CINT Publications — 2012

1. Adolphi, N.L., Altobelli, S.A., Bryant, H.C., Butler, K.S., Fegan, D.L., Flynn, E.R., Hathaway, H.J., Huber, D.L., Larson, R.S., Lovato, D.M., Milne, M.L., Monson, T.E., Ramu, J., Tessier, T.E., Trujillo, J.E. (2012) "Imaging of Her2-Targeted Magnetic Nanoparticles for Breast Cancer Detection: Comparison of Squid-Detected Magnetic Relaxometry and MRI" Contrast Media & Molecular Imaging: 7(3): P. 308-319

2. Ahmed, T., Balatsky, A., Das, T., Haraldsen, J., Kilina, S., Rehr, J. (2012) "Electronic Fingerprints of DNA Bases on Graphene" Nano Letters: 12, 927-931

3. Akins, B., Cook, C., Ivanov, S., Osinski, M., Plumley, J., Rivera, A., Smolyakov, G. (2012) "Cadmium-Free ZnSe:Mn/ZnS High Temperature Nanophosphors with Record High Quantum Efficiency for White LED Applications" Technical Digest: 7th International Conference on Quantum Dots

4. Alam, T., Bolintineanu, D., Buitrago, F., Frischknecht, A., Jenkins, J., Opper, K., Stevens, M., Winey, K. (2012) "Heterogeneous Coordination Environments in Lithium-Neutralized Ionomers Identified Using 1h and 7li MaS NmR" Materials: 5, 1508-1527

5. Appavoo, K., Brady, N., Haglund, R., Hilton, D., Nag, J., Prasankumar, R., Seo, M. (2012) "Dynamics of Ultrafast Electron Injection on Phase-Changing Vanadium Dioxide" Gordon Research Conference: Ultrafast Phenomena in Cooperative Systems: Galveston, TX, February 19-24

6. Appavoo, K., Brady, N., Haglund, R., Hilton, D., Nag, J., Prasankumar, R., Seo, M. (2012) "Ultrafast Phase Transition in Vo_2 Driven by Interfacial Electron Injection" Proceedings of the XVIII International Conference on Ultrafast Phenomena: Lausanne, Switzerland, July 8-13

7. Armijo, L., Adolphi, N., Brandt, Y., Cook, N., Huber, D., Maestas, S., Mathew, D., Monson, T., Osinski, M., Rivera, A., Smolyakov, G., Smyth, H., Withers, J., Yadav, S. (2012) "Iron Oxide Nanocrystals for Magnetic Hyperthermia Applications" Nanomaterials: 2, Pp. 134-14

8. Armijo, L., Adolphi, N., Brandt, Y., Cook, C., Huber, D., Maestas, S., Monson, T., Osinski, M., Rivera, A., Smolyakov, G., Smyth, H., Withers, J. (2012) "Multifunctional Nanocrystals for Drug Delivery in Cystic Fibrosis" Technical Digest: 7th International Conference on Quantum Dots

9. Armijo, L., Brandt, Y., Cook, N., Huber, D., Plumley, J., Osinski, M., Rivera, A., Smith, D., Smolyakov, G., Withers, N., Yadav, S. (2012) "Multifunctional Superparamagnetic Nanocrystals for Imaging and Targeted Drug Delivery to the Lung" Colloidal Nanocrystals for Biomedical Application VII: San Francisco, CA. January 21-23

10. Armijo, L., Brandt, Y., Cook, N., Huber, D., Plumley, J., Osinski, M., Rivera, A., Smith, D., Smolyakov, G., Withers, N., Yadav, S. (2012) "Multifunctional Superparamagnetic Nanoparticles for Enhanced Drug Transport in Cystic Fibrosis" Global Congress on Nanomedicine: Incheon, Korea, September 10-13

11. Bleu Knight, V., Serrano, E., Van Velkinburgh, V. (2012) XTranscriptional Profiling of a Human Astrocyte Cell Line with Next Generation Sequencing" Neurosci Abstr: 38: 816.04.

12. Bonca, J., Mierzejewski, M., Vidmar, L. (2012) "Nonequilibrium Propagation and Decay of a Bound Pair in Driven T-J Models" Physical Review Letters: 109, 156404

13. Brady, N., Appavoo, K., Haglund, R., Hilton, D., Nag, R., Prasankumar, R., Seo, M. (2012) "Ultrafast Dynamics of Vo_2 Grown on Different Substrates with Nondegenerate Pump-Probe Spectroscopy" Gordon Research Conference: Ultrafast Phenomena in Cooperative Systems: Galveston, TX, February 19-24

14. Brady, N., Appavoo, K., Haglund, R., Hilton, D., Nag, R., Prasankumar, R., Seo, M. (2012) "Nondegenerate Pump-Probe Spectroscopy of the Insulator-to-Metal Phase Transition in Vo_2" Proceedings of the XVIII International Conference on Ultrafast Phenomena: Lausanne, Switzerland, July 8-13

15. Brady, N., Appavoo, K., Haglund, R., Hilton, D., Nag, R., Prasankumar, R., Seo, M., Upadhaya, P. (2012) "Utrafast Phase Transition in Vo_2 driven by Interfacial Electron Injection" Aps March Meeting: Boston, MA, February 27–March 2

16. Brueck, S., Kuznetsova, Y., Neumann, A. (2012) "Solid-Immersion Imaging Interferometric Nanoscopy to the Limits of Available Frequency Space" Journal Opt. Soc. America: A29, 772-781

17. Bufford, D., Bi, Z., Jia, Q.X., Wang, H., Zhang, X. (2012) "Nanotwins and Stacking Faults in High-Strength Epitaxial Ag/Al Multilayer Films" Appl. Phys. Lett.: 101, 223112 (2012).

18. Burghoff, D., Chan, C.W., Hu, Q., Reno, J.L. (2012) "Gain Measurements of Scattering-Assisted Terahertz Quantum Cascade Lasers" Applied Physics Letters: 100, 26111

19. Butler, K.S., Adolphi, N.L., Belfon, R., Bryant, H.C., Fegan, D.L., Flynn, E.R., Hathaway, H.J., Huber, D.L., Larson, R.S., Lovato, D.M, Monson, T.C., Tessier, T.E. (2012) "Development of Antibody-Tagged Nanoparticles for Detection of Transplant Rejection using Biomagnetic Sensors" Cell Transplantation

20. Cao, W., Al-Naib, I. A., He, M., Singh, R., Taylor, A. J., Zhang, W. (2012) "Low-Loss Ultra-High-*Q* Dark Mode Plasmonic Fano Metamaterials" Optics Letters: 37, 3366-3368

21. Carpenter, J., Anderson, P., Misra, A. (2012) "Achieving Maximum Hardness in Semi-Cohrent Multilayer Thin Films with Unequal Layer Thickness," Acta Mater: 60: 2625

22. Carpenter, J., Anderson, P., Misra, A., Uchic, M. (2012) “Strain Rate Sensitivity and Activation Volume of Cu/Ni Metallic Multilayer Thin Films measured via Micropillar Compression” Applied Physics Letters: 101

23. Cellek, O.O., Kim, H.S., Reno, J.L., Zhang, Y.H. (2012) “NIR/LWIR Dual-Band Infrared Photodetectors with Optical Addressing” Proc. SPIE: 8353, 8353e

24. Cellek, O.O., Reno, J.L., Zhang, Y.H. (2012) “Optically Addressed Near and Long-Wave Infrared Multiband Photodetectors” Appl. Phys. Lett.: 100, 241103

