactivity of Ti Powder with H_2 under Ball Milling*
C. Borchers, T.I. Khomenko, O.S. Morozova, A.V. Galakhov, E.Z. Kurmaev, J. MacNaughton, M.V. Yablonskikh, and A. Moewes, *J. Phys. Chem. B* 110, 196-204 (2006).
172. *Electronic structure of boron nitride single crystals and films*
J.B. MacNaughton, A. Moewes, R.G. Wilks, X.T. Zhou, T.K. Sham, T. Taniguchi, C.Y. Chan, W.J. Zhang, I. Bello, S.T. Lee, and H. Hofsäss, *Phys. Rev. B* 72, 195113-1-8 (2005).
173. *Chemical reaction at the interface between pentacene and HfO_2*
S.J. Kang, Y. Yi, C.Y. Kim, K.-H. Yoo, A. Moewes, M.H. Cho, J.D. Denlinger, C.N. Whang, and G.S. Chang, *Phys. Rev. B* 72, 205328-1 – 6 (2005).
174. *Ion irradiation induced reduction of Fe^{3+} to Fe^{2+} in triethoxysilane films*
R.G. Wilks, E.Z. Kurmaev, J.C. Pivin, A. Hunt, M.V. Yablonskikh, D.A. Zatsepin, A. Moewes, S. Shin, P. Palade, and G. Principi, *J. Phys.: Cond. Matt.* 17, 7023-7028 (2005).
175. *X-ray Photoelectron and Carbon $K\alpha$ Emission Spectral Analysis of Polymers by DFT Calculations using QM/MM Method*
Y. Kimura, T. Hiroi, S. Shimada, M. Mizuno, K. Endo, E.Z. Kurmaev, and A. Moewes, *J. Surf. Analysis* 12, 213-217 (2005).
176. *An indirect probe of the half-metallic nature of $LiFePO_4$ using resonant inelastic X-ray scattering*
A. Hunt, A. Moewes, W.-Y. Ching, Y.-M. Chiang, *J. Phys. Chem. Sol.* 66, 2290-2294 (2005).
177. *Resonantly Excited Cascade X-ray Emission from La*
A. Moewes, R. Wilks, A.G. Kochur, and E.Z. Kurmaev, *Phys. Rev. B* 72, 075129-1-6 (2005).
178. *Plasma-enhanced synthesis of diamond nanocone films*
Q. Yang, T. Hamilton, C. Xiao, A. Hirose, and A. Moewes, *Thin Solid Films* 494, 110-115 (2005).

179. *The effects of bias polarity on diamond deposition by hot-filament chemical vapor deposition*
W. Chen, C. Xiao, Q. Yang, A. Moewes, and A. Hirose, *Can. J. Phys.* 83, 753 – 759 (2005).
180. *Local Environment of Fluorine Atoms in $Sr_2Ca_{n-1}Cu_nO_{2n+\delta}F_{2\pm y}$ ($n=2,3$) High-Temperature Superconductors Grown under High Pressure*
E.Z. Kurmaev, A. Moewes, R. Wilks, L.D. Lechkina, D.A. Zatsepin, T. Kawashima, and E. Takayama-Muromachi, *Phys. Solid State* 47, 1211 – 1215 (2005).
181. *Analysis of octadecyltrichlorosilane effects on organic thin film transistor by using soft X-ray fluorescence*
S.J. Kang, Y. Yi, C.Y. Kim, C.N. Whang, K. Krochak, A. Moewes, G.S. Chang, and T.A. Callcott, *Appl. Phys. Lett.* 86, 232103-1-3 (2005).
182. *The $L_2:L_3$ intensity ratio in soft X-ray emission spectra of 3d-metals*
E.Z. Kurmaev, J.J. Rehr, A.L. Ankudinov, L.D. Finkelstein, P.F. Karimov, and A. Moewes, *J. Electr. Spectr. Rel. Phenom.* 148, 1-4 (2005).
183. *The electronic structure of DNA nucleobases*
J. MacNaughton, A. Moewes and E.Z. Kurmaev, *J. Physical Chemistry B* 109, 7749-7757 (2005).
184. *Electronic structure of $KTaO_3$: A combined spectroscopic investigation*
K. Kuepper, A.V. Postnikov, A. Moewes, B. Schneider, M. Matteucci, H. Hesse, and M. Neumann, *J. Phys.: Cond. Matt.* 16, 8213-8219 (2004).
185. *Electronic structure of carbosulfide superconductors*
E.Z. Kurmaev, N.A. Skorikov, A.V. Galakhov, P.F. Karimov, V.R. Galakhov, V.A. Trofimova, Yu.M. Yarmoshenko, A. Moewes, S.G. Chiuzbăian, M. Neumann, and K. Sakamaki, *Phys. Rev. B* 71, 024528-1-5 (2005).
186. *Experimental Evidence of the Hybridization of the Electron States of an Impurity and the Conduction Band in the $HgSe:Fe$ System*
V.I. Okulov, L.D. Sabirzyanova, E.Z. Kurmaev, L.D. Finkelstein, R.F. Karimov, A. Moewes, and S. Yu. Paranchich, *JETP Letters* 81, 72-74 (2005).
