

Alexander V. Balatsky

More than 180 papers in referred journals. Citations > 3800 citations. **H** factor = 30.

Nanoscience Related Publications

(Selected journal publications)

- Matthias J. Graf, James Ahrens, John Patchett, Hari Dahal, Alexander V. Balatsky, Dave Modl, Laura Monroe Nathan Brown, Elshan Akhadov (SNL), "To See is to Know: VISUALIZATION" SciDAC Review, Number 10, Winter 2008, Pages 32-37. Overview of issue -- <http://www.scidacreview.org/0804/index.html>; Article - <http://www.scidacreview.org/0804/pdf/cint.pdf>

Cover page of the issue is from this article:



- I. Grigorenko, K. Fujita, J. Lee, W. Wang, Jian Xin Zhu, J. C. Davis, H. Eisaki, S. Uchida, and Alexander V. Balatsky, "Bogoliubov angle and visualization of particle-hole mixture in superconductors", *J. Phys. Chem of Solids*, **69**, 3000 (2008).
- D. Talbayev, S. A. Trugman, A. V. Balatsky, T. Kimura, A. J. Taylor, and R. D. Averitt, "Detection of Coherent Magnons via Ultrafast Pump-Probe Reflectance Spectroscopy in Multiferroic $Ba_{0.6}Sr_{1.4}Zn_2Fe_{12}O_{22}$ ", *Phys. Rev. Lett.* **101**, 097603 (2008)
- K. Fujita, Ilya Grigorenko, J. Lee, W. Wang, Jian Xin Zhu, J. C. Davis, H. Eisaki, S. Uchida, and Alexander V. Balatsky, "Bogoliubov angle and visualization of particle-hole mixture in superconductors", *Phys. Rev. B* **78**, 054510 (2008).
- T. O. Wehling, A. V. Balatsky, A. M. Tsvelik, M. I. Katsnelson, and A. I. Lichtenstein, "Midgap states in corrugated graphene: Ab initio calculations and effective field theory", *Eur. Phys. Lett.* v. 84, 17003, (2008).
- Mielke, CH; Balatsky, AV, "Crossing a bridge into the unknown", *Nature Nanotechnology*; Mar 2008; v.3, no.3, p.129-130
- Qazilbash, MM; Brehm, M.; Byung-Gyu Chae; Ho, PC; Andreev, GO; Bong-jun Kim; Sun Jin Yun; Balatsky, AV; Maple, MB; Keilmann, F.; et. al., "Mott transition in VO_2 revealed by infrared spectroscopy and nano-imaging", *Science*; Dec. 2007; vol.318, p.1750-3

- Fransson, J; Zhu, JX; Balatsky, AV, "Vibrating superconducting island in a Josephson junction", *PHYSICAL REVIEW LETTERS*; AUG 8 2008; v.1, no.6, p.01067202
- Wehling, TO; Dahal, HP; Lichtenstein, AI; Balatsky, AV, "Local impurity effects in superconducting graphene", *PHYSICAL REVIEW B*; JUL 2008; v.78, no.3, p.035414
- Dahal, HP; Balatsky, AV; Zhu, JX, "Tuning impurity states in bilayer graphene", *Physical Review B* (Condensed Matter and Materials Physics); 15 March 2008; vol.77, no.11, p.115114-1-10
- Grigorenko, Ilya; Haas, Stephan; Balatsky, Alexander; Levi, AFJ, "Optimal control of electromagnetic field using metallic nanoclusters", *New Journal of Physics*; Apr 14 2008; v.10
- Grigorenko, Ilya; Zhu, Jian-Xin; Balatsky, Alexander, "Optimization of the design of superconducting inhomogeneous nanowires", *Journal of Physics: Condensed Matter*; 14 May 2008; vol.20, no.19
- Rosengren, A; Lundow, PH; Balatsky, AV, "Isotope effect on superconductivity in Josephson coupled stripes in underdoped cuprates", *Physical Review B* (Condensed Matter and Materials Physics); 1 April 2008; vol.77, no.13, p.134508-1-4
- Kilina, S; Tretiak, S; Yarotski, DA; Zhu, JX; Modine, N; Taylor, A; Balatsky, AV, "Electronic properties of DNA base molecules adsorbed on a metallic surface", *Journal of Physical Chemistry C*; 4 Oct. 2007; vol.111, no.39, p.14541-51
- J. Jinho Lee, K. Fujita, K. McElroy, J. A. Slezak, A. Wang, J.-X. Zhu, A. V. Balatsky, H. Eisaki, S. Uchida and J. C. Davis, "Visualizing the Influence of Nanoscale Electron- Lattice Interactions on High-T_c Superconductivity in Bi₂Sr₂CaCu₂O_{8+□}", *Nature*, v 442, p 546, (2006).
- Fransson, J; Balatsky, AV, "Surface imaging of inelastic Friedel oscillations", *Physical Review B (Condensed Matter and Materials Physics)*; 15 May 2007; vol.75, no.19, p.195337-1-5
- Fransson, J.; Balatsky, AV, "Exchange interaction and Fano resonances in diatomic molecular systems", *Physical Review B (Condensed Matter)*; 15 April 2007; vol.75, no.15, p.153309-1-5
- Zhu, Jian-Xin; Rasmussen, KO; Balatsky, AV; Bishop, AR, "Local electronic structure in the Peyrard-Bishop-Holstein model", *Journal of Physics Condensed Matter*; Apr 4 2007; v.19, no.13
- Wehling, TO; Balatsky, AV; Katsnelson, MI; Lichtenstein, AI; Scharnberg, K; Wiesendanger, R, "Local electronic signatures of impurity states in graphene", *PHYSICAL REVIEW B*; MAR 2007; v.75, no.12, p.125425
- J.-X. Zhu, K. McElroy, J. Lee, T. P. Devereaux, Q. Si, J. C. Davis, and A. V. Balatsky , "[Effects of Pairing Potential Scattering on Fourier-Transformed Inelastic Tunneling Spectra of High-T_c Cuprate Superconductors with Bosonic Modes](#)," *Phys. Rev. Lett.* 97, 177001 (2006)

- Y. N. Joglekar, A. V. Balatsky, and S. Das Sarma , “[Wigner supersolid of excitons in electron-hole bilayers](#)”, *Phys. Rev. B* 74, 233302 (2006)
- A. V. Balatsky and J.-X. Zhu , “[Local strong-coupling pairing in d-wave superconductors with inhomogeneous bosonic modes](#)”, *Phys. Rev. B* 74, 094517 (2006)
- J.-X. Zhu, Z. Nussinov, and A. V. Balatsky , “[Vibration-mode-induced Shapiro steps and back action in Josephson junctions](#),” *Phys. Rev. B* 73, 064513 (2006)
- Dahal, HP; Joglekar, YN; Bedell, KS; Balatsky, AV, “Absence of Wigner crystallization in graphene”, *PHYSICAL REVIEW B*; DEC 2006; v.74, no.23, p.233405
- Jian-Xin Zhu; McElroy, K.; Lee, J.; Devreux, TP; Qimiao Si; Davis, JC; Balatsky, AV, “Effects of pairing potential scattering on Fourier-transformed inelastic tunneling spectra of high-T{sub c} cuprate superconductors with bosonic modes”, *Physical Review Letters*; 27 Oct. 2006; vol.97, no.17, p.177001/1-4