

Total FY10 CINT Publications - 184

CINT Science - 35

CINT User Science (External) - 98

CINT User Science – [Internal (No external users on the publication)] - 51

**CINT Science (35)**

1. Akatyeva, E., **J. Y. Huang** and T. Dumitric (2010). "Edge-mediated dislocation processes in multishell carbon nano-onions." Physical Review Letters **105**: 106102.
2. Alberti, S. F., V. Kleiman, **S. Tretiak**, and A. Roitberg (2010). "Unidirectional Energy Transfer in Conjugated Molecules: The Crucial Role of High Frequency C(triple)C bonds." Journal of Physical Chemistry I 2699-2704
3. Bowers, C. R., G. M. Gusev, J. Jaroszynski, **J. L. Reno** and J. A. Simmons (2010). "Resistively detected NMR of the  $\nu=1$  quantum Hall state: A tilted magnetic field study." Physical Review B **81**: 07330.
4. Boyce, B. L., **J. Y. Huang**, D. C. Miller and M. S. Kennedy (2010). "Deformation and Failure of Small-scale Structures." Journal of the Minerals, Metals and Materials Society **62**: 61.
5. Burckel, D. B., J. R. Wendt, G. A. Ten Eyck, A. R. Ellis, **I. Brener** and M. B. Sinclair (2010). "Fabrication of 3D Metamaterial Resonators Using Self-Aligned Membrane Projection Lithography." Advanced Materials **22**:(29) 3171–3175.
6. Chandross, M., C. D. Lorenz, **M. J. Stevens**, **G. S. Grest** (2010). "Probe-Tip Induced Damage in Compliant Substrates." Journal of Manufacturing Science and Engineering **132**: 030916.
7. Chen, H. T., J. F. OHara and A. J. Taylor (2010). "Active Terahertz Metamaterials." Optics and Spectroscopy **108**: 834–840.
8. **Chen, H. T.**, H. Yang, R. Singh, J. F. O'Hara, A. K. Azad, **S. A. Trugman**, **Q.X. Jia** and **A. J. Taylor** (2010). "Tuning the resonance in high temperature superconducting metamaterials." Physical Review Letters **105**: 247402.
9. **Chen, H. T.**, J. Zhou, J. F. OHara and **A. J. Taylor** (2010). "A numerical investigation of metamaterial antireflection coatings." Terahertz Science and Technology **3** 66–73.
10. Chen, Z., **A. J. Taylor** and **A. Efimov** (2010). "Soliton dynamics in non-uniform fiber tapers: analytical description through an improved moment method." Journal of the Optical Society of America B **27**: 1022-1030.
11. Dubi, Y. and **A. V. Balatsky** (2010). "Impurity-Induced Bound States and Proximity Effect in a Bilayer Exciton Condensate." Physical Review Letters **104**:166802.
12. Gu, I. J., R. Singh, Z. Tian, W. Cao, Q. Xing, M. He, J. W. Zhang, J. Han, **H.-T. Chen** and