187. *Studying 4d – 4f transitions in Er using resonant inelastic scattering*
A. Hunt, D. Muir and A. Moewes, *J. Electr. Spectr. Rel. Phenom.* 144-147, 573-576 (2005).
188. *Photon-in photon-out studies of Alq_3 (tri-aluminum-8- hydroxyquinolate): synchrotron light excited optical luminescence and X-ray emission*
P.-S.G. Kim, S.J. Naftel, T.K. Sham, I. Coulthard, Y.-F. Hu, A. Moewes, and J.W. Freeland, *J. Electr. Spectr. Rel. Phenom.* 144-147, 901-904 (2005).
189. *Resonant $L_{\alpha,\beta}$ X-ray emission and $L_{2,3}$ absorption spectra of 3d metals in Co_2MnZ ($Z=Al, Ga, Sn, Sb$) Heusler alloys as an element-selective probe of spin-character of valence band*
M.V. Yablonskikh, Yu.M. Yarmoshenko, I.V. Soloviev, E.Z. Kurmaev, L.-C. Duda, T. Schmitt, M. Magnuson, J. Nordgren, and A. Moewes, *J. Electr. Spectr. Rel. Phenom.* 144-147, 765-769 (2005).
190. *Analysis of the electronic structure of human hemoglobin from soft X-ray emission*
A.V. Soldatov, A.N. Kravtsova, E.N. Fedorovich, A. Ankudinov, A. Moewes, and E.Z. Kurmaev, *J. Electr. Spectr. Rel. Phenom.* 144-147, 279-282 (2005).

191. *Monitoring 5p–4d soft X-ray emission of La when exciting through the low-lying 3d – 4f threshold*
A. Moewes, R. Wilks, A. Kochur, and E.Z. Kurmaev, *J. Electr. Spectr. Rel. Phenom.* 144-147, 577-580 (2005).
192. *Properties of Non-Equivalent Sites and Band Gap of Spinel-Phase Silicon Nitride*
S. Leitch, A. Moewes, L. Ouyang, W.Y. Ching, and T. Sekine, *J. Phys.: Cond. Matt.* 16, 6469-6476 (2004).
193. *Influence of the Coulomb Parameter U on Partial Density of States of CuGeO₃*
A.V. Galakhov, V.R. Galakhov, V.I. Anisimov, E.Z. Kurmaev, A.V. Sokolov, L. Gridneva, V.V. Maltsev, L.I. Leonyuk, A. Moewes, S. Bartkowski, M. Neumann, and J. Nordgren, *Europ. Phys. J. B* 41, 295-300 (2004).
194. *The electronic structure and optical properties of silicon nanowires: a study using X-ray excited optical luminescence and X-ray emission spectroscopy*
T.K. Sham, S.J. Naftel, P.-S.G. Kim, R. Sammynaiken, Y.H. Tang, I. Coulthard, A. Moewes, J.W. Freeland, Y.-F. Hu, S.T. Lee, *Phys. Rev. B* 70, 0453131-0453138 (2004).
195. *Soft X-ray Spectroscopy of Nucleobases, B-DNA and Ferrocene-proline conjugates*
A. Moewes, J. MacNaughton, R. Wilks, J.S. Lee, S.D. Wettig, H.-B. Kraatz, and E.Z. Kurmaev, *J. Electr. Spec. Rel. Phen.* 137-140, 817-822 (2004).
196. *Resonant inelastic soft X-ray scattering and electronic structure of LiBC*
P.F. Karimov, N.A. Skorikov, E.Z. Kurmaev, L.D. Finkelstein, S. Leitch, J. MacNaughton, A. Moewes, and T. Mori, *J. Phys.: Cond. Matt.* 16, 5137-5142 (2004).
197. *Soft X-ray emission studies of biomaterials*
E.Z. Kurmaev, J.P. Werner, A. Moewes, S. Chiuzbăian, M. Bach, W.-Y. Ching, W. Motozaki, T. Otsuka, S. Matsuya, K. Endo, and M. Neumann, *J. Electr. Spec. Rel. Phen.* 137-140, 811-815 (2004).
198. *Electron correlation effects in band structure of magnetic clusters Mn₁₂ and Fe₈*
D.W. Boukhvalov, E.Z. Kurmaev, A. Moewes, S. Chiuzbăian, V.R. Galakhov, L.D. Finkelstein, M. Neumann, M.I. Katsnelson, V.V. Dobrovitski, and A.L. Lichtenstein, *J. Electr. Spec. Rel. Phen.* 137-140, 735-739 (2004).
199. *Electronic Structure of Transition-Metal Dicyanamides Me[N(CN)₂]₂ (Me=Mn, Fe, Co, Ni, Cu)*
D.O. Demchenko, A.Y. Liu, E.Z. Kurmaev, L.D. Finkelstein, V.R. Galakhov, A. Moewes, S.G. Chiuzbăian, M. Neumann, C.R. Kmety, and K.L. Stevenson, *Phys. Rev. B* 69, 2051051-2051058 (2004).
200. *Tight-Binding Model for the X-ray Absorption and Emission Spectra of Dilute GaN_xAs_{1-x} at the Nitrogen K-Edge*
E. Nodwell, M. Adamcyk, A. Ballestad, T. Tiedje, S. Webster, A. Moewes, T. van Buuren, and E.Z. Kurmaev, *Phys. Rev B* 69, 155210-155213 (2004).
