

Dieter Vollhardt: Publication List

3. January 2012

- 177) *Magnetic properties of interacting, disordered electron systems in $d=2$ dimensions*
P. B. Chakraborty, K. Byczuk, and D. Vollhardt
Phys. Rev. B **84**, 155123 (2011)
- 176) *Dynamical Mean-Field Approach for Strongly Correlated Materials*
D. Vollhardt
in *The LDA+DMFT approach to strongly correlated materials*, Lecture Notes of the Autumn School “Hands-on LDA+DMFT”, eds. E. Pavarini, E. Koch, D. Vollhardt, and A. Lichtenstein (Forschungszentrum Jülich, Jülich, 2011), Chapter 1.
- 175) *Interacting lattice electrons with disorder in two dimensions: Numerical evidence for a metal-insulator transition with a universal critical conductivity*
P. B. Chakraborty, K. Byczuk, and D. Vollhardt
Phys. Rev. B **84**, 035121 (2011)
- 174) *Electronic correlations at the α - γ structural phase transition in paramagnetic iron*
I. Leonov, A. I. Poteryaev, V. I. Anisimov, and D. Vollhardt
Phys. Rev. Lett. **106**, 106405 (2011)
- 173) *Route to ferromagnetism in organic polymers*
Z. Gulácsi, A. Kampf, and D. Vollhardt
Phys. Rev. Lett. **105**, 266403 (2010)
- 172) *Dynamical Mean-Field Theory of Electronic Correlations in Models and Materials*
D. Vollhardt
in *Lectures on the Physics of Strongly Correlated Systems XIV*, eds. A. Avella and F. Mancini, AIP Conference Proceedings **1297** (American Institute of Physics, Melville, New York, 2010), p. 339
- 171) *Elektronische Korrelationen im Festkörper*
D. Vollhardt
Physik Journal, Aug./Sept. 2010, p. 71

- 170) *Material-Specific Investigations of Correlated Electron Systems*
 A. Kampf, M. Kollar, J. Kuneš, M. Sentef, and D. Vollhardt
 in *High Performance Computing in Science and Engineering, Garching/Munich 2009*, eds. S. Wagner et al. (Springer, Heidelberg, 2010), p. 599.
- 169) *Anderson localization vs. Mott-Hubbard metal-insulator transition in disordered, interacting lattice fermion systems*
 K. Byczuk, W. Hofstetter, and D. Vollhardt
 in *50 Years of Anderson Localization*, ed. E. Abrahams (World Scientific, Singapore, 2010), p. 473; reprinted in *Int. J. Mod. Phys. B* **24**, 1727 (2010)
- 168) *Self-Consistent Theory of Anderson Localization: General formalism and applications*
 P. Wölfle and D. Vollhardt
 in *50 Years of Anderson Localization*, ed. E. Abrahams (World Scientific, Singapore, 2010), p. 43; reprinted in *Int. J. Mod. Phys. B* **24**, 1526 (2010)
- 167) *Correlated electrons in the presence of disorder*
 K. Byczuk, W. Hofstetter, U. Yu, and D. Vollhardt
Eur. Phys. J. Special Topics **180**, 135 (2010)
- 166) *Dynamical mean-field approach to materials with strong electronic correlations*
 J. Kuneš, I. Leonov, M. Kollar, K. Byczuk, V. I. Anisimov, and D. Vollhardt
Eur. Phys. J. Special Topics **180**, 5 (2010)
- 165) *Distribution of the local density of states as a criterion for Anderson localization: Numerically exact results for various lattices in dimensions $D=2$ and 3*
 G. Schubert, J. Schleede, K. Byczuk, H. Fehske, and D. Vollhardt
Phys. Rev. B **81**, 155106 (2010)
- 164) *Computation of correlation-induced atomic displacements and structural transformations in paramagnetic $KCuF_3$ and $LaMnO_3$*
 I. Leonov, Dm. Korotin, N. Binggeli, V. I. Anisimov, and D. Vollhardt
Phys. Rev. B **81**, 075109 (2010)
- 163) *Classification of the electronic correlation strength in the Fe-pnictides: The case of the parent compound $BaFe_2As_2$*
 S.L. Skornyakov, A.V. Efremov, N.A. Skorikov, M.A. Korotin, Yu.A. Izyumov, V.I. Anisimov, A.V. Kozhevnikov, and D. Vollhardt
Phys. Rev. B **80**, 092501 (2009)

- 162) *Mixtures of correlated bosons and fermions: Dynamical mean-field theory for normal and condensed phases*
K. Byczuk and D. Vollhardt
Ann. Phys. (Berlin) **18**, 622 (2009)
- 161) *Competition between Anderson localization and antiferromagnetism in correlated lattice fermion systems with disorder*
K. Byczuk, W. Hofstetter, and D. Vollhardt
Phys. Rev. Lett. **102**, 146403 (2009)
- 160) *Ferromagnetism and metal-insulator transitions in correlated electron systems with alloy disorder*
K. Byczuk, U. Yu, W. Hofstetter, and D. Vollhardt
Acta Physica Polonica A **115**, 7 (2009)
- 159) *Exact many-electron ground states on diamond and triangle Hubbard chains*
Z. Gulacsi, A. Kampf, and D. Vollhardt
Prog. Theor. Phys. Suppl. **176**, 1 (2008)
- 158) *Influence of band and orbital degeneracies on ferromagnetism in the periodic Anderson model*
U. Yu, K. Byczuk, and D. Vollhardt
Phys. Rev. B **78**, 205118 (2008)
- 157) *Structural relaxation due to electronic correlations in the paramagnetic insulator $KCuF_3$*
I. Leonov, N. Binggeli, Dm. Korotin, V. I. Anisimov, N. Stojić, and D. Vollhardt
Phys. Rev. Lett. **101**, 096405 (2008)
- 156) *Ferromagnetism and Kondo Insulator Behavior in the Disordered Periodic Hubbard Model*
U. Yu, K. Byczuk, and D. Vollhardt
Phys. Rev. Lett. **100**, 246401 (2008)
- 155) *Correlated bosons on a lattice: Dynamical mean-field theory for Bose-Einstein condensed and normal phases*
K. Byczuk and D. Vollhardt
Phys. Rev. B **77**, 235106 (2008)