- W. Zhang (2010). "Terahertz superconductor metamaterial." Applied Physics Letters **97**: 071102. [User proposal: RA2008A183]
13. Guzei, I., I. Arachchige and **S. A. Ivanov** (2010). "Two Polymorphs of chloro[di(phenyl)cyclohexyl]phosphine]gold(I)." Acta Crystallography C **66**(30): M55.
  14. **Huang, J. Y.**, L. Qi and J. Li (2010). "In situ imaging of layer-by-layer sublimation of suspended grapheme." Nano Research **3**: 43-50.
  15. Jones, R. E., J. A. Templeton, G. J. Wagner, D. Olmsted and **N. A. Modine** (2010). "Electron transport enhanced molecular dynamics for metals and semi-metals." International Journal for Numerical Methods in Engineering **83**: 940.
  16. Kadel, K., L. Kumari, W. Z. Li, **J. Y. Huang** and **P. P. Provencio** (2010). "Synthesis and Thermoelectric Properties of Bi<sub>2</sub>Se<sub>3</sub> Nanostructures." Nanoscale Research Letters **10**: 1007.
  17. Kobayashi, T., J. Du, W. Feng, K. Yoshino, **S. Tretiak**, A. Saxena and A. R. Bishop (2010). "Observation of Breather Excitons in a Substituted Polythiophene with a Degenerate Ground State." Physical Review B **81**: 075205.
  18. Kos S., **A. V. Balatsky**, P. B. Littlewood, D. Smith, "Spin noise of itinerant fermions." Physical Review B **81**: 064407.
  19. Kumari, L., W. Li, **J. Y. Huang** and P. P. Provencio (2010). "Nanosize Transition Metal Antimonides, NiSb and FeSb<sub>2</sub>: Solvothermal synthesis and Characterization." Journal of Physical Chemistry **114**: 9573.
  20. Kumari, L., W. Li, **J. Y. Huang** and P. P. Provencio (2010). "Solvothermal synthesis, structure and optical property of nanosized CoSb<sub>3</sub> skutterudite." Nanoscale Research Letters **5**: 1698.
  21. Lin, Y., C. Dai, Y. R. Li, X. Chen, C. L. Chen, A. Bhalla, and **Q. X. Jia** (2010). "Strain Relaxation in Epitaxial (Pb,Sr)TiO<sub>3</sub> Thin Films on NdGaO<sub>3</sub> Substrates." Applied Physics Letters **96**: 102901.
  22. Lu, Y., **J. Y. Huang**, C. Wang, S. Sun and J. Lou (2010). "Cold-welding of ultrathin gold nanowires." Nature Nanotech **5**: 218.
  23. Matthew, J., D. Lane, and **G. S. Grest** (2010). "Spontaneous Asymmetry of Coated Spherical Nanoparticles in Solution and at Liquid/Vapor Interfaces." Physical Review Letters **104**: 235501.
  24. Mazin, I. I. and **A. V. Balatsky** (2010). "Superconductivity in Ca-intercalated bilayer grapheme." Philosophical Magazine Letters **90**: 731-738.
  25. Mudalige, K., S., Habuchi, **P. M., Goodwin**, R. K., Pai, F., De Schryver, M., and M., Cotlet (2010). "Photophysics of the Red Chromophore of HcRed: Evidence for Cis-

Trans Isomerization and Protonation-State Changes.” Journal of Physical Chemistry B **114**: 4678-4685.

26. Okba, F., N. Cherkashin, Z. Di, **M. Nastasi**, F. Rossi, A. Merabet and A. Claverie (2010). “Controlled drive-in and precipitation of hydrogen during plasma hydrogenation of silicon using a thin compressively strained SiGe layer.” Applied Physics Letters **97**: 31917.
27. **Picraux, S. T.** (2010). “Exploring new science through nanoscale integration.” MRS Bulletin **35**.
28. Pesce, P.B.C., P. T. Araujo, P. Nikolaev, **S. K. Doorn**, K. Hata, R. Saito, M. S. Dresselhaus and A. Jorio (2010). “Calibrating Single-Wall Carbon Nanotubes’ Resonance Raman Intensity by High Resolution Transmission Electron Microscopy for Spectroscopy-Based Diameter Distribution Determination.” Applied Physics Letters **96**: 051910.
29. Schmidt, A. R., M. H. Hamidian, P. Wahl, F. Meier, **A. V. Balatsky**, J. D. Garrett, T. J. Williams, G. M. Luke and J. C. Davis (2010). “Imaging the Fano lattice to 'hidden order' transition in URu2Si2.” Nature **465**: 570-576.
30. Shelton, D. J., D. W. Peters, M. B. Sinclair, **I. Brener**, L. K. Warne, L. I. Basilio, K. R. Coffey and G. D. Boreman (2010). “Effect of thin silicon dioxide layers on resonant frequency in infrared metamaterials.” Optics Express **18**(2) 1085-1090.
31. Sheng, G., Y. L. Li, J. X. Zhang, S. Choudhury, **Q. X. Jia**, V. Gopalan, D. G. Schlom, Z. K. Liu, and L. Q. Chen (2010). “A Modified Landau-Devonshire Thermodynamic Potential for Strontium Titanate.” Applied Physics Letters **96**: 232902.
32. Vidmar, L., J. Bonca, and **S. A. Trugman** (2010). “Emergence of novel states in the phonon spectral function of the Holstein polaron below and above the one-phonon continuum.” Physical Review B **82**: 104304.
33. Wehling, T. O., **A. V. Balatsky**, M. I. Katsnelson, A. I. Lichtenstein and A. Rosch (2010). “Orbitally controlled Kondo effect of Co adatoms on grapheme.” Physical Review B **81**: 115427.
34. Zhang, Z., T. M. Nenoff, K. Leung, S. R. Ferreira, **J. Y. Huang**, D. T. Berry, P. P. Provencio and R. Stumpf (2010). “Room-Temperature Synthesis of Ag-Ni and Pd-Ni Alloy Nanoparticles.” Journal of Physical Chemistry **114**: 14309.
35. Zhao, H., Y. Y. Zhang, P. D. Bradford, Q. Zhou, **Q. X. Jia**, F. G. Yuan, and Y. T. Zhu (2010). “Carbon Nanotube Yarn Strain Sensors.” Nanotechnology **21**: 305502.