201. *Testing the magnetism of polymerized fullerene*
D.W. Boukhvalov, P.F. Karimov, E.Z. Kurmaev, T. Hamilton, A. Moewes, L.D. Finkelstein, M.I. Katsnelson, V.A. Davydov, A.V. Rakhmanina, T.L. Makarova, Y. Kopelevich, S. Chiuzbăian, and M. Neumann, *Phys. Rev. B* 69, 1154251-1154254 (2004).
202. *Electronic structure and thermoelectric properties of skutteride antimonides*

- E.Z. Kurmaev, A. Moewes, I.R. Shein, L.D. Finkelstein, A.L. Ivanovskii, and H. Anno, *J. Phys.: Cond. Matt.* 16, 979-987 (2004).
203. *Analysis of Electron Spectra of Carbon Allotropes (Diamond, Graphite, Fullerene) by DFT Calculations using the Model Molecules*
K. Endo, S. Koizumi, T. Otsuka, T. Ida, T. Morohashi, J. Onoe, A. Nakao, E.Z. Kurmaev, A. Moewes, D.P. Chong, *J. Physical Chemistry A* 107, 9403-9408 (2003).
204. *Isomer structure of high-pressure hydrofullerene probed by soft X-ray emission*
E.Z. Kurmaev, A. Moewes, T. Ida, S. Danielache, K. Endo, I.O. Bashkin, A.I. Harkunov, and A.P. Moravsky, *Journal of Molecular Structure* 639, 27-33 (2003).
205. *The electronic structure and chemical bonding of Vitamin B₁₂*
E.Z. Kurmaev, A. Moewes, L. Ouyang, L. Randaccio, P. Rulis, W.Y. Ching, M. Bach, and M. Neumann, *Europhysics Letters* 62, 582-587 (2003).
206. *X-ray emission spectroscopy study of the Verwey transition in Fe₃O₄*
A. Moewes, E.Z. Kurmaev, L.D. Finkelstein, A.V. Galakhov, S. Gota, M. Gautier-Soyer, J.P. Rueff, and C.F. Hague, *J. Phys.: Cond. Matt.* 15, 2017-2022 (2003).
207. *Band dispersion of MgB₂, graphite and diamond from resonant inelastic scattering*
A.V. Sokolov, E.Z. Kurmaev, S. Leitch, A. Moewes, J. Kortus, L.D. Finkelstein, N.D. Skorikov, C. Xiao, and A. Hirose, *J. Phys.: Cond. Matt.* 15, 2081-2089 (2003).
208. *Half-metallic electronic structure of CrO₂ in resonant scattering*
E.Z. Kurmaev, A. Moewes, S.M. Butorin, M.I. Katsnelson, L.D. Finkelstein, J. Nordgren, and P.M. Tedrow, *Phys. Rev. B* 67, 155105-1-4 (2003).
209. *Electronic structure of magnetic molecules V₁₅: LDA+U calculations, X-ray emissions, and photoelectron spectra*
D.W. Boukhvalov, E.Z. Kurmaev, A. Moewes, D.A. Zatsepin, V.M. Cherkashenko, S.N. Nemnonov, L.D. Finkelstein, Y.M. Yarmoshenko, M. Neumann, V.V. Dobrovitski, M.I. Katsnelson, A.I. Lichtenstein, B.N. Harmon, and P. Kögerler, *Phys. Rev. B* 67, 134408-1-8 (2003).
210. *X-ray emission spectra of vanadium atoms in a new series of (Cu, V) based high-T_c superconductors*
E.Z. Kurmaev, A. Moewes, G.T. Woods, T.A. Callcott, N.D. Zhigadlo, E. Takayama-Muromachi, V.R. Galakhov, and D.L. Ederer, *J. Solid State Chemistry* 170, 188-191 (2003).
211. *Electronic Structure and Bonding in Vitamin B₁₂ Cyanocobalamin*
L. Ouyang, L. Randaccio, P. Rulis, E.Z. Kurmaev, A. Moewes, and W.Y. Ching, *J. Molecular Structure: (theor. Chem.)* 622, 221-227 (2003).
212. *σ and π-band dispersion of graphite from polarized resonant inelastic X-ray scattering measurements*
A.V. Sokolov, E.Z. Kurmaev, J. MacNaughton, A. Moewes, N.A. Skorikov, and L.D. Finkelstein, *JETP letters* 77, 108-111 (2003).
213. *Interlayer conduction band states in graphite-sulfur composites*
E.Z. Kurmaev, A.V. Galakhov, A. Moewes, S. Moehlecke, and Y. Kopelevich, *Phys. Rev. B* 66, 193402-1-3 (2002).
214. *Electronic structure of niobium oxides*
E.Z. Kurmaev, A. Moewes, O.G. Bureev, I.A. Nekrasov, V.M. Cherkashenko, M.A. Korotin, and D.L. Ederer, *J. Alloys Comp.* 347, 213-218 (2002).
215. *Angular rotation of magnetic hysteresis of ion-irradiated ferromagnetic thin films*

- G.S. Chang, S.H. Kim, S.W. Shin, A. Moewes, T.A. Callcott, K. Jeong, and C.N. Whang, *Appl. Phys. Lett.* 81, 3016-3018 (2002).
