

2010 SRC PUBLICATIONS

65 Items Published

1. **Y. An, A. Taylor, T. Durakiewicz, and G. Rodriguez**, "Ultrafast Dynamics of Photoexcited 5f Electrons in the Mott Insulator Uo₂," American Physical Society, APS March Meeting 2010, March 15-19, 2010, abstract #B38.014 **55** (Journal Article) (2010).
<http://meetings.aps.org/Meeting/MAR10/Event/117368>
2. **Y. Bai, X. Liu, P. Cook, N.L. Abbott and F.J. Himpsel**, "Characterization of Surfaces Presenting Covalently Immobilized Oligopeptides Using Near-Edge X-ray Absorption Fine Structure Spectroscopy," *Langmuir* **26** (9), 6464-6470 (2010).
3. **W.A. Barletta, J. Bisognano, J.N. Corlett, P. Emma, Z. Huang, K. Kim, R. Lindberg, J.B. Murphy, G.R. Neil, D.C. Nguyen, C. Pellegrini, R.A. Rimmer, F. Sannibale, G. Stupakov, R.P. Walker and A.A. Zholents**, "Free Electron Lasers: Present Status and Future Challenges," *Nucl. Instrum. Meth. A* **618**, 69-96 (2010).
4. **G. Bian, T. Miller, and T.-C. Chiang**, "Metastability of Bi Films Mediated by Surface Kinetics," American Physical Society, APS March Meeting 2010 (2010).
5. **J. Bisognano, M. Bissen, M. Green, K. Jacobs, C. Moore, E. Olson, M. Severson and R. Wehlitz**, "Aladdin: Transforming Science at SRC," *Nucl. Instrum. Meth. A*, In Press (2010).
6. **C. Booth, C. Capan, T. Durakiewicz, D. Hurt, A. Bianchi, and J.J.J.Z. Fisk**, "Electronic Structure and F-Orbital Occupancy in Yb Substituted CeCoIn₅," *Phys. Rev. B* **83** (23) (2010).
7. **R.A. Bosch, M.D. Medley and J.J. Bisognano**, "Beam Breakup in One-Turn and Two-Turn Energy Recovery Linacs," *Nucl. Instrum. Meth. A* **620** (2-3), 105-111 (2010).
8. **M. Brinkley, Y. Liu, N. Speer, T. Miller, and T.-C. Chiang**, "Utilizing Electronic Coherence to Probe a Deeply Embedded Quantum Well in Bimetallic Pb/Ag Films on Si(111)," American Physical Society, APS March Meeting 2010 (2010).
9. **C.K. Boyce, M. Abrecht, D. Zhou and P.U.P.A. Gilbert**, "X-ray Photoelectron Emission Spectromicroscopic Analysis of Arborescent Lycopodium Cell Wall Composition and Carboniferous Coal Ball Preservation," *Int. J. Coal Geol* **83** (2-3), 146-153 (2010).
10. **F. Cavallo and M.G. Lagally**, "Semiconductors Turn Soft: Inorganic Nanomembranes," *Soft Matter* **6** (3), 439-455 (2010).
11. **U. Chatterjee, M. Shi, D. Ai, J. Zhao, A. Kanigel, S. Rosenkranz, H. Raffy, Z.Z. Li, K. Kadowaki, D.G. Hinks, J. Xu, J.S. Wen, G. Gu, C.T. Lin, H. Claus, M.R. Norman, M. Randeria and J.C. Campuzano**, "Observation of a *d*-Wave Nodal Liquid in Highly Underdoped Bi₂Sr₂CaCu₂O_{8+δ}," *Nat. Phys.* **6** (99-103), 1-5 (2010).
12. **F. Chen, E.B. Ramayya, C. Euaruksakul, F.J. Himpsel, G.K. Celler, B. Ding, I. Knezevic and M.G. Lagally**, "Quantum Confinement, Surface Roughness, and the Conduction Band Structure of Ultrathin Silicon Membranes," *ACS Nano* **4** (4), 2466-2474 (2010).
13. **M. Corso, M.J. Verstraete, F. Schiller, M. Ormaza, L. Fernandez, T. Greber, M. Torrent, A. Rubio and J.E. Ortega**, "Rare-Earth Surface Alloying: A New Phase for GdAu₂," *Phys. Rev. Lett.* **105** (1), 016101 (2010).
14. **M. Corso, L. Fernandez, F. Schiller and J. Enrique Ortega**, "Au(111)-Based Nanotemplates by Gd Alloying," *ACS Nano* **4** (3), 1603-1611 (2010).