*CINT User Science – External (98)*

1. **Adolphi, N. L.**, **D. L. Huber**, **H. C. Bryant**, T. C. Monson, **D. L. Fegan**, J. Lim, **J. E. Trujillo**, T. E. Tessier, D. M. Lovato, K. S. Butler, P. P. Provencio, H. J. Hathaway, S. A. Majetich, R.

- S. Larson and E. R. Flynn (2010). "Characterization of single-core magnetite nanoparticles for magnetic imaging by SQUID relaxometry." Physics in Medicine and Biology **55**(19): 5985-6003.[User Proposal #C2009A123]
2. Allen, D. G., T. Hargett, J. L. Reno, A. A. Zinn and M. C. Wanke (2011). "Index Tuning for Precise Frequency Selection of Terahertz Quantum Cascade Lasers." IEEE Photonics Technology Letters **23**: 30. [User proposal number: C2009B040]
  3. Allen, D. G., M. Wanke, J. L. Reno and T. Hargett (2010). "Optical bistability from domain formation in terahertz quantum cascade lasers." IEEE Journal of Selected Topics in Quantum Electronics submitted 1/10. [User proposal number: U2008A105]
  4. Alvermann, A., H. Fehske, and S. A. Trugman (2010). "Polarons and slow quantum phonons." Physical Review B **81**: 165113. [User proposal number: C2008A096]
  5. Baber, S., M. Zhou, Q. L. Lin, M. Naalla, Q. X. Jia, Y. Lu, and H. M. Luo (2010). "Nanoconfined Surfactant Templated Electrodeposition to Porous Hierarchical Nanowires and Nanotubes." Nanotechnology **21**: 165603. [User proposal number: U2009A043]
  6. Badaeva, E., V. Albert, S. Kilina, M. Sykora, and S. Tretiak (2010). "Effect of Deprotonation on Absorption and Emission Spectra of Ru(II)-bpy Complexes Functionalized with Carboxyl Groups." Physical Chemistry Chemical Physics **12**: 8902-8913. [User proposal number: U2010B1108]
  7. Bellou, A., C. T. Overman, H. M. Zbib, D. F. Bahr and A. Misra (2011). "Strength and strain hardening behavior of Cu-based bilayers and trilayers." Scripta Materialia **64**: 641. [User proposal number: U2009A080]
  8. Bi, Z., O. Anderoglu, X. Zhang, J. L. MacManus-Driscoll, H. Yang, Q. X. Jia, and H. Wang (2010). "Nanoporous Thin Films with Controllable Nanopores Processed from Vertically Aligned Nanocomposites." Nanotechnology **21**: 285606. [User proposal: C2009A006]
  9. Bock, J., Y. Fukuyo, S. Kang, M. E. Phipps, L. B. Alexandrov, K. Ø. Rasmussen, A.R. Bishop, E. D. Rosen, J. S. Martinez, H.-T. Chen, G. Rodriguez, B. S. Alexandrov and A. Usheva (2010). "Mammalian stem cells reprogramming in response to terahertz radiation." PLoS ONE **5**: 15806. [User proposal: U2009A097]
  10. Burghoff, D., T. -Y. Kao, D. Ban, A. W. M. Lee, Q. Hu and J. Reno (2011). "A terahertz pulse emitter monolithically integrated with a quantum cascade laser." Applied Physics Letters **98**: 061112. [User proposal: C2009A002]
  11. Choi, E. M., S. Patnaik, E. Weal, S. L. Sahonta, H. Wang, Z. Bi, J. Xiong, M. G. Blamire, Q. X. Jia and J. L. MacManus-Driscoll (2011). "Strong room temperature magnetism in highly resistive strained thin films of BiFe<sub>0.5</sub>Mn<sub>0.5</sub>O<sub>3</sub>." Applied Physics Letters **98**. [User proposal:

C2009A006]

12. Elbert E. M. Chia, **D. Talbayev**, Jian-Xin Zhu, H. Q. Yuan, T. Park, J. D. Thompson, C. Panagopoulos, G. F. Chen, **J. L. Luo**, N. L. Wang, and **A. J. Taylor** (2010). "Ultrafast Pump-Probe Study of Phase Separation and Competing Orders in the Underdoped (Ba, K)Fe<sub>2</sub>As<sub>2</sub> Superconductor." Physical Review Letters **104**: 027003. [User proposal: U2009B036]
13. **Fraboni, B.**, A. Scida, A. Cavallini, P. Cosseddu, A. Bonfiglio, S. Milita and **M. Nastasi** (2010). "Spectroscopic investigation of the semiconductor molecular packing in fully operational organic thin-film transistors." Applied Physics Letters **96**: 163302. [User proposal: C2010A907]
14. **Fransson, J.**, **A. V. Balatsky** and **J. X. Zhu** (2010). "Dynamical properties of a vibrating molecular quantum dot in a Josephson junction." Physical Review B **81**: 155440. [User proposal: C2008B110]
15. **Fransson J.**, O. Eriksson and **A. V. Balatsky** (2010). "Theory of spin-polarized scanning tunneling microscopy applied to local spins." Physical Review B **81**: 115454. [User proposal: C2008B110]
16. **Frischknecht, A. L.**, E. S. McGarrity, and **M. E. Mackay** (2010). "Expanded chain dimensions in polymer melts with nanoparticle fillers." Journal of Chemical Physics **132**: 204901. [User proposal: U2008A043]
17. **Gambari, J.**, S. A. Maier, B. S. Williams, **S. Kumar**, **J. L. Reno**, **Q. Hu** and C. C. Phillips (2010). "Thresholdless Coherent Light Scattering from Subband-polaritons in a Strongly-Coupled Microcavity." Physical Review B **82**(12): 121303. [C2009A002(Hu)]
18. **Ganguly K.**, **I. D. McRury**, **P. M. Goodwin**, **R. E. Morgan** and W. K. Augé (2010). "Histopomorphic evaluation of radiofrequency mediated débridement chondroplasty." The Open Orthopaedics Journal **4**: 211. [User proposal: RA2009A135]
19. **Ganguly K.**, **I. D. McRury**, **P. M. Goodwin**, **R. E. Morgan** and W. K. Augé (2010). "Native chondrocyte viability during cartilage lesion progression: normal to surface fibrillation." Cartilage **10**: 1177. [User proposal: RA2009A135]
20. **Gupta, G.**, S. B. Rathod, K. W. Staggs, L. K. Ista, K. Abbou-Cucherif, P. B. Atanassov, M. S. Tartis, **G. A. Montaño** and **G. P. Lopez** (2010). "CVD for Facile Synthesis of Hybrid Nano-Biomaterials Integrating Functional Supramolecular Assemblies. Science." Langmuir **25**: 2986-2993. [User proposal: U2008A083]
21. **Haroz, E.H.**, W. D. Rice, B. Y. Lu, R. H. Hauge, S. Ghosh, R. B. Weisman, **S. K. Doorn** and **J. Kono** (2010). "Enrichment of Armchair Carbon Nanotubes via Density Gradient Ultracentrifugation: Raman Evidence." ACS Nano **4**: 1955. [User proposal: U2007A214]
22. **Hopkins, P. E.**, **L. M. Phinney**, J. R. Serrano, S. P. Kearney, T. W. Grasser and **C. T. Harris**