25. Chen, L., Gianola, D., Richter, G., Sullivan, J. (2012) “Lattice Anharmonicity in Defect-Free Pd Nanowhiskers” Physical Review Letters: 109, 125503

26. Crochet, J.J., Cognet, L., Doorn, S.K., Duque, J.G., Lounis, B., Werner, J.H. (2012) “Disorder Limited Exciton Transport in Colloidal Single-Wall Carbon Nanotubes” Nano Letters: 12, 5091

27. Dayeh, S., Dai, X., Huang, J., Liu, X., Picraux, S.T., Soci, C. (2012) “Rocking Chair Defect Multiplication in Nanowire Growth” Appl. Phys. Lett.: 101, 053121

28. Duque, J.G., Chen, H., Doorn, S.K., Shreve, A.P., Swan, A.K., Telg, H., Tu, X., Zheng,
29. M. (2012) “Quantum Interference between the Third and Fourth Excitonic States in Semiconducting Carbon Nanotubes” Phys. Rev. Lett.: 108, 117404

30. Duzik, A., Lang, J., Laukkanen, P., Millunchick, J., Punkkinen, M., Thomas, J. (2012) “Surface Structure of Bismuth Terminated GaAs Surfaces Grown with Molecular Beam Epitaxy” Surface Science: Vol. 606, 15-16, 1203-1207

31. Fernandez-Alberti, S., Kleiman, V., Nelson, T., Roitberg, A., Tretiak, S. (2012) “Shishiodoshi Unidirectional Energy Transfer Mechanism in Phenylene Ethynylene Dendrimers” J. Chem. Phys.: 137, 22a526

32. Fernandez-Alberti, S., Nelson, T., Roitberg, A., Tretiak, S. (2012) “Identification of Un-Avoided Crossings in Nonadiabatic Photoexcited Dynamics Involving Multiple Electronic States in Polyatomic Conjugated Molecules” J. Chem. Phys.: 37 (1), 014512

33. Fischer, S.A., Crotty, A.M., Ivanov, S., Kilina, S.V., Tretiak, S. (2012) “Passivating Ligand and Solvent Contributions to the Electronic Properties of Semiconductor

Nanocrystals" Nanoscale: 4, 3

34. Fishman, R., Brown, G., Haraldsen, J. (2012) "Monte Carlo and Variational Calculations of the Magnetic Phase Diagram of $CuFeO_2$" Physical Review B: 85, 020405

35. Fishman, R., Furukawa, N., Haraldsen, J., Matsuda, M., Miyahara, S. (2012) "Identifying the Spectroscopic Modes of Multiferroic $BiFeO_3$" Physical Review: 86, 220402

36. Fraboni, B., Bonfiglio, Y., Cavallinia, A., Cosseddu, P., Milita, S., Nastasi, M., Scida, A., Wang, Y. (2012) "Photocurrent Spectroscopy of Ion-Implanted Organic Thin Film Transistors" Synthetic Metals: 161, 2585

37. Frischknecht, A.L., Mackay, M.E., Padmanabhan, V. (2012) "Surface-Induced Phase Behavior of Polymer/Nanoparticle Blends with Attractions" J. Chem. Phys.: 136, 164904

38. Furmanchuk, A., Kilina, S., Leszczynski, J., Tretiak, S. (2012) "Morphology and Optical Response of Carbon Nanotubes Functionalized by Conjugated Polymers" Journal of Physical Chemistry C: 116, 12, 6831-6840

39. Galland, C., Ghosh, Y., Hollingsworth, J.A., Htoon, H., Klimov, V.I., Steinbruck, A. (2012) "Lifetime Blinking in Nonblinking Nanocrystal Quantum Dots" Nature Communications: 3, 908

40. Golez, D., Bonca, J., Vidmar, L. (2012) "Dissociation of a Hubbard-Holstein Bipolaron Driven Away from Equilibrium by a Constant Electric Field" Phys. Rev. B: 85, 14

41. Golez, D., Bonca, J., Trugman, S.A., Vidmar, L. (2012) "Relaxation Dynamics of the Holstein Polaron" Phyical Review Letters: 109, 236402

42. Gu, J., Azad, A., Chen, H.-T., Han, J., Liu, X., Ma, Y., Maier, S. A., Singh, R., Taylor, A. J., Tian, Z., Zhang, S., Zhang, W., Zhang, X. (2012) "Active Control of Electromagnetically Induced Transparency Analogue in Terahertz Metamaterials" Nature Communications: 3, 1151

43. Gu, J., Singh, R., Azad, A. K., Han, J., O'Hara, J. F., Taylor, A. J., Zhang, W. (2012) "An Active Hybrid Plasmonic Metamaterial" Optical Materials Express: 2, 31-37

44. Hagmann, M.J., Nahata, A., Pandey, S., Taylor, A.J., Yarotski, D.A. (2012) "Microwave Frequency Comb Attributed to the Formation of Dipoles at the Surface of a Semiconductor by a Mode-Locked Ultrafast Layer" Applied Physics Letters: 101,231102

45. Hagmann, M.J., Taylor, A.J., Yarotski, D.A. (2012) "Observation of 200th Harmonic Fractional Linewidth of 10^-10 in a Microwave Frequency Comb Generated in a Tunneling Junction" Applied Physics Letters: 101, 241102

46. Han, J., Bird, J., Buchholz, S., Fischer, S., Kunze, U., Reuter, D., Wieck, A. (2012) "Many-Body Enhanced Nonlinear Conductance Resonance in Quantum Channels" Physical Review B: 84, 193302

47. Hao, L., Chernyak, V.Y., Tretiak, S. (2012) "Natural Atomic Orbital Representation for Optical Spectra Calculations in the Exciton Scattering Approach" Journal of Physical Chemistry Letters: 3, 24, P. 3734-3739

48. Haraldsen, J., Brown, G., Fishman, R. (2012) "Spin-Wave Dynamics for the High- Magnetic-Field Phases of the Frustrated $CuFeO_2$ Antiferromagnet: Predictions for Inelastic Neutron Scattering" Physical Review B: 86, 024412

49. Haroz, E.H., Arepalli, S., Doorn, S.K., Duque, J.G., Hauge, R.H., Kono, J., Lu, B.Y., Nikolaev, P. (2012) "Unique Origin of Colors of Armchair Carbon Nanotubes" J. Am. Chem. Soc.: 134, 4461

50. Hore, M., Composto, R., Frischknecht, A. (2012) "Nanorod Assemblies in Polymer Films and their Dispersion-Dependent Optical Properties" ACS Macro Lett.: 1, 115

51. Iza, D.C., Jia, Q., Macmanus-Driscoll, J., Munoz-Rojas, D., Swartzentruber, B. (2012) "Tuning of Defects in ZnO Nanorod Arrays Used in Bulk Heterojunction Solar Cells" Nanoscale Research Letters: 7, 655

52. Jock, R., Carroll, M., Childs, K., Eng, K., He, J., Lilly, M., Lyon, S., Shankar, A., Tracy, L., Tyryshkin, A. (2012) "Probing Band-Tail States in Silicon Metal-Oxide-Semiconductor Heterostructures with Electron Spin Resonance" Applied Phy. Lett.: 100, 023503

53. Kar, A., Li, Q., Luk, T., Prasankumar, R., Seo, M., Upadhya, P., Wang, G., Wright, J. (2012) "The Influence of Radial Heterostructuring on Carrier Dynamics in GaN Nanowires" Applied Phys. Lett: 101, 143104

54. Karki, K., Cho, J., Cumings, J., Epstein, E., Jia, Z., Li, T., Picraux, S., Wang, C. (2012) "Lithium-Assisted Electrochemical Welding in Silicon Nanowire Battery Electrodes" Nano Lett.: 12, 3, Pp. 1392-1397