15. **D.G. de Oteyza, Y. Wakayama, X. Liu, W. Yang, P.L. Cook, F.J. Himpsel and J.E. Ortega**, "Effect of Fluorination on the Molecule-Substrate Interactions of Pentacene/Cu(1 0 0) Interfaces," *Chem. Phys. Lett.* **490** (1-3), 54-57 (2010).
16. **E.P. Domashevskaya, V.A. Terekhov, S.Y. Turishchev, D.A. Khoviv, V.A. Skryshevskii and I.V. Gavril'chenko**, "Features of Atomic and Electronic Structure of Oxides on Porous Silicon Surface According to XANES Data," *J. Surf. Investig. X-ray Synchro.* **4** (3), 384-389 (2010).
17. **T. Durakiewicz, P.S. Riseborough, C.D. Batista, Y. Yang, P.M. Oppeneer, J.J. Joyce, E.D. Bauer and K.S. Graham**, "Quest for Band Renormalization and Self-Energy in Correlated f-Electron Systems," *Acta. Phys. Pol. A* **117** (2), 264-267 (2010).
18. **C.M. Evans**, "2009 Synchrotron Radiation Center Users' Meeting," *Synchrotron Radiation News* **23**, 8 (2010).
19. **C.M. Evans and G.L. Findley**, "Energy of the Conduction Band in Near Critical Point Fluids," *Physics Research International* **2010** (Article ID 749293) (2010).
20. **C.M. Evans, Y. Lushtak and G.L. Findley**, "Energy of the Quasi-Free Electron in Dense Neon," *Chem. Phys. Lett.* **501** (4-6), 202-205 (2010).
21. **F.J. Garcia de Abajo, J. Cordon, M. Corso, F. Schiller and J.E. Ortega**, "Lateral Engineering of Surface States - Towards Surface-State Nanoelectronics," *Nanoscale* **2** (5), 717-721 (2010).
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23. **Gierz, T. Suzuki, R.T. Weitz, D.S. Lee, B. Krauss, C. Riedl, U. Starke, H. Hoescht, J.H. Smet, C.R. Ast and K. Kern**, "Electronic Decoupling of an Epitaxial Graphene Monolayer by Gold Intercalation," *Phys. Rev. B* **81** (23), 235408 (2010).
24. **A.L. Gullikson, G.M. Moore and K. Roggensack**, "A Neglected Magma: Constraining the Volatile Content and Pre-Eruptive Conditions of the Peridot Mesa Basanite," *Proc. American Geophysical Union Fall Meeting* (2010).
25. **R.C. Hatch, C.W. Sanchez and H. Hoescht**, "Charge Injection Barrier and Interface Dipole Formation in Pentacene/Semimetal Heterostructures," *Appl. Phys. Lett.* **97** (9), 093303 (2010).
26. **R.C. Hatch and H. Hoescht**, "Evolution of Interface Properties of the Pentacene/Bi(0001) System," *Surface Science* **604** (19-20), 1684-1687 (2010).
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29. **S. Ji, C. Liu, G. Liu and P.F. Nealey**, "Molecular Transfer Printing Using Block Copolymers," *ACS Nano* **4** (2), 599-609 (2010).
30. **B. Jia, Y.K. Wu, J.J. Bisognano, A.W. Chao and J. Wu**, "Influence of an Imperfect Energy Profile on a Seeded Free Electron Laser Performance," *Phys. Rev. ST Accel. Beams* **13** (6), 060701 (2010).
31. **M.Z. Kastyak, M. Szczerbowska-Boruchowska, D. Adamek, B. Tomik, M. Lankosz and K. M. Gough**, "Pigmented Creatine Deposits in Amyotrophic Lateral Sclerosis Central Nervous System

Tissues Identified by Synchrotron Fourier Transform Infrared Microspectroscopy and X-ray Fluorescence Spectromicroscopy,” *Neuroscience* **166** (4), 1119-1128 (2010).

32. **B. Kim, R. Mourhatch and P.B. Aswath**, “Properties of Tribofilms Formed with Ashless Dithiophosphate and Zinc Dialkyl Dithiophosphate Under Extreme Pressure Conditions,” *Wear* **268** (3-4), 579-91 (2010).
33. **J. Kruse, W. Negassa, N. Appathurai, L. Zuin and P. Leinweber**, “Phosphorus Speciation in Sequentially Extracted Agro-Industrial by-Products: Evidence from X-ray Absorption Near Edge Structure Spectroscopy,” *J. Environ. Qual.* **39** (6), 2179-2184 (2010).
34. **Kuzyk, M. Kastyak, V. Agrawal, M. Gallant, G. Sivakumar, M. Rak, M.R. Del Bigio, D. Westaway, R. Julian and K.M. Gough**, “Association Among Amyloid Plaque, Lipid, and Creatine in Hippocampus of TgCRND8 Mouse Model for Alzheimer Disease,” *J. Biol. Chem.* **285** (41), 31202-31207 (2010).
35. **J.L. Lauer, H. Sinha, M.T. Nichols, G.A. Antonelli, Y. Nishi and J.L. Shohet**, “Charge Trapping Within UV and Vacuum UV Irradiated Low-*k* Porous Organosilicate Dielectrics,” *J. Electrochem. Soc.* **157** (8), 177-82 (2010).
36. **Y. Liu, L. Zhang, M.K. Brinkley, G. Bian, T. Miller and T.-C. Chiang**, “Phonon-Induced Gaps in Graphene and Graphite Observed by Angle-Resolved Photoemission,” *Phys. Rev. Lett.* **105** (13) (2010).
37. **R.A. Metzler, J.S. Evans, C.E. Killian, D. Zhou, T.H. Churchill, N.P. Appathurai, S.N. Coppersmith and P.U.P.A. Gilbert**, “Nacre Protein Fragment Templates Lamellar Aragonite Growth,” *J. Am. Chem. Soc.* **132** (18), 6329-6334 (2010).
38. **R.A. Metzler, G.A. Tribello, M. Parrinello and P.U.P.A. Gilbert**, “Asprich Peptides are Occluded in Calcite and Permanently Disorder Biomineral Crystals,” *J. Am. Chem. Soc.* **132** (33), 11585-11591 (2010).
39. **T. Miller and T.-C. Chiang**, “Quantum Electronic Stability of Atomically Uniform Films,” *Thin Film Growth: Physics, Materials Science and Applications* (Chapter 2), Woodhead Publishing, Accepted/In Press (2010).
40. **M.J. Nasse, E. Mattson, C. Gohr, A. Rosenthal, S. Ratti, M. Giordano, and C. Hirschmugl**, “Biological Kinetics Under the Microscope: Pathological Mineralization, IRENI and In vivo Capabilities,” *Vibrational Spectroscopic Imaging on Biomedical Applications*, McGraw Hill, Berlin (2010).
41. **M.J. Nasse, E. Mattson and C. Hirschmugl**, “First Results from IRENI-Rapid Diffraction-Limited High Resolution Imaging Across the Mid-Infrared Bandwidth,” *Proc. WIRMS 5th International Workshop on Infrared Microscopy and Spectroscopy with Accelerator Based Sources* (2010).
42. **M.J. Nasse, E.C. Mattson, R. Reininger, T. Kubala, S. Janowski and C. Hirschmugl**, “Multi-Beam Synchrotron Infrared Chemical Imaging with High Spatial Resolution: Beamline Realization and First Reports on Image Restoration,” *Nucl. Instrum. Meth. A*, In Press (2010).
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44. **G. Nehme, R. Mourhatch and P.B. Aswath**, “Erratum to Effect of Contact Load and Lubricant Volume on the Properties of Tribofilms Formed Under Boundary Lubrication in a Fully Formulated Oil Under Extreme Load Conditions,” *Wear* **269** (3-4), 323 (2010).
45. **M.R. Norman, A. Kaminski, S. Rosenkranz and J.C. Campuzano**, “Comment on ‘Circular Dichroism in the Angle-Resolved Photoemission Spectrum of the High-Temperature Bi₂Sr₂CaCu₂O_{8+δ}’”

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51. **H. Ren, G.A. Antonelli, Y. Nishi and J.L. Shohet**, "Plasma Damage Effects on Low-*k* Porous Organosilicate Glass," J. Appl. Phys. **108** (9), 094110 (2010).
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