216. *Local electronic structure of doping atoms in $MA_2Ca_{(n-1)}Cu_nO_{(2n+3)}$ high-Tc superconductors with $[M-12(n-1)n]$ type structures*
E.Z. Kurmaev, A. Moewes, N.D. Zhigadlo, E. Takayama-Muromachi, I.A. Nekrasov, O.A. Bureev, G.T. Woods, T.A. Callcott, Y.M. Yarmoshenko, S.N. Shamin, D.L. Ederer, and M. Yanagihara, *Surface Review Letters* 9, 1345-1350 (2002).
217. *Polymer conversion into amorphous ceramics by ion irradiation*
E.Z. Kurmaev, A. Moewes, J.-C. Pivin, M. Bach, K. Endo, T. Ida, S. Shimada, M. Neumann, S.N. Shamin, D.L. Ederer, and M. Iwami, *Journal of Materials Science* 37, 3789-3793 (2002).
218. *Effect of Co-doping on the electronic structure of $MgCNi_3$*
I.R. Shein, A.L. Ivanovskii, E.Z. Kurmaev, A. Moewes, S. Chiuzbăian, L.D. Finkelstein, M. Neumann, Z.A. Ren, G.C. Che, *Phys. Rev. B* 66, 024520-1-5 (2002).
219. *Probing oxygen and nitrogen bonding sites in chitosan by X-ray emission*
E.Z. Kurmaev, S. Shin, M. Watanabe, R. Eguchi, Y. Ishiwata, T. Takeuchi, A. Moewes, D.L. Ederer, Y. Gao, M. Iwami, and M. Yanagihara, *J. Elec. Spec. Rel. Phen.* 125, 133-138 (2002).
220. *Electronic structure of the molecule-based magnet $Mn[N(CN)_2]_2$ from theory and experiment*
M.R. Pederson, A.Y. Liu, T. Baruah, E.Z. Kurmaev, A. Moewes, S. Chiuzbăian, M. Neumann, C.R. Kmetz, K.L. Stevenson, and D.L. Ederer, *Phys. Rev. B* 66, 014446-1-8 (2002).
221. *Electronic structure of alkali metal-doped M_8Si_{46} ($M=Na, K$) clathrates*
A. Moewes, E.Z. Kurmaev, J.S. Tse, M. Geshi, M.J. Ferguson, V.A. Trofimova, and Y.M. Yarmoshenko, *Phys. Rev. B* 65, 1531061-1531063 (2002).
222. *Valence band spectra of BEDT-TTF and TTF-based magnetic charge-transfer salts*
E.Z. Kurmaev, A. Moewes, S. Chiuzbăian, L.D. Finkelstein, M. Neumann, S.S. Turner, and P. Day, *Phys. Rev. B* 65, 235106-235111 (2002).
223. *Soft X-ray fluorescence measurements in materials science*
E.Z. Kurmaev, A. Moewes and D.L. Ederer, *X-ray Spectrometry* 31, 219-224 (2002).
224. *Characterization of CN_x -films by X-ray Fluorescence Measurements*
E.Z. Kurmaev, R.P. Winarski, A. Moewes, S.N. Shamin, D.L. Ederer, J.Y. Feng and S.S. Turner, *Thin Solid Films* 402, 60-64 (2002).
225. *The electronic structure of TPD films grown by different methods*
E.Z. Kurmaev, K. Endo, T. Ida, S.Y. Kim, G.S. Chang, A. Moewes, N.Y. Kim, C.N. Whang, and D.L. Ederer, *Organic Electronics* 3, 15-21 (2002).
226. *Electronic structure of MgB_2 : X-ray emission and absorption studies*
E.Z. Kurmaev, I.I. Lyakhovskaya, J. Kortus, A. Moewes, N. Miyata, M. Demeter, M. Neumann, M. Yanagihara, M. Watanabe, T. Muranaka, and J. Akimitsu, *Phys. Rev. B* 65, 134509-134512 (2002).
227. *Electronic structure of charge transfer salts*
E. Z. Kurmaev, A. Moewes, U. Schwingenschlögl, R. Claessen, M. I. Katsnelson, H. Kobayashi, S. Kagoshima, Y. Misaki, D.L. Ederer, K. Endo, and M. Yanagihara, *Phys. Rev. B* 64, 233107-1-233107-4 (2001).
228. *Multi-Atom Resonances and Soft X-ray Emission*

- A. Moewes and E.Z. Kurmaev, Nucl. Instr. Meth. A, 467, 1529-1532 (2001).
229. *X-ray transitions for studying the electronic structure of 5d metals*
E.Z. Kurmaev, A. Moewes, Z.V. Pchelkina, I.A. Nekrasov, A.A. Rempel, and D.L. Ederer, Phys Rev. B 64, 73108-73109 (2001).
230. *The electronic structure of Ion Beam Mixed ferromagnetic multilayered films*
G.S. Chang, S.H. Kim, K.H. Chae, E.Z. Kurmaev, V. Galakhov, A. Moewes, Y.P. Lee, K. Jeong, C.N. Whang, J. Electr. Spectr. Relat. Phenom. 114, 807-811 (2001).
231. *Electronic structure of graphite fluorides*
E.Z. Kurmaev, A. Moewes, D.L. Ederer, H. Ishii, K. Seki, M. Yanagihara, F. Okino, and H. Touhara, Physics Letters A 288, 340-344 (2001).
232. *Local and electronic structure of carbon and nitrogen atoms in oxycarbonitrate superconductors*
E.Z. Kurmaev, A. Moewes, N.D. Zhigadlo, E. Takayama-Muromachi, Y.M. Yarmoshenko, S.N. Shamin, and D.L. Ederer, Physica C 363, 55-59 (2001).