- 154) *Reply to “Comment on ‘Evidence for strong electronic correlations in the spectra of Sr_2RuO_4 ’ ”*
Z. V. Pchelkina, I. A. Nekrasov, Th. Pruschke, S. Suga, V. I. Anisimov, and D. Vollhardt
Phys. Rev. B **77**, 046102 (2008)
- 153) *Eine Sternstunde der modernen Physik: Vor 50 Jahren lösten Bardeen, Cooper und Schrieffer das Rätsel der Supraleitung*
D. Vollhardt und P. Wölfle
Physik Journal **7**, Nr. 1 (Januar) 43 (2008)
- 152) *NiO: Correlated Bandstructure of a Charge-Transfer Insulator*
J. Kunes, V. I. Anisimov, S. L. Skornyakov, A. V. Lukoyanov, and D. Vollhardt
Phys. Rev. Lett. **99**, 156404 (2007)
- 151) *Exact many-electron ground states on the diamond Hubbard chain*
Z. Gulacsi, A. Kampf, and D. Vollhardt
Phys. Rev. Lett. **99**, 026404 (2007)
- 150) *Surprises in correlated electron physics*
K. Byczuk, W. Hofstetter, M. Kollar, and D. Vollhardt
Acta Physica Polonica A **111**, 549 (2007)
- 149) *Signatur korrelierter Elektronen*
D. Vollhardt
Phys. Unserer Zeit, **38**, No. 3 (Mai) 110 (2007)
- 148) *Local correlations and hole doping in NiO: A computational study*
J. Kunes, V. I. Anisimov, A. V. Lukoyanov, and D. Vollhardt
Phys. Rev. B **75**, 165115 (2007)
- 147) *Isosbestic points in the spectral function of correlated electrons*
M. Eckstein, M. Kollar, and D. Vollhardt
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- 146) *Phase separation in the particle-hole asymmetric Hubbard model*
M. Eckstein, M. Kollar, M. Potthoff, and D. Vollhardt
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- 145) *Kinks in the dispersion of strongly correlated electrons*
 K. Byczuk, M. Kollar, K. Held, Y.-F. Yang, I. A. Nekrasov, Th. Pruschke, D. Vollhardt
 Nature Phys. **3**, 168 (2007)
- 144) *Evidence for strong electronic correlations in the spectra of Sr_2RuO_4 .*
 Z. V. Pchelkina, I. A. Nekrasov, Th. Pruschke, A. Sekiyama, S. Suga,
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- 143) *LDA+DMFT computation of the electronic spectrum of NiO*
 X. Ren, I. Leonov, G. Keller, M. Kollar, I. Nekrasov, and D. Vollhardt
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- 142) *Realistic Investigations of correlated electron materials with LDA+DMFT*
 K. Held, I. A. Nekrasov, G. Keller, V. Eyert, N. Blümer, A. K. McMahan,
 R. T. Scalettar, T. Pruschke, V. I. Anisimov, and D. Vollhardt
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- 141) *Momentum-resolved spectral functions of $SrVO_3$ calculated by LDA+DMFT*
 I. A. Nekrasov, K. Held, G. Keller, D. E. Kondakov, Th. Pruschke, M. Kollar,
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- 140) *Realistic Modeling of Materials with Strongly Correlated Electrons*
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- 139) *Comparative study of correlation effects in $CaVO_3$ and $SrVO_3$*
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- 137) *Green functions for nearest- and next-nearest-neighbor hopping on the Bethe lattice*
M. Kollar, M. Eckstein, K. Byczuk, N. Blümer, P. van Dongen, M. H. Radke de Cuba, W. Metzner, D. Tanaskovic, V. Dobrosavljevic, G. Kotliar, and D. Vollhardt
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- 136) *Exact Ground States of the Periodic Anderson Model in $D=3$ Dimensions*
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- 135) *Hopping on the Bethe lattice: Exact results for densities of states and dynamical mean-field theory*
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- 134) *Mott-Hubbard and Anderson Transitions in Dynamical Mean-Field Theory*
K.Byczuk, W. Hofstetter, and D. Vollhardt
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- 133) *Two Aspects of the Mott-Hubbard Transition in Cr-doped V_2O_3*
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- 132) *Full orbital calculation scheme for materials with strongly correlated electrons*
V. I. Anisimov , D. E. Kondakov, A. V. Kozhevnikov, I. A. Nekrasov,
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- 125) *Mott-Hubbard metal-insulator transition at non-integer filling*
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- 124) *Exact Insulating and Conducting Ground States of a Periodic Anderson Model in Three Dimensions*
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- 123) *LDA+DMFT Investigations of Transition Metal Oxides and f-Electron Materials*
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