55. Karki, K., Cho, J., Chuanfu, S., Cumings, J., Epstein, E., Picraux, S., Wang, C., Wang, Y. (2012) "In-situ TEM Studies of Silicon Nanostructures for Li-Ion Batteries" Electrochemical Society Meeting: Honolulu, Hawaii

56. Kao, T.Y., Hu, Q., Reno, J. (2012) "Perfectly Phase-Matched Third-Order DFB Terahertz Quantum-Cascade Lasers" Optics Letters: 37, 2070

57. Kilina, S., Ramirez, J., Tretiak, S. (2012) “Brightening of the Lowest Exciton in Carbon Nanotubes via Chemical Functionalization” Nano Letters: 12, 5, 2306-2312

58. Kilina, S., Ivanov, S., Prezhdo, O.V., Tretiak, S., Velizhanin, K.A. (2012) “Surface Ligands Increase Photoexcitation Relaxation Rates in CdSe Quantum Dots” -Nano: 6, 7

59. Klimov, V., Galland, C., Ghosh, Y., Hollingsworth, J., Htoon, H., Steinbruck, A. (2012) “Lifetime Blinking in Non-Blinking Quantum Dots” Bulletin of the American Physical Society: 57

60. Kocharian, A., Fang, K., Fernando, J. (2012) “Exact Quantum Critical Points and Phase Separation Instabilities in Betts Hubbard Nanoclusters” Mag. Mat.: 324, 3427

61. Kumar, S. (2012) “Operation of Terahertz Quantum Cascade Lasers Above 160k Covering a Frequency Range of 1.8 Thz-4.3ThZ” SPIE Optical Engineering Conference: San Diego, CA, 12-16 August

62. Kumar, S. (2012) “Terahertz Quantum-Cascade Lasers for Applications in Sensing and Imaging” Chemical and Biological Defense 1012 THz Science and Technology Forum Organized by the U.S. Defense Threat Reduction Agency (DTRA): Falls Church, VA. 3-4 April

63. Laroche, D., Gervais, G., Lilly, M., Reno, J. (2012) “Positive and Negative Coulomb Drag in a 1d Quantum Ciruit” American Physical Society March Meeting: Boston, USA

64. Le, S.T., Dayeh, S.A., Jannaty, P., Luo, X., Perea, D.E., Picraux, S.T., Zaslavsky, A. (2012) “Axial Sige Heteronanowire Tunneling Field-Effect Transistors” Nano Lett.: 12, 5850

65. Lee, A.W.M., Burgoff, D., Hu, Q., Kao, T.Y., Reno, J.L. (2012) “Terahertz Quantum-Cascade Laser Tomography” Optics Letter: 37, 217

66. Lee, O, Bi, Z., Chen-Fong, Y., Defay, E., Harrington, S., Jia, Q., Kursumovic, A., Macmanus-Driscoll, J., Wang, H. (2012) “Extremely High Tenability and Low Loss in Nanoscaffold Ferroelectric Films” Nanoletters: 12

67. Li, Q., Brener, I., Chow, W.W., Lester, L.F., Luk, T.S., Wang, G.T., Wright, J.B. (2012) “Single-Mode Gan Nanowire Lasers” Optics Express: 20, 16

68. Li, Y., Antoniou, A. (2012) “Synthesis of Transversely Isotropic Nanoporous Platinum” Scripta Materialia: 8, 503-506

69. Lin, Q., Baber, S., Bao, Z., Bauer, E., Burrell, A.K., Deng, S.G., Fu, E.G, Hollingsworth, J., Jia, Q.X., Kundu, J., Luo, H.M., Mccleskey, T.M., Xu, Y., Yu, L. (2012) “Polymer-Assisted

Chemical Solution Approach to YvO_4: Eu Nanoparticle Networks" J. Mater. Chem.: 22, 5835

70. Liu, R., Antoniou, A. (2012) "a Relation Between Relative Density, Alloy Composition and Sample Shrinkage for Nanporous Metal Foams" Scripta Materialia: 67, 923

71. Liu, X., Davydov, A., Dayeh, S., Fan, F., Huang, J., Huang, S., Huang, X., Krylyuk, S.,
72. Li, J., Liu, Y., Mao, S.X., Picraux, S.T., Wang, J., Yang, H., Yoo, J., Zhang, S., Zhu, T. (2012) "In-situ Atomic Scale Imaging of Electrochemical Lithiation of Si" Nature Nanotechnology: 7, 749

73. Loftian, S., Chawla, N., Llorca, J., Molina-Aldareguia, J.M., Yazzie, K.E. (2012) "High Temperature Nanoindentation Behavior of Al/SiC Multilayers" Phil. Mag. Lett.: 92, 362-367

74. Loh, O., Divan, R., Espinosa, H., Sullivan, J., Wei, X. (2012) "Carbon-Carbon Contacts for Robust Nanoelectromechanical Switches" Advanced Materials: Vol. 24, No. 18

75. Loh, O., Espinosa, H.D. (2012) "Nanoelectromechanical Contact Switches" Nature Nanotechnology: 7, 5, 283-295

76. Lu, H., Bonca, J., Matsueda, H., Sota, S., Tohyama, T. (2012) "Enhanced Charge Order in a Photoexcited One-Dimensional Strongly Correlated System" Physical Review Letters: 109, 197401

77. Magedov, I.V., Bethke, D., Frolova, L.V., Kalugin, N.G., Ovezmyradov, M., Shaner, E.A. (2012) "Benzyne-Functionalized Graphene and Graphite Characterized by Raman Spectroscopy and Energy Dispersive X-Ray Analysis" Carbon: 54, 192-200

78. Maska, M., Bonca, J., Kochetov, E., Mierzejewksi, M., Sushkov, O., Vidmar, L. (2012) "Effective Approach to the Nagaoka Regime of the Two-Dimensional T-J Model" Phys. Rev. B: 85, 24

79. Mierzejewksi, M., Bonca, J., Prelovsek, P., Vidmar, L. (2012) "Nonequilibrium Quantum Dyanmics of a Charge Carrier Doped into a Mott Insulator" Phys. Rev. Lett.: 106, 19

80. Mierzejewksi, M., Bonca, J., Prelovsek, P., Vidmar, L. (2012) "Integrable Mott Insulators Driven by a Finite Electric Field" Phys. Rev. Lett.: 107, 126601-1-126601-4

81. Morrissey, F., Dexheimer, S. (2012) "Vibrational Spectroscopy of Structurally Relaxed Self-Trapped Excitons via Excited-State Resonant Impulsive Stimulated Raman Spectroscopy" Journal Phys. Chem. B: 116, 10582-10589

82. Nagy, A., Doggett, N., Gao, J., Hollingsworth, J.A., Iyer, R., Steinbruck, A. (2012) "Comprehensive Analysis of the Effects of CdSe Quantum Dot Size, Surface Charge, and

Functionalization on Primary Human Lung Cells" ACS Nano: 6, 4748-62

83. Nelson, T., Chernyak, V., Fernandez-Alberti, S., Roitberg, A., Tretiak, S. (2012) "Analysis of State-Specific Vibrations Coupled to the Unidirectional Energy Transfer in Conjugated Dendrimers" J. Phys. Chem.: 116 (40), Pp. 9802-9810

84. Nelson, T., Chernyak, V., Fernandez-Alberti, S., Roitberg, A., Tretiak, S. (2012) *"*Nonadiabatic Excited-State Molecular Dynamics (NA-ESMD). Numerical Tests of Convergence and Parameters*"* J. Chem. Phys.: 136, 054108-054120