233. *Electronic structure of thiophenes and phtalocyanines*
E.Z. Kurmaev, S.N. Shamin, V.R. Galakhov, A. Moewes, T. Otsuka, S. Koizume, K. Endo, H.E. Katz, M. Bach, M. Neumann, D.L. Ederer, and M. Iwami, Phys. Rev. B 64, 45211-45217 (2001).
234. *X-ray emission TaN_3 and Nb L_3 spectra of NbC-TaC Solid Solutions*
V.M. Cherkashenko, E.Z. Kurmaev, S.Z. Nazarova, A.L. Ivanovskii, A.I. Gusev, A. Moewes, D.L. Ederer, Russ. J. Inorganic Chem. 46, 892-897 (2001).
235. *Spectroscopic observation of polaron-lattice band structure in conducting polymers: X-ray fluorescence measurements of polyaniline*
E.Z. Kurmaev, A. Moewes, M. Magnuson, J.-H. Guo, S.M. Butorin, J. Nordgren, D.L. Ederer, and M. Iwami, J. Phys. Cond.: Matt. 13, 3907-3912 (2001).
236. *Theoretical X-ray photoelectron and emission spectra of Si- and S-containing polymers by density-functional theory calculations using model molecules*
K. Endo, S. Shimada, T. Ida, M. Suhara, E.Z. Kurmaev, A. Moewes, and D.P. Chong, Journal of Molecular Structure 561, 17-28 (2001).
237. *No multiatom resonances observed in X-ray fluorescence*
A. Moewes, E.Z. Kurmaev, and D.L. Ederer, and T.A. Callcott, Phys. Rev. B 62, 15427-15430 (2000).
238. *Soft X-ray fluorescence and photoluminescence of Si nanocrystals embedded in SiO_2*
G.S. Chang, J.H. Son, K.H. Chae, C.N. Whang, E.Z. Kurmaev, S.N. Shamin, V.R. Galakhov, A. Moewes, D.L. Ederer, Appl. Phys. A 72, 303-306 (2001).
239. *X-ray fluorescence measurements of advanced organic materials*
E.Z. Kurmaev, A. Moewes, K. Endo, and D.L. Ederer, J. Electr. Spectr. Relat. Phenom. 114-116, 889-894 (2001).
240. *Diffusion of TiN into aluminum films measured by soft X-ray spectroscopy and Rutherford backscattering*
T.M. Schuler, D.L. Ederer, N. Rudzycki, G. Glass, W.A. Hollerman, A. Moewes, M. Kuhn, and T.A. Callcott, J. Vac. Sci. Technol. A 19, 2259-2266 (2001).
241. *Soft X-ray fluorescence study of the quasi-one-dimensional Heisenberg antiferromagnet Tetrphenylverdazyl*

- E.Z. Kurmaev, V.R. Galakhov, S. Shimada, T. Otsuka, K. Endo, S. Stadler, D.L. Ederer, A. Moewes, H. Schuermann, M. Neumann, S. Tomiyoshi, N. Azuma, and M. Iwami, *Phys. Rev. B* 62, 15660-15665 (2000).
242. *Resonant mixing of widely separated intermediate states and charge transfer at the 4d-4f resonance of La compounds*
A. Moewes, A.V. Postnikov, E.Z. Kurmaev, M.M. Grush, and D.L. Ederer, *Europhysics Letters* 49, No. 5, 665-671 (2000).
243. *Interaction of Cu 3d and O 2p states in Mg_{1-x}Cu_xO-solid solutions with the NaCl-structure: X-ray photoelectron and X-ray emission study*
V.R. Galakhov, L.D. Finkelstein, E.Z. Kurmaev, D.A. Zatsepin, A.A. Samokhvalov, S.V. Naumov, G.K. Tatarinova, M. Demeter, S. Bartkowski, M. Neumann, and A. Moewes, *Phys. Rev. B* 62, 4922-4926 (2000).
244. *Electronic structure of molecular superconductors containing paramagnetic 3d ions*
E.Z. Kurmaev, V.R. Galakhov, A. Moewes, S. Shimada, K. Endo, S.S. Turner, P. Day, R.N. Lyubovskaya, D.L. Ederer, and M. Iwami, *Phys. Rev. B* 62, 11380-11383 (2000).
245. *Soft X-ray Scattering Dominates Emission near the Giant Resonance of the Rare Earth Compounds*
A. Moewes, S. Stadler, R.P. Winarski, D.L. Ederer, and T.A. Callcott, *J. Elec. Spec. Rel. Phen.* 110-111, 189-196, (2000).
246. *Chemical reactions in polymers induced by ion beam mixing: Fluorescence X-ray measurements*
E.Z. Kurmaev, R.P. Winarski, J.-C. Pivin, D.L. Ederer, S.N. Shamin, A. Moewes, K. Endo, T. Ida, G.S. Chang, and C.N. Wang, *J. Elec. Spec. Rel. Phen.* 110-111, 87-103 (2000).
247. *The Effects of Boron Impurities on the Atomic Bonding and Electronic Structure of Ni₃Al*
R.P. Winarski, T. Eskildsen, S. Stadler, J. van Ek, D.L. Ederer, E.Z. Kurmaev, M.M. Grush and T.A. Callcott, *J. Elec. Spec. Rel. Phen.* 110-111, 69-74 (2000).