- (2010). "Criteria for Cross-Plane Dominated Thermal Transport in Multilayer Thin Film Systems During Modulated Laser Heating." Journal of Heat Transfer **132**: 081302. [User proposal: U2008A097]
23. Hou-Tong, C., J. Zhou, J. F. O'Hara, F. Chen, A. K. Azad, and A. J. Taylor (2010). "Antireflection Coating Using Metamaterials and Identification of Its Mechanism." Physical Review Letters **105**: 0739021. [User proposal: U2009B015]
24. Htoon, H., A. V. Malko, D. Bussian, J. Vela, Y. Chen, J. A. Hollingsworth and V. I. Klimov (2010). "Highly Emissive Multiexcitons in Steady-State Photo-luminescence of Individual "Giant" CdSe/CdS Core/Shell Nanocrystals." Nano Letters **10**: 2401-07. [User proposal: U2008A078]
25. Hu, Q. (2011). "Terahertz Quantum Cascade Lasers and Real-time T-rays Imaging at video rate." International Journal of High Speed Electronics and Systems **2**(4). [User proposal: U2008A008]
26. Huang, J. Y., L. Zhong, C. M. Wang, J. P. Sullivan, W. Xu, L. Q. Zhang, S. X. Mao, N. S. Hudak, X. H. Liu, A. Subramanian, H. Y. Fan, L. Qi, A. Kushima and J. Li (2010). "In situ observation of the electrochemical lithiation of a single SnO<sub>2</sub> nanowire electrode." Science **330**: 1515. [User proposal: C2009A052]
27. Huang, J. Y., L. Zhong, C. M. Wang, J. P. Sullivan, W. Xu, L. Q. Zhang, S. X. Mao, N. S. Hudak, X. H. Liu, A. Subramanian, H. Y. Fan, L. Qi, A. Kushima and J. Li (2010). "Real time observation of the charging process of a single SnO<sub>2</sub> nanowire anode in a Li-ion nanobattery." Science **10**: 1126. [User proposal: C2009A052]
28. Hur, S.-M., A. L. Frischknecht, D. L. Huber and G. H. Fredrickson (2010). "Field-based simulations of directed self-assembly in a mixed brush system." Proceedings of the SPIE **7637**: 76370. [User proposal: U2009B038]
29. Ivanov, S. A., and M. Achermann (2010). "Spectral and Dynamic Properties of Excitons and Biexcitons in Type-II Semiconductor Nanocrystals." ACS Nano **4**(10): 5994. [User proposal: U2008A074]
30. Kaehr, B., C. J. Brinker (2010). "Using bacterial growth to template catalytic asymmetry." Chemistry Communications **46**: 5268-5270. [User proposal: U2008B041]
31. Kalb, J., D. Dukes, S. K. Kumar, R. S. Hoy and G. S. Grest (2011). "End Grafted Polymer Nanoparticles in a Polymer Matrix: Effects of Coverage and Curvature." Soft Matter **7**: 1418. [User proposal: U2008B030]
32. Kalugin, N. G., I. Kalichava, J. Fallt, C. Del Barga, C. Cooper, J. G. Duque, E. Gonzales, S. K. Doorn, E. A. Shaner and A. V. Gin (2010). "The characterization of non-planar graphene nanowires with an  $\Omega$  shape cross-section." Carbon **48**(12): 3405-3411. [User proposal: U2008A061]

33. Kao, T-Y., Q. Hu and J. L. Reno (2010). "Phase-locked arrays of surface-emitting terahertz quantum-cascade lasers." Applied Physics Letters **96**: 101106. [User proposal: C2008A008]
34. Katan, C., M. Charlot, O. Mongin, C. Le Droumaguet, V. Jouikov, F. Terenziani, E. Badaeva, S. Tretiak and M. Blanchard-Desce (2010). "Simultaneous Control of Emission Localization and Two-photon Absorption Efficiency in Dissymmetrical Chromophores." Journal of Physical Chemistry B **114**: 3152-3169. [User proposal: C2008A031]
35. Katan, C., S. Tretiak, and J. Even (2010). "Two-photon Transitions in Triazole Based Quadrupolar and Octupolar Chromophores: a TD-DFT Investigation Nanophotonics III." Proceedings of SPIE **7712**: 77123D. [User proposal: C2009A021]
36. Katzenmeyer, A. M., F. Leonard, A. A. Talin, P. S. Wong and D. L. Huffaker (2010). "Poole-Frenkel effect and phonon-assisted tunneling in GaAs nanowires." Nano Letters **10**: 4935. [User proposal: U2008B116]
37. Kumar, S., C. W. I. Chan, Q. Hu and J. L. Reno (2011). "A 1.8 THz quantum-cascade laser operating up to 163 K; significantly above the temperature of  $\hbar\omega/k_B$ " Nature Physics **7**: 166-171. [User proposal: C2008A008]
38. Laroche D, S. Das Sarma and G. Gervais (2010). "Scattering mechanism in modulation-doped shallow two-dimensional electron gases." Applied Physics Letters **96**: 162112. [User proposal: C2008A019]
39. Le, S. T., P. Jannaty, A. Zaslavsky, S. A. Dayeh and S. T. Picraux (2010). "Growth, electrical rectification, and gate control in axial in situ doped p-n junction germanium nanowires." Applied Physics Letters **96**: 262102. [User proposal: C2008A016]
40. Lee, A. W. M., B. Williams, S. Kumar, Q. Hu and J. L. Reno (2010). "Tunable terahertz quantum cascade lasers based on external-cavity gratings." Optics Letters **35** **7**: 910. [User proposal: U2008B030]
41. Li, H., S. Malinin, S. Tretiak, and V. Chernyak (2010). "Exciton Scattering Approach for Branched Conjugated Molecules and Complexes IV. Transition Dipoles and Optical Spectra." Journal of Chemical Physics **132**: 124103. [User proposal: C2009B011]
42. Li, N., J. Wang, J. Y. Huang, A. Misra and X. Zhang (2010). "In situ TEM Observation of Room Temperature Dislocation Climb at Interfaces in Nanolayered Al/Nb Composites." Scripta Materialia **63**: 363. [User proposal: C2009A017]
43. Li, N., J. Wang, J. Y. Huang, A. Misra and X. Zhang (2011). "Influence of slip transmission on the migration of incoherent twin boundaries in nanotwinned Cu." Scripta Materialia **64**(2): 149. [User proposal: C2009A017]
44. Lin, T. -Y., K. -M. Lim, A. M. Andrews, G. Strasser and J. P. Bird (2010). "Nonspin related

giant magnetoresistance <600% in hybrid field-effect transistors with ferromagnetic gates.” Applied Physics Letters **97**: 063108. [User proposal: C2008A037]

45. Loh, O., X. Wei, C. Ke, **J. P. Sullivan** and **H. D. Espinosa** (2010). “Robust carbon nanotube-based nanoelectromechanical devices: Understanding and eliminating prevalent failure modes using alternative electrode materials.” Small **7**: 79. [User proposal: C2008A035]
46. **Lucca, D.A.**, Y. Qi, T. A. Harriman, T. Prenzel, Y. Q. Wang, **M. Nastasi**, J. Dong and A. Mehner (2010). “Effects of ion irradiation on the mechanical properties of  $\text{SiNa}_w\text{O}_x\text{C}_y\text{H}_z$  sol-gel derived thin films.” Nuclear Instruments and Methods in Physics Research B, **268**: 2926. [User proposal: U2008A095]
47. **Luo, H. M.**, **H. Wang**, **G. F. Zou**, E. Bauer, T. M. McCleskey, A. K. Burrell and **Q. X. Jia** (2010). “A Review of Epitaxial Metal-Nitride Films by Polymer-Assisted Deposition.” Transactions on Electrical and Electronic Materials **11**: 54-60. [User proposal: U2009A043]
48. **Luo, J. H.**, F. F. Wu, **J. Y. Huang** and **S. X. Mao** (2010). “Superelongation and atomic chain formation in nanosized metallic glass.” Physical Review Letters **104**: 215503. [User proposal: C2008A004]
49. **Manandhar, P.**, A. Akhadov, **E. A. Akhadov**, **C. Tracy** and **S. T. Picraux** (2010). “Integration of nanowire devices in out-of-plane geometry.” Nano Letters **10**: 2126. [User proposal: C2009A042]
50. Manjeri, R. M., S. Qiu, **N. Mara**, **A. Misra** and **R. Vaidyanathan** (2010). “Superelastic response of 111 and 101 oriented NiTi micropillars.” Journal of Applied Physics **108**: 023501. [User proposal: C2008A098]
51. Mariani, G., **R. B. Laghumavarapu**, B. T. de Villers, J. Shapiro, P. Senanayake, A. Lin, B. J. Schwartz and **D. L. Huffaker** (2010). “Hybrid Conjugated Polymer Solar Cells using Patterned GaAs Nanopillars.” Applied Physics Letters **97**: 013107. [User proposal: U2007A194]
52. Martin, K. E., Z. Wang, R. M. Garcia, Y. Song, J. L. Jacobsen, N. E. Schore, **T. Busani**, **B. S. Swartzentruber**, C. J. Medforth and **J. A. Shelnutt** (2010). “Donor-Acceptor Biomorphs from the Ionic Self-Assembly of Porphyrins.” Journal of the American Chemical Society **132**: 8194. [User proposal: U2008B185]
53. Mehner, A., J. Dong, T. Hoja, T. Prenzel, Y. Mutluguenes, E. Brinksmeier, **D. Lucca** and F. Klaiber (2010). “Diamond Machinable Sol-Gel Silica Based Hybrid Coatings for High Precision Optical Molds.” Key Engineering Materials **438**: 65. [User Proposal: U2008A095]
54. Mehner, A., J. Dong, T. Prenzel, W. Datchary and **D. A. Lucca** (2010). “Mechanical and Chemical Properties of Thick Hybrid Sol-Gel Silica Coatings from Acid and Base Catalyzed Sols.” Journal of Sol-Gel Science and Technology **54**: 355. [User Proposal: U2008A095]



55. Miao, X., I. Brener, and T. S. Luk (2010). "Nanocomposite plasmonic fluorescence emitters with core/shell configurations." Journal of the Optical Society of America B **27**: 1561-1570. [User proposal: C2008B105]
56. Miao, X., B. Passmore, A. Gin, W. Langston, S. Vangala, W. Goodhue, E. Shaner and I. Brener (2010). "Doping tunable resonance: Toward electrically tunable mid-infrared metamaterials." Applied Physics Letters **96**: 101111. [User proposal: C2008B105]
57. Padmanabhan, V., A. L. Frischknecht and M. E. Mackay (2010). "Binary fluid with attractions near a planar wall." Physical Review E **82**: 021507. [User proposal: C2009A047]
58. Passmore, B. S., D. C. Adams, R. Ribaud, D. Wasserman, S. Lyon, P. Davids, W. W. Chow and E. A. Shaner (2011). "Observation of Rabi Splitting from Surface Plasmon Coupled Conduction State Transitions in Electrically excited InAs Quantum Dots." Nano Letters **11**: 338. [User proposal: C2008A049]
59. Peralta, X. G., I. Brener, W. J. Padilla, E.W. Young, A. J. Hoffman, M. J. Cich, R. D. Averitt, M. C. Wanke, J. B. Wright, H.-T. Chen, J. F. O'Hara, A. J. Taylor, J. Waldman, W. D. Goodhue, J. Li and J. Reno (2010). "External modulators for terahertz quantum cascade lasers based on electrically-driven active metamaterials." Metamaterials **4**: 83–88. [User proposal: U2007A030]
60. Pint, C.L., Y. Xu, T. Cherukuri, S. Moghazy, N. T. Alvarez, E. H. Haroz, S. Mahzooni, S. K. Doorn, J. Kono and R. H. Hauge (2010). "Dry Contact Transfer Printing of Patterns Formed From Pristine Well-Aligned Carbon Nanotube Arrays and Characterization of Their Anisotropic Optical Properties." ACS Nano **4**: 1131. [User proposal: U2008A010]
61. Prasankumar, R. P., W. W. Chow, J. Urayama, R. S. Attaluri, R. V. Shenoi, S. Krishna, and A. J. Taylor (2010). "Density-dependent carrier dynamics in a quantum dots-in-a-well heterostructure." Applied Physics Letters **96**: 031110. [U2008A064]
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