85. Ou, Y., Sokoloff, J., Stevens, M. (2012) "Comparison of Shear Behavior between Two Planar Neutral Brushes and Polyectrolyte Brushes Through Molecular Dynamics Simulation" Phys. Rev. E: 85, 011801

86. Padmanabhan, V., Frischknecht, A.L., Mackay, M.E. (2012) "Effect of Chain Stiffness on Nanoparticle Segregation in Polymer/Nanoparticle Blends Near a Substrate" Macromolecular Theory and Simulations: 21, 98-105

87. Price, A., Fredrickson, G., Frischknecht, A., Huber, D., Hur, S. (2012) "Exploring Lateral Microphase Separation in Mixed Polymer Brushes by Experiment and Self-Consistent Field Theory Simulations" Macromolecules: 45, 510

88. Qi, J., Jia, Q., Prasankumar, R., Taylor, A., Trugman, S., Wen, X., Yan, L., Zhou, H., Zhu, J. (2012) "Coexistence of Coupled Magnetic Phases in Epitaxial $TbMnO_3$ Films Revealed by Ultrafast Optical Spectroscopy" Appl. Phys. Lett.: 101,122904

89. Qu, M., Chen, Y.S., Emilianov, S., Homan, K., Joshi, P., Mallidi, S., Mehrmohammadi, M., Sokolov, K., Truby, R. (2012) "Magneto-Photo-Acoustic Imaging" 1; 2(2) 385-396

90. Ren, Y., Cui, M., Gao, J., Hayton, D.J., Hovenier, J.N., Hu, Q., Kao, T.Y., Klapwijk, T.M., Reno, J.L., Shi, S.C. (2012) "Frequency and Amplitude Stabilized Terahertz Quantum Cascade Laser as Local Oscillator" Applied Physics Letters: 101

91. Ren, Y., Cui, M., Gao, J., Hayton, D.J., Hovenier, J.N., Hu, Q., Kao, T.Y., Klapwijk, T.M., Reno, J.L., Shi, S.C. (2012) "Frequency Locking of Single-Mode 3.5 ThZ Quantum Cascade Lasers using a Gas Cell" Applied Physics Letters

92. Ren, Y., Cui, M., Gao, J., Hayton, D.J., Hovenier, J.N., Hu, Q., Kao, T.Y., Klapwijk, T.M., Reno, J.L., Shi, S.C. (2012) "Stabilized HEB-QCL Heterodyne Spectrometer at Super-Terahertz" Proceedings of SPIE: 8452

93. Rivadulla, F., Bauer, E., Bi, Z., Jia, Q., Rivas-Murias, B., Vila-Fungueirino, J. (2012) "Strain-Induced Ferromagnetism and Magnetoresistance in Epitaxial Thin Films of $LaCoO_3$ Prepared by Polymer-Assisted Deposition" Chemistry of Materials: 25, 55-58

94. Roy Chowdhury, D., Azad, A. K., Chen, H.-T., Singh, R., Taylor, A. J., Zhang, W., (2012) "Coupling Schemes in Terahertz Planar Metamaterials" International Journal of Optics: 2012, 148985

95. Ruzmetov, D., Agrawal, A., Baloch, K., Cumings, J., Davydov, A., Haney, P., Huang, J., Karki, K., Krylyuk, S., Lezec, H., Liu, Y., Oleshko, V., Talin, A., Tanase, M. (2012) "Electrolyte Stability Determines Scaling Limits for Solid-State 3D Li Ion Batteries" Nano Lett.: 12 (1), Pp. 505-511

96. Seo, M., Dayeh, S., Martinez, J., Picraux, S.T., Prasankumar, R.P., Swartzentruber, B., Taylor, A.J., Upadhya, P. (2012) "Understanding Ultrafast Carrier Dynamics in Single Quasi-One-Dimensional Si Nanowires" Appl. Phys. Lett.: 100, 071104

97. So, W.Y., Chacon-Madrid, K., Hong, J., Kim, J.J., Peteanu, L.A., Sherwood, G.A., Shreve, A.P., Werner, J.H. (2012) "Effects of Solvent Properties on the Spectroscopy and Dynamics of Alkoxy-Substituted PpV Oligomer Aggregates" the Journal of Physical Chemistry B: 116, 10504-10513

98. Solovyov, V.F., Haugan, T.J., Jia, Q.X., Li, Q., Mcmanus-Driscoll, J.L., Maiorov, B., Si, W., Specht, E.D., Yang, H. (2012) "Influence of Defect-Induced Biaxial Strain on Flux Pinning in Thick $YbA_2Cu_3O_7$ Layers," Phys. Rev. B: 86, 094511

99. Song, F., Choi, E.M., Jia, Q.X., Li, Z.S., Mcmanus-Driscoll, J., Monsen, A., Wahlstrom, W., Wells, J.W., Xiong, J. (2012) "Extracting the Near Surface Stoichiometry of BiFe0.5mn0.5o3 Thin Films: A Finite Element Maximum Entropy Approach," Surf. Sci.: 606, 1771-1776

100. Stagon, S., Baldwin, J., Huang, H., Misra, A. (2012) "Anomaly of Film Porosity Dependence on Deposition Rate" Applied Physics Letters: 100, 61601

101. Stevens, M., Mcintosh, D., Saleh, O. (2012) "Simulations of Stretching a Strong, Flexible Polyectrolyte" Macromolecules: 45,5757

102. Subramania, G., Fischer, A.J., Luk, T.S. (2012) "Optical Properties of Metal-Dielectric Based Epsilon Near Zero Metamaterials" Applied Physics Letters: 101, 241107-241104

103. Sullivan, J., Hearne, S., Huang, J., Hudak, N., Liu, X., Liu, Y., Shaw, M., Subramanian, A., Zavadil, K. (2012) "In-situ TEM Investigation of Electrokinetic Nanomanipulation and Nanoengineering of Molecular-to-Nanoscale Constructs" Spring ECS Meeting: Seattle, WA, May 6-10

104. Talbayev, D., Chia, E.M., Taylor, A.J., Trugman, S.A., Zhu, J.X. (2012) "Relaxation of Photoinduced Quasiparticles in Correlated Electron Metals" IEEE Journal of Selected Topics in Quantum Electronics: 18, 340

105. Tang, W., Dayeh, S., Huang, J., Picraux, S.T., Tu, K. (2012) “Ultrashort Channel Silicon Nanowire Transistors with Nickel Silicide Source/Drain Contacts” Nano Lett.: 12, 3979

106. Taylor, R.M., Esch, V., Huber, D.L., Monson, T.C., Sillerud, L.O. (2012) “Structural and Magnetic Characterization of Superparamagnetic Iron Platinum Nanoparticle Contrast Agents for Magnetic Resonance Imaging” Journal of Vacuum Science & Technology: 30(2)

107. Tian, Y., Beavers, C., Busani, T., Jacobsen, J.L., Martin, K.E., Medforth, C.J., Mercado, B., Shelnutt, J.A., Swartzentruber, B.S., Van Swol, F. (2012) “Binary Ionic Porphyrin Nanosheets: Electronic and Light-Harvesting Properties Regulated by Crystal Structure” Nanoscale: 4, 1695-1700

108. Tian, Y., Busani, T., Martin, K.E., Medforth, C.J., Montano, G.A., Shelnutt, J.A., Uyeda, G.H., Van Swol, F. (2012) “Hierarchical Cooperative Binary Porphyrin Nanocomposites” Chem. Commun.: 48, 4863-4865