248. *Electronic Structures of the Tungsten Borides WB, W₂B, and W₂B₅*
S. Stadler, R.P. Winarski, J.M. McLaren, D.L. Ederer, J. van Ek, A. Moewes, M.M. Grush, T.A. Callcott, and R.C.C. Perera, *J. Elec. Spec. Rel. Phen.* 110-111, 75-86 (2000).
249. *Electronic structure of Cu_{1-x}Ni_xRh₂S₄ and CuRh₂Se₄: band structure calculations, X-ray photoemission and fluorescence measurements*
G.L.W. Hart, W.E. Pickett, E.Z. Kurmaev, D. Hartmann, M. Neumann, A. Moewes, D.L. Ederer, R. Endo, K. Tanigushi, and S. Nagata, *Phys. Rev. B* 61, 4230-4237 (2000).
250. *Resonant Raman Scattering in Nd₂O₃ and the Electronic Structure of Sr₂RuO₄ Studied by Synchrotron Radiation Excitation*
D.L. Ederer, A. Moewes, E.Z. Kurmaev, T.A. Callcott, M.M. Grush, S. Stadler, R.P. Winarski, R.C.C. Perera, and L.J. Terminello, *J. Phys. Chem. Solids* 61, 435-444 (2000).
251. *Ion-implantation effects in Al₂O₃: X-ray fluorescence measurements*
E.Z. Kurmaev, A. Moewes, V.R. Galakhov, D.L. Ederer and T. Kobayashi, *Nucl. Instr. Meth. B* 168, 395-398 (2000).

252. *Combined study for KNbO₃ and KTaO₃ by different techniques of photoelectron and X-ray emission spectroscopy*
A.V. Postnikov, B. Schneider, M. Neumann, D. Hartmann, H. Hesse, A. Moewes, E.Z. Kurmaev, and M. Matteucci, J. Phys. Chem. Sol. 61, 265-269 (2000).
253. *Electronic properties of Ion-Beam Mixed Co/Pt multilayered films*
G.S. Chang, S.H. Kim, J.H. Son, S.W. Shin, K.H. Chae, J. Lee, K. Jeong, C.N. Whang, E.Z. Kurmaev, A. Moewes, and Y.P. Lee, J. Kor. Phys. Soc. 37, 438-442 (2000).
254. *Electronic Structure of KNbO₃: Nb M_{4,5} X-ray Fluorescence Measurements*
A. Moewes, A.V. Postnikov, B. Schneider, E.Z. Kurmaev, M. Matteucci, V.M. Cherhashenko, D. Hartmann, H. Hesse, and M. Neumann, Phys. Rev. B 60, 4422-4425 (1999).
255. *Band Approach to the excitation energy dependence of soft X-ray fluorescence of TiO₂*
L.D. Finkelstein, E.Z. Kurmaev, M.A. Korotin, A. Moewes, B. Schneider, S.M. Butorin, J-H. Guo, D. Hartmann, M. Neumann, and D.L. Ederer, Phys. Rev. B 60, 2212-2217 (1999).
256. *Decay mechanisms of the 4d core hole through the 4d-4f resonance in Dysprosium*
A. Moewes, M.M. Grush, T.A. Callcott, and D.L. Ederer, Phys. Rev. B 60, 15728-15731 (1999).
257. *X-ray fluorescence study of organic-inorganic polymer conversion into ceramics induced by ion irradiation*
E.Z. Kurmaev, A. Moewes, M. Krietemeyer, K. Endo, T. Ida, S. Shimada, R.P. Winarski, M. Neumann, S.N. Shamin, and D.L. Ederer, Phys. Rev. B 60, 15100-15106 (1999).
258. *Probing electron correlation, charge-transfer and Coster-Kronig transitions at the 3d and 4d thresholds of Nd by resonant inelastic scattering*
A. Moewes, D.L. Ederer, M.M. Grush and T.A. Callcott, Phys. Rev. B 59, 5452-5456 (1999).
259. *Resonant inelastic scattering at the 3d and 4d thresholds of LaAlO₃*
A. Moewes, American Institute of Physics proceedings 506, 18th Conf. On X-ray and Inner-shell Processes, Chicago (1999), publ. by AIP, Melville, New York, page 304-311 (2000).
260. *Mechanism for interfacial adhesion strength of an ion beam mixed Cu/polyimide with a thin buffer layer*
G.S. Chang, K.H. Chae, C.N. Whang, E.Z. Kurmaev, D.A. Zatsepin, R.P. Winarski, D.L. Ederer, A. Moewes, and Y.P. Lee, Appl. Phys. Lett. 74, 522-524 (1999).
261. *Study of 4f inner shell excitations in Gd and Tb using resonant inelastic soft X-ray scattering*
A. Moewes, R.P. Winarski, D.L. Ederer, M.M. Grush and T.A. Callcott, J. Elec. Spec. Rel. Phen. 101-103, 617-622 (1999).
262. *X-ray Emission and Photoelectron Spectra of Pr_{0.5}Sr_{0.5}MnO₃*
E.Z. Kurmaev, M.A. Korotin, V.R. Galakhov, L.D. Finkelstein, E.I. Zabolotsky, M.N. Efremova, N.I. Lobashevskaya, S. Stadler, D.L. Ederer, A. Moewes, S. Bartkowski, M. Neumann, J. Matsuno, A. Fujimori, and J. Mitchell, Phys. Rev. B 59, 12799-12806 (1999).

263. *X-ray Fluorescence measurements of organic superconductors k -(ET)₂Cu[N(CN)₂]Br and k -(ET)₂Cu(NCS)₂*
E.Z. Kurmaev, S.N. Shamin, Y.-N. Xu, W.Y. Ching, A. Moewes, D.L. Ederer, E.B. Yagubskii, and N.D. Kushch, Phys. Rev. B 60, 13169-13174 (1999).
264. *Examples of soft X-ray emission and inelastic scattering excited by synchrotron radiation*
D.L. Ederer, E.Z. Kurmaev, S. Shin, A. Moewes, M. Grush, T.A. Callcott, R.C.C. Perera, J. van Ek, S. Stadler, R. Winarski, L.J. Terminello, and L. Zhou, J. Alloys Compounds 286, 47-55 (1999).
265. *Electronic Structure of Superconducting Inorganic Polymer (SN)_x*
E.Z. Kurmaev, A.I. Poteryaev, V.I. Anisimov, I. Karla, A. Moewes, B. Schneider, M. Neumann, D.L. Ederer, and R.N. Lyubovskaya, Physica C: Superconductivity 321, 191-198 (1999).
266. *Radiation-Induced Degradation of Polyethersulphone Films Studied by Fluorescent X-ray Emission Spectroscopy*
E.Z. Kurmaev, R.P. Winarski, K. Endo, T. Ida, A. Moewes, D.L. Ederer, J.-C. Pivin, S.N. Shamin, V.A. Trofimova, and Y.M. Yarmoshenko, Nucl. Instr. Meth. B 155, 431-439 (1999).
267. *X-ray emission and photoelectron spectra of $Pr_{0.5}Sr_{0.5}MnO_3$*
E.Z. Kurmaev, M.A. Korotin, V.R. Galakhov, L.D. Finkelstein, E.I. Zabolotzky, N.N. Efremova, S. Stadler, D.L. Ederer, A. Moewes, S. Bartkowski, M. Neumann, J. Matsuno, T. Mizokawa, A. Fujimori, and J. Mitchell, J. Electr. Spectr. Relat. Phenom. 101-103, 793-798 (1999).
268. *X-ray emission study of ion beam mixed Cu/Al films on polyimide*
E.Z. Kurmaev, D.A. Zatsepin, R.P. Winarski, S. Stadler, D.L. Ederer, A. Moewes, V.V. Fedorenko, S.N. Shamin, V.R. Galakhov, G.S. Chang, and C.N. Wang, J. Vac. Sci. Technol. 17, 593-596 (1999).
269. *Soft X-ray fluorescence measurements of polyimide films*
R.P. Winarski, D.L. Ederer, E.Z. Kurmaev, S.N. Shamin, K. Endo, T. Ida, A. Moewes, G.S. Chang, S.Y. Kim, and C.N. Wang, Thin Solid Films 357, 91-97 (1999).
270. *Soft X-ray Fluorescence Measurements of Irradiated Polyimide and Polycarbosilane Films*
E.Z. Kurmaev, R.P. Winarski, D.L. Ederer, J.-C. Pivin, S.N. Shamin, A. Moewes, G.S. Chang, and C.N. Wang, J. Electr. Spectr. Relat. Phenom. 101-103, 565 (1999).
271. *Elastic and inelastic scattering of 4d inner shell electrons in $(Y,Gd)_2O_3$ studied by synchrotron radiation excitation*
A. Moewes, T. Eskildsen, D.L. Ederer, J. Wang, J. McGuire, and T.A. Callcott, Phys. Rev. B, Rap. Comm 57, R8059-R8062 (1998).
272. *Core-hole induced charge-transfer in lanthanum and Coster-Kronig enhanced fluorescence at the 3d threshold of $LaAlO_3$ studied by resonant inelastic scattering*
A. Moewes, S. Stadler, R.P. Winarski, M.M. Grush, T.A. Calcott, and D.L. Ederer, Phys. Rev. B 58, Rap. Comm. R15951-R15954 (1998).
273. *X-ray Emission spectra and electronic structure of $CuIr_2S_4$ and $CuIr_2Se_4$*
E.Z. Kurmaev, V.R. Galakhov, D.A. Zatsepin, V.A. Trofimova, S. Stadler, D.L. Ederer, A. Moewes, M.M. Grush, T.A. Callcott, J. Matsuno, A. Fujimori, and S. Nagata, Solid State Commun. 108, 235-239, (1998).

274. *Soft X-ray emission spectroscopy of early-transition-metal compounds*
S. Shin, M. Fujisawa, H. Ishii, Y. Harada, M. Watanabe, M.M. Grush, T.A. Calcott
R.C.C. Perera, E.Z. Kurmaev, A. Moewes, R. Winarski, S. Stadler, and D.L. Ederer, J.
Elec. Spec. Rel. Phen. 92, 197-205 (1998).
275. *Soft X-ray fluorescence measurements of Irradiated polymer films*
R.P. Winarski, D.L. Ederer, J.C. Pivin, E.Z. Kurmaev, S.N. Shamin, A. Moewes, G.S.
Chang, C.N. Whang, K. Endo, and T. Ida, Nucl. Instr. Meth., B 145, 401-408 (1998).
276. *Soft X-ray Emission Excited Resonantly and Nonresonantly by Synchrotron
Radiation*
D.L. Ederer, J.A. Carlisle, J. Jimenez, J.J. Jia, Ling Zhou, T.A. Callcott, R.C.C. Perera,
A. Moewes, L.J. Terminello, E. Shirley, A. Asfaw, J. van Ek, E. Morikawa and F.J.
Himpsel, 17th Conf. On X-ray Inner-shell Processes, AIP conf. proceedings 389, publ.
by AIP, Woodbury, New York (1997), pp. 749-770.
277. *Raman scattering at the L-edge of transition metals*
J. Jimenez-Mier, D.L. Ederer, U. Diebold, A. Moewes, T.A. Callcott, L. Zhou, J.J. Jia,
J.A. Carlisle, E. Hudson, L.J. Terminello, A. Asfaw, F.J. Himpsel, and R.C.C. Perera,
Raman Emission by X-ray scattering, D.L. Ederer and J.H. McGuire (editors), World
Scientific Publishing Co., 71 (1996) pp. 71-80.
278. *Development of a Hard X-ray Microprobe at CAMD*
N. Moelders, P. Schilling, A. Moewes, Mark C. Petri, Leonard Leibowitz, and Herbert
O. Moser, X-ray Microscopy and Spectromicroscopy, edited by J. Thieme et al.,
Springer III-105-110 (1996).
279. *New Optics for the Hard X-ray Microprobe at CAMD*
A. Moewes, N. Moelders and P. Schilling, X-ray Microscopy and Spectromicroscopy,
edited by J. Thieme et al., Springer, IV-111-116 (1996).
280. *Soft X-ray stimulated luminescence microscopy and spectroscopy on $Gd_2O_2S : Pr^{3+}$
and $(Y,Gd)_2O_3 : Eu^{3+}$ ceramics*
A. Moewes, C. Kunz and J. Voss, Nuclear Instr. & Methods A 373, 299-304 (1996).
281. *Soft X-ray Spectromicroscopy*
J. Voss, M. Fornefett, C. Kunz, A. Moewes, M. Pretorius, A. Ranck, M. Schroeder and
V. Wedemeier, J. Elec. Spec. Rel. Phen. 80, 329-335 (1996).
282. *Optical luminescence spectroscopy with the scanning soft X-ray microscope at
HASYLAB/DESY*
H. Zhang, A. Föhlich, C. Kunz, A. Moewes, M. Pretorius, A. Ranck, H. Sievers, I.
Storjohann, V. Wedemeier and J. Voss, Rev. Sci. Instr. 66 (6), 3513-3519 (1995).
283. *Scanning Luminescence Microscopy at HASYLAB/DESY*
A. Moewes, H. Zhang, C. Kunz, M. Pretorius, H. Sievers, I. Storjohann and J. Voss,
X-ray microscopy IV, V.V. Aristov, A.I. Erko (Editors), Bogorodskii echatnik
(Publishing company), Chernogolovka, Russia, 345-354 (1993).
284. *Soft X-ray Microscopy at HASYLAB/DESY*
J. Voss, I. Storjohann, C. Kunz, A. Moewes, M. Pretorius, A. Ranck, H. Sievers, V.
Wedemeier, M. Wochnowski and H. Zhang, X-ray Microscopy IV, V.V. Aristov, A.I.
Erko (Editors), Bogorodskii echatnik (Publishing company), Chernogolovka, Russia,
103-119 (1993).
285. *Grazing Incidence Optics for Soft X-ray Microscopy*

- J. Voss, C. Kunz, A. Moewes and I. Storjohann, *Rev. Sci. Instrum.* 63 (1), 569-573 (1992).
286. *Microspectroscopy and spectromicroscopy at the Hamburg focusing mirror microscope*
I. Storjohann, C. Kunz, A. Moewes and J. Voss, *X-ray Optics and Microanalysis 1992*, P.B. Kenway, P.J. Duke, G.W. Lorimer, T. Mulvey, I.W. Drummond, G. Love, A.G. Michette and M. Stedman (Editor), Institute of Physics Conference Series No. 130, Bristol, 587 (1993); UMIST, Manchester, UK, 31st Aug. - 4th Sept. 1992.
287. *A Scanning Soft X-ray Microscope with an Ellipsoidal Focusing Mirror*
J. Voss, H. Dadras, C. Kunz, A. Moewes, G. Roy, H. Sievers, I. Storjohann, H. Wongel, *Journal of X-ray Science and Technology* 3, 85-108 (1992).
288. *Microprobe Photoemission Spectroscopy with the Hamburg Focusing Mirror Microscope*
I. Storjohann, C. Kunz, A. Moewes, J. Voss and M. Wulf, *Proceedings of the International Conference, X-ray Microscopy III*, Springer Series in Optical Sciences Vol. 67, 238-240 (1992).
289. *Technical Realization and First Images of the Hamburg Focusing Mirror Scanning Microscope*
A. Moewes, H. Dadras, C. Kunz, G. Roy, H. Sievers, I. Storjohann, J. Voss, H. Wongel, *Proceedings of the International Conference, X-ray Microscopy III*, Springer Series in Optical Sciences Vol. 67, 231-234 (1992).