109. Tian, Z., Hinkey, R., Jiang, Y., Johnson, M., Li, L., Mishima, T., Santos, M., Yang, R., Yin, Z. (2012) “InAs-Based Mid-Infrared Interband Cascade Lasers Near 5.3 Um” IEEE Journal of Quantum Electronics: 48, 7

110. Van Swol, F., Challa, S., Shelnutt, J. (2012) “a Thermodynamic Perspective of the Metastability of Holey Sheets: The Role of Curvature” PCCP: 14, 13309-13318

111. Verma, A., Ghosh, Y., Hollingsworth, J.A., Htoon, H., Malko, A., Sampat, S. (2012) “Pump Wavelength-Dependent Time Correlated Photoluminescence Spectroscopy of Giant Quantum Dots” Bulletin of the American Physical Society: 57

112. Vidmar, L., Bonca, J. (2012) “Real-Time Current of a Charge Carrier in a Strongly Correlated System Coupled to Phonons, Driven by a Uniform Electric Field” Journal of Supercond.: 25, 5, 1255-1258

113. Vidmar, L., Bonca, J., Maekawa, S., Tohyama, T. (2012) Quantum Dynamics of a Driven Correlated System Coupled to Phonons” Phys. Rev. Letters: 107, 24

114. Vidmar, Bonca, J., Mierzejewski, M., Prelovsek, P., Trugman, S. (2012) “Nonequilibrium Dynamics of the Holstein Polaron Driven by an External Electricfield” Phys. Rev. B.: 83, 13

115. Woong, Y., Chacon-Madrid, K., Hong, J., Kim, J., Peteanu, L., Sherwood, G., Shreve, A., Werner, J., Wildeman, J. (2012) “Effects of Solvent Properties on the Spectroscopy and Dynamics of Alkoxy-Substituted PpV Oligomer Aggregates” Journal of Physical Chemistry B: 10.1021

116. Xu, H., Balakrishnan, G., Brener, I., Cross, K., Figiel, J., Hurtado, A., Lester, L, Li, Q., Luk, T., Wang, G., Wright, J. (2012) "Gold Substrate-Induced Single-Mode Lasing of Gan Nanowires" Applied Physics Letters: 10.1063

117. Xu, H., Balakrishnan, G., Brener, I., Cross, K., Figiel, J.J., Hurtado, A., Lester, L.F., Li, Q., Luk, T.S., Wright, J.B. (2012) "Single-Mode Lasing of Gan Nanowire-Pairs" Applied Physics Letters: 101, 11

118. Yan, L., Civale, L., Haberkorn, N., Jia, Q.X., Li, J., Viehland, D., Wang, Z., Yao, J., Zhang, S., Zhou, M.J. (2012) "Magnetoelectric Properties of Flexible $BiFeO_3$/Ni Tapes," Appl. Phys. Lett.: 101, 012908

119. Yang, H., Chen, L., Fan, F., Huang, J., Huang, S., Liang, W., Li, J., Liu, X., Zhang, S., Zhu, T. (2012) "Orientation-Dependent Interfacial Mobility Governs the Anisotropic Swelling in Lithiated Silicon Nanowires" Nano Letters: Pp. 1953-1958

120. Yang, L., Koralek, J.D., Lilly, M.P., Orenstein, J., Reno, J.L., Tibbetts, D.R. (2012) "Coherent Propagation of Spin Helices in a Quantum-Well Confined Electron Gas" Phys. Rev. Letters: 109, 246603

121. Yang, L., Koralek, J.D., Lilly, M.P., Orenstein, J., Reno, J.L., Tibbetts, D.R. (2012) "Doppler Velocimetry of Spin Propagation in a Two-Dimensional Electron Gas" Nature Phys.: 8, 153

122. Yoon, Y., Aoki, N., Bird, J., Fransson, J., Kang, M., Morimoto, T., Mourokh, L., Ochiai, Y., Reno, J. (2012) "Coupling Quantum States through a Continuum: A Mesoscopic Multistate Fano Resonance" Physical Review: 2, 021003

123. Zhang, S.X., Jia, Q.X., Picraux, S.T., Prasankumar, R., Qi, J., Wang, Y.Q., Yan, L., Zhuo, M. (2012) "Epitaxial Thin Films of Topological Insulator Bi_2Te_3 with Two- Dimensional Weak Anti-Localization Effect Grown by Pulsed Laser Deposition," Thin Solid Films: 520, 6459-6462

124. Zhang, S.X., Bi, Z.X., Jia, Q.X., Li, Y., Mcdonald, R.D., Picraux, S., Shekhter, A., (2012) "Magneto-Resistance up to 60 Tesla in Topological Insulator Bi_2Te_3 Thin Films," Appl. Phys. Lett.: 101, 202403

125. Zhang, Y.Y., Bauer, E., Burrell, A.K., Gofryk, K., Haberkorn, N., Jia, Q.X., Mara, N.U., Mccleskey, T.M., Ronning, F., Wang, H., Zou, G. (2012) "Aligned Carbon Nanotubes Sandwiched in Epitaxial NbC Film for Enhanced Superconductivity" Nanoscale: 4, 2268-2271

126. Zheng, H., Huang, J., Mao, S., Liu, Y., Wang, J. (2012) "Beam-Assisted Large Elongation of In-Situ Formed Li_2O Nanowire" Sci Rep.: 2, 542

127. Internal User:

128. Alexandrov, B.S., Alexandrov, L.B., Bishop, A.R., Booshehri, L., Chen, H.T., Erat, A., Martinez, J.S., Mielke, C.H., Phipps, M.L., Rasmussen, K.O., Rodriguez, G., Usheva, A., Zabolotny, J. (2012) "Specificity and Heterogeneity of Terahertz Radiation Effect on Gene Expression in Mouse Mesenchymal Stem Cells" Sci Rep.: 3, 1184

129. Bulaevskii, L., Graf, M., Kogan, V. (2012) "Comment on Äö√Ñ√¥ Vortex-Assisted Photon Counts and their Magnetic Field Dependence in Single-Photon Superconducting Detectors, Äö√Ñ√¥" Physical Review B: 83, 14

130. Bulaevskii, L., Graf, M., Kogan, V. (2012) "Vortex Assisted Photon Counts and Their Magnetic Field Dependence in Single-Photon Superconducting Detectors" Physical Review B: 85, 1

131. Beyerlein, I.J., Carpenter, J.S., Han, W.Z., Kang, K., Mara, N.A., Nizolek, T., Pollock, T.M., Wang, J., Zhang, R.F., Zheng, S.J. (2012) "Structure-Property-Functionality of Bimetal Interfaces" JOM: 64, 10

132. Carpenter, J.S., Beyerlein, I.J., Mara, N.A., Vogel, S.C., Zhang, R.F., Zheng, S.J. (2012) "Thermal Stability of Cu-Nb Nanolamellar Composites Fabricated via Accumulative Roll Bonding" Philosophical Magazine: 1-18

133. Cheng, G., Brown, P., Browning, J., Datta, S., Dubey, M., Esker, A., Halbert, C., Huber, D., Hutcheson, S., Jabling, M., Liu, Z., Kent, M., Majewski, J., Murton, J., Sale, K., Simmons, B., Wang, C., Watson, B., Zhang, H. (2012) "Interactions of Endoglucanases with Amorphous Cellulose Films Resolved by Neutron Reflectometry and Quartz Crystal Microbalance with Dissipation Monitoring" Langmuir: 28, 8348-8358

134. Cho, J., Li, X., Picraux, S.T. (2012) "The Effect of Metal Silicide Formation on Silicon Nanowire-Based Lithium-Ion Battery Anode Capacity" J. Power Sources: 205, 467-473

135. Crochet, J.J., Doorn, S.K., Duque, J.G., Werner, J.H. (2012) "Photoluminescence Imaging of Localized and Delocalized Electronic Defects in Single-Wall Carbon Nanotubes" Nature Nanotech: 7, 126

136. Dalvit, D.A.R., O'hara, J., Trugman, S.A. (2012) "Modal Analysis Method to Describe Weak Nonlinear Effects in Metamaterials" Phys. Rev. B: 85, 125107

137. Dani, K., Ajayan, P., Dattelbuam, A., Galande, C., Htoon, H., Lee, J., Mohite, A., Prasankumar, R., Sharma, R., Taylor, A. (2012) "Intraband Conductivity Response in Graphene Observed Using Ultrafast Infrared-Pump Visible-Probe Spectroscopy" Phys. Rev. B:

86, 125403

138. Dani, K.M., Ajayan, P.M., Dattelbaum, A.M., Galande, C.M., Htoon, H., Lee, J., Mohite, A.D., Prasankumar, R.P., Sharmam R., Taylor, A.J. (2012) "Relativistic Drude Response of Photoexcited Dirac Quasiparticles in Graphene" Phys. Rev. B: 86, 125403

139. Dennis, A.M., Hollingsworth, J.A., Htoon, H., Mangum, B.D., Park, Y.S., Piryatinski, A. (2012) "Bandgap Engineering of InP QdS through Shell Thickness and Composition" Los Alamos National Laboratory

140. Dennis, A., Casson, J.L., Hannah, D., Hollingsworth, J.A., Htoon, H., Mangum, B.D., Park, Y.S., Piryatinski, A., Schallert, R., Williams, D.J. (2012) "Suppressed Blinking and Auger Recombination in Near-Infrared Type-Ii InP/CdS Nanocrystal Quantum Dots" Nano Lett.: 10.1021

141. Dennis, A., Hollingsworth, J.A., Htoon, H., Mangum, B., Park, Y. (2012) "Synthesis of Novel Non-Blinking Semiconductor Nanocrystal Quantum Dots Emitting in the Near- Infrared" ACS Spring

142. Fu, E., Caro, A., Caro, M., Nastasi, M., Wang, Y. (2012): "Irradiation Response and Stability of Nanoporous Materials" 18th International Conference on Ion Beam Modification of Materials: Qingdao, China, September 2-7

143. Fu, E., Baldwin, J., Bringa, E., Caro, A., Caro, M., Nastasi, M., Wang, Y., Zepeda-Ruiz, (2012) "Nanofoams Response to Radiation Damage" CAARI 22nd Int. Conf. on the Application of Accelerators in Np-Au Foams: September 2012

144. Fu, E., Baldwin, J., Bringa, E., Caro, A., Caro, M., Nastasi, M., Wang, Y., Zepeda-Ruiz, L. (2012) "Temperature Dependent Radiation Response of Nanoporous (Np) Au Foams" Computer Simulation of Radiation Effects in Solids: June 24-29 2012, Santa Fe, NM (Poster)

145. Ghosh, Y., Casson, J.L., Hollingsworth, J.A., Htoon, H., Mangum, B.D., Williams, D.J. (2012) "New Insights into the Complexities of Shell Growth and the Strong Influence of Particle Volume in Nonblinking "Giant" Core/Shell Nanocrystal Quantum Dots" J. Am Chem. Soc.: 134 (23)

146. Gilbertson, S., Dakvoski, G., Dani, K.M., Dattelbaum, A.M., Durakiewicz, T., Mohite, A.D., Rodriguez, G., Zhu, J.X. (2012) "Tracing Ultrafast Separation and Coalescence of Carriers in Graphene with Time-Resolved Photoemission" J. Phys. Chem: 3, 64-68

147. Gilbertson, S., Dattelbaum, A.M., Durakiewicz, T., Mohite, A.D., Rodriguez, G., Zhu,
148. J.X. (2012) "Direct Measurement of Quasiparticle Lifetimes in Graphene" J. Vac. Sci. Technology B: 30, 03

149. Ginn, J.C., Basilio, L.I., Brener, I., Clem, P.G., Hines, P.F., Ihlefeld, J.F., Peters, D.W., Stevens, J.O., Warne, L.K., Wendt, J.R. (2012) "Realizing Optical Magnetism from Dielectric Metamaterials" Physical Review Letters: 108, 9

150. Goel, S., Ivanov, S., Piryatinski, A., Tretiak, S., Velizhanin, K.A. (2012) "Ligand Effects on Optical Properties of Small Gold Clusters: A TDDFT Study" the Journal of Physical Chemistry C: 116, 5

151. Han, J.J., Shreve, A.P., Werner, J.H. (2012) "Super-Resolution Optical Microscopy" Characterization of Materials: Vol. 2

152. Han, J.J., Bradbury, A., Kiss, C., Werner, J.H. (2012) "Time-Resolved, Confocal Single Molecule Tracking of Individual Organic Dyes and Fluorescent Proteins in Three Dimensions" ACS Nano: 6 (10), 8922-8932

153. Haraldsen, J., Balatsky, A., Wolfle, P. (2012) "Understanding the Electric-Field Enhancement of the Superconducting Transition Temperature for Complex Oxide Interfaces" Physical Review B: 85, 134501

154. Hollis, K., Dickerson, P., Field, R., Mara, N.A., Wynn, T. (2012) "Bond Strength Characterization of Plasma Sprayed Zirconium on Uranium Alloy by Microcantilever Testing" Thermal Spray: Proceedings of the International Thermal Spray Conference, P. 70-75

155. Hopkins, P.E., Baraket, M., Barnat, E.V., Beechem, T.E., Kearney, S.P., Duda, J.C., Robinson, J., Walton, S. (2012) "Manipulating Thermal Conductance at Metal-Graphene Contacts via Chemical Functionalization" Nano Letters: 12, 590-595

156. Hopkins, P.E., Brinker, C.J., Dunphy, D., Kaehr, B., Piekos, E.S. (2012) "Minimum Thermal Conductivity Considerations in Aerogel Thin Films" Journal of Applied Physics: 111, 113532

157. Kaehr, B., Awad, Y., Brinker, C.J., Dunphy, D., Kalinich, R.M., Swartzentruber, B.S., Townson, J.L. (2012) "Cellular Complexity Captured in Durable Silica Biocomposites" PnAs

158. Kundu, J., Dennis, A.M., Ghosh, Y., Hollingsworth, J.A., Htoon, H. (2012) "Giant Nanocrystal Quantum Dots: Stable Down-Conversion Phosphors that Exploit a Large Stokes Shift and Efficient Shell-to-Core Energy Relaxation" Nano Lett.: 12 (6)

159. Lee, J., Jia, Q., Prasankumar, R., Talbayev, D., Taylor, A., Trugman, S., Xiong, J., Yarotski, D., Zhu, J. (2012) "Quasiparticle Dynamics in YbCo and YbCo/LsMo Measured Femtosecond Optical Spectroscopy" Conference on Lasers and Electro-Optics

160. Li, N., Dickerson, P., Huang, J., Mara, N.A., Misra, A., Wang, J. (2012) "Ex-Situ and In-Situ

Measurements of the Shear Strength of Interfaces in Metallic Multilayers" Scripta Materialia: 67, 5

161. Li, X., Cho, J., Dayeh, S., Li, N., Picraux, S.T., Williams, D., Zhang, Y. (2012) "Carbon-Nanotube-Enhanced Growth of Silicon Nanowires as an Anode for High-Performance Lithium Ion Batteries" Advanced Energy Materials: 2, 87

162. Lin, S., Bulaevskii, L., Graf, M., Hasegawa, Y., Nishio, T. (2012) "Thermally Assisted Penetration and Exclusion of Single Vortex in Mesoscopic Superconductors" Physical Review B: 85, 13

163. Liu, S., Bender, D.A., Brener, I., Clem, P.G., Ginn, J., Ihlefeld, J.F., Mahony, T.S., Sinclair, M.B., Wendt, J.R., Wright, J.B. (2012) "Direct Observation of Optical Magnetismm from a Dielectric Resonator Metamaterial Using Time-Domain Spectroscopy in the Mid-Infrared" IEEE Photonics Conference: Pg. 784-785

164. Mara, N.A., Beyerlein, I.J., Carpenter, J.S., Wang, J. (2012) "Interfacially-Driven Deformation Twinning in Bulk Ag-Cu Composites" JOM: 64, 10

165. Mohite, A.D., Campbell, I., Dayeh, S., Htoon, H., Perea, D.E., Picraux, S.T., Singh, S. (2012) "Highly Efficient Charge Separation and Collection Across In-Situ Doped Axial VLS-Grown Si Nanowire P-N Junctions" Nano Lett.: 12 (4), 1965-1971

166. Nakajima, T., Fishman, R., Haraldsen, J., Hong, T., Mitsuda, S., Terada, N., Uwatoko, Y. (2012) "Magnetic Interaction in the Multiferroic Phase of Cufe1-Gaxo2 (X=.035) Refined by Inelastic Neutron Scattering with Uniaxial-Pressure Control Domain Structure" Physical Review B: 85, 144405

167. Pal, B.N., Brovelli, S., Ghosh, Y., Hollingsworth, J.A., Htoon, H., Klimov, V.I, Laocharoensuk, R. (2012) "'Giant' CdSe/CdS Core/Shell Nanocrystal Quantum Dots as Efficient Electroluminescent Materials: Strong Influence of Shell Thickness on Light-Emitting Diode Performance" Nano Lett.: 12, 331

168. Park, Y.S., Chen, Y., Ghosh, Y., Hollingsworth, J.A., Htoon, H., Klimov, V.I., Mack, N.H., Piryatinski, A., Xu, P., Wang, H.L. (2012) "In Strong Photon Bunching in Individual Nanocrystal Quantum Dots Coupled to Rough Silver Film" Quantum Electronics and Laser Science Conference

169. Picraux, S.T., Campbell, I.H., Dayeh, S.A., Perea, D.E., Yoo, J. (2012) "Semiconductor Nanowires for Solar Cells" Chapter in: Semiconductor Nanostructures for Optoelectronic Devices: Pp. 297-328

170. Qi, J., Jia, Q., Prasankumar, R., Taylor, A., Trugman, S., Yan, L., Zhu, J. (2012) "Using

Ultrafast Optical Pump-Probe Spectroscopy to Reveal Coexisting Magnetic Orders in Epitaxial $RmNo_3$ Films" March Meeting of the American Physical Society

171. Seo, M., Dayeh, S., Picraux, S., Prasankumar, R., Taylor, A., Yoo, J. (2012) "Mapping Carrier Diffusion in Single Silicon Core-Shell Nanowires with Ultrafast Optical Microscopy" Nano Letters: 12,6334

172. Seo, M., Dayeh, S., Perea, D., Picraux, S., Prasankumar, R., Taylor, A., Yoo, J. (2012) "Tracking Ultrafast Carrier Dynamics in Single Semiconductor Nanowire Heterostructures" 18th ~~International Conference on Ultrafast Phenomena: Ox~~ford University Press

173. Seo, M., Dayeh, S., Martinez, J., Picraux, S., Prasankumar, R., Swartzentruber, B., Taylor, A., Upadhya, P. (2012) "Understanding Ultrafast Carrier Dynamics in Single Quasi- One-Dimensional Si Nanowires" Appl. Phys. Lett: 100,071104

174. Sharma, J.K., Balatsky, K.A., Martinez, J.S., Phipps, M.L., Rocha, R.C., Shreve, A.P., Vu, D.M., Werner, J.H., Yeh, H.C. (2012) "A DNA-Templated Fluorescent Silver Nanocluster with Enhanced Stability" Nanoscale: 4, 4107-4110

175. Sharma, J.K., Martinez, J.S., Phipps, M.L., Werner, J.H., Yeh, H.C. (2012) "Evolution of Highly Fluorescent Silver Nanocluster" Nanoscale: 4(14), 4107-4110

176. Sheu, Y., Cheong, S., Jia, Q., Lee, S., Park, Y., Prasankumar, R., Taylor, A., Trugman, S., Yi, H. (2012) "Ultrafast Carrier Dynamics and Radiative Recombination in Multiferroic $BiFeO_3$" Appl. Phys. Lett: 100, 242904

177. Sheu, Y., Jia, Q., Prasankumar, R., Taylor, A., Trugman, S., Zhu, J. (2012) "Ultrafast P-D Charge-Transfer Carrier Dynamics of Multiferroic $BiFeO_3$" March Meeting of the American Physical Society

178. Subramania, G., Fischer, A., Luk, T. (2012) "Optical Properties of Metal-Dielectric Based Epsilon Near Zero Metamaterials" Applied Physics Letters: 101, 241107-241104

179. Tao, J., Chia, E., Prasankumar, R., Taylor, A., Zhu, J. (2012) "Theory of Ultrafast Carrier Dynamics in High-Temperature Superconductors: Pump Fluence Dependence" Phys. Rev. B: 85,144302

180. Talbayev, D., Averitt, R., Cheong, S., Lee, J., Prasankumar, R., Taylor, A., Trugman, S., Zhang, C. (2012) "Ultrafast Pump-Probe Reflectance Study of Multiferroic $Eu.75y.25MnO_3$" March Meeting of the American Physical Society

181. Tang, M., Mara, N.A., Monnet, I., Patel, M.K., Pivin, J.C., Sickafus, K.E., Won, J., Wynn,

T.A. (2012) “Structure and Mechanical Properties of Swift Heavy Ion Irradiated Tungsten-Bearing Delta-Phase Oxides Y6W1O12 and Yb6W1O12” Journal of Nuclear Materials: 425, 1-3

182. Telg, H., Doorn, S.K., Duque, J.G., Hennrich, F., Kappes, M., Maultzsch, J., Staiger, M., Thomsen, C., Tu, X., Zheng, M. (2012) “Chiral Index Dependence of the G+ and G- Raman Modes in Semiconducting Carbon Nanotubes” ACS Nano: 6, 904

183. Wang, G.T., Brener, I., Figiel, J., Li, Q., Luk, T.S., Wierer, J., Wright, J.B. (2012) “Top- Down Fabrication of Gan-Based Nanorod LEDs and Lasers” Proceedings of SPIE: 8278

184. Wiley, T., Haraldsen, J. (2012) “The Theory of Modulated Hormone Therapy for the Treatment of Breast Cancer in Pre- and Post- Menopausal Women” AIP Advances: 2, 011206

185. Yarotski, D., Balatsky, A. (2012) “DNA Sequencing and Detection with Nanoprobes” CECAM Workshop: Pisa, Italy

186. Yau, S.H., Abeyasinghe, N., Goodson, T., Martinez, J.S., Orr, M., Sharma, J., Shreve, A.P., Upton, L., Varnavsi, O., Werner, J.H., Yeh, H.C. (2012) “Bright Two-Photon Emission and Ultra-Fast Relaxation Dynamics in a DNA-Templated Nanocluster Investigated by Ultra-Fast Spectroscopy” Nanoscale: 4, 4247-4254

187. Yeager, J., Dubey, M., Hooks, D., Majewski, J., Ramos, K., Singh, S., Sun, C. (2012) “Probing Interfaces Between Pharmaceutical Crystals and Polymers by Neutron Reflectometry.” Molecular Pharmaceutics: 9 (7), 1953-61.

188. Yeager, J., Fezzaa, K., Hooks, D., Jensen, B., Montgomery, D., Luo, S. (2012) “High- Speed X-Ray Phase Contrast Imaging for Analysis of Low-Z Composite Microstructure.” Composites Part A: Applied Science and Manufacturing: 43 (6), 885-92.

189. Yeager, J., Hooks, D., Majewski, J., Ramos, K., Singh, S., Rutherford, M. (2012) “Nanoindentation of Explosive-Polymer Composites to Simulate Deformation and Failure.” Materials Science and Technology: Vol. 28, 9-10, Pp. 1147-1155

190. Yeh, H.C., Martinez, J.S., Sharma, J., Shih, I.M., Vu, D.M., Werner, J.H. (2012) “A Fluorescence Light-Up Ag Nanocluster Probe That Discriminates Single-Nucleotide Variants by Emission Color” Journal of the American Chemical Society: 134, 11550-11558

191. Yeh, H.C., Martinez, J.S., Sharma, J., Shih, I.M., Vu, D.M., Werner, J.H. (2012) “Colorimetric Detection of Single-Nucleotide Variations using Silver Nanoclusters” J. Amer. Chem. Soc.: 134(28) 11550-11558

192. Yeu, S.H., Abeyasinghe, N., Goodson, T. Iii, Martinez, J.S., Orr, M., Sharma, J.H., Shreve, A.P., Varnavski, O., Werner, J.H., Yeh, H.C. (2012) "Bright Two-Photon Emission and Multi-Atom Excitation in a DNA-Templated Fluorescent Silver Nanoclusters Investigated by Ultra-Fast Spectroscopy" Nanoscale: 4(14) 4247-4254

193. Zhang, S., Azad, A. K., Chen, H.-T., Nam, S., Park, Y.-S., Rho, J., Singh, R., Taylor, A. J., Yin, X., Zhang, X., Zhou, J. (2012) "Photoinduced Handedness Switching in Terahertz Chiral Metamolecules" Nature Communications: 3, 942

194. Zhang, S., Jia, Q., Picraux, S., Prasankumar, R., Qi, J., Wang, Y., Yan, L., Zhuo, M. (2012) "Pulsed Laser Deposition and Characterization of Epitaxial Topological Insulator Bi_2Te_3 Thin Films" Thin Solid Films: 520, 6459

195. Zhang, S.X., Jia, Q., Picraux, S.T., Prasankumar, R.P., Qi, B., Wang, Y.Q., Yan, L., Zhuo, M. (2012) "Epitaxial Thin Films of Topological Insulator Bi_2Te_3 with Two- Dimensional Weak Anti-Localization Effect Grown by Pulsed Laser Deposition" Thin Solid Films: 520, 6459-6462

196. Zhou, J., Azad, A. K., Chen, H.-T., O'hara, J. F., Roy Chowdhury, D., Soukoulis, C. M., Taylor, A. J., Zhao, R. (2012) "Terahertz Chiral Metamaterials with Giant and Dynamically Tunable Optical Activity" Physical Review B: 86, 035448.

197. CINT Science:

198. Bachand, G., Achyuthan, K., Allen, A., Bachand, M., Brozik, S., Seagrave, J. (2012) "Cytotoxicity and Inflammation in Human Alveolar Epithelial Cells Following Exposure to Occupational Levels of Gold and Silver Nanoparticles" J. Nanopart Res.: 14, 1

199. Bachand, M., Bachand, G.D. (2012) "Effects of Potential Environmental Interferents on Kinesin-Powered Molecular Shuttles" Nanoscale: 4, 3706

200. Bae, J., Choi, J., Hong, S., Hwang, I., Jeong, Y., Jia, Q.X., Kang, S.O., Park, B.H., Park, J., Seong, M.J., Son, J. (2012) "Coexistence of Bi-Stable Memory and Mono-Stable Threshold Resistance Switching Phenomena in Amorphous Nbox Films" Appl. Phys. Lett.: 100, 062902

201. Bringa, E.M., Abraham, M., Caro, A., Duchaineau, M., Farkas, D., Misra, A., Monk, J.D., Nastasi, M., Picraux, S.T., Wang, Y.Q., Zepeda-Ruiz, L. (2012) "Are Nanoporous Materials Radiation Resistant?" Nano Lett.: 12, 3351

202. Cannon, W.R., Danzig, B.A., Liu, X., Macdonald, G., Martinez, J.S., Shreve, A.P., Talley, N.D. (2012) "Ion Specific Influences on the Stability and Unfolding Transitions of a Naturally Aggregating Protein; RecA" Biophysical Chem.: 16304, 56-63

203. Caviezel, A., Beaud, P., Cheong, S., Garganourakis, M., Huang, S., Ingold, G., Jia, Q., Johnson, S., Mariager, S., Milne, C., Mohr-Vorobeva, E., Scagnoli, V., Staub, U. (2012) "Femtosecond Dynamics of the Structural Transition in Mixed Valence Manganites" Physical Review B: 86,174105

204. Chen, H.-T. (2012) "Interference Theory of Metamaterial Perfect Absorbers" Optics Express: 20, 7165-7172

205. Clark, J., Nelson, T., Tretiak, S. (2012) "Femtosecond Torsional Relaxation" Nature Physics: 8, 3, 225-231

206. Dickey, A., Stevens, M. (2012) "The Site-Dipole Field and Vortices in Confined Water" Phys. Rev. E: 86,051601

207. Fu, E.G., Baldwin, J.K., Jia, Q.X., Misra, A., Nastasi, M., Shao, L., Wang, Y.Q., Wei, Q.M., Xiong, J., Zhuo, M.J., Zou, G.F. (2012) "Irradiation Induced Changes in Small Angle Grain Boundaries in Mosaic Cu Thin Films" Appl. Phys. A: 108, 121-126

208. Gabbay, A., Brener, I. (2012) "Theory and Modeling of Electrically Tunable Metamaterial Devices using Inter-Subband Transitions in Semiconductor Quantum Wells" Optics Express: 20, 6

209. Gupta, G., Baldwin, J.K., Dattelbaum, A.M., Misra, A., Picraux, S.T., Thorp, J.C. (2012) "Morphology and Porosity of Nanoporous Au Thin Films Formed by Dealloying of Auxsi1-X" J. Appl. Physics: 112, 094320

210. Hall, L., Frischknecht, A., Stevens, M. (2012) "Dynamics of Model Ionomer Melts of Various Architectures" Macromolecules: 45, 8097

211. Han, W., An, Q., Chen, H.-T., Huang, L., Luo, S.-N. (2012) "Crystallization of Liquid Cu Nanodroplets on Single Crystal Cu Substrates Prefers Closest-Packed Planes Regardless of the Substrate Orientations" Journal of Crystal Growth: 345, 34-38

212. Hatke, A.T., Pfeiffer, L.N., Reno, J.L., West, K.W, Zudov, M.A. (2012) "Giant Negative Magnetoresistance in High-Mobility 2d Electron Systems" Physical Review B: 85, 8

213. Huang, L., Azad, A. K., Chen, H.-T., Luo, S.-N., Ramani, S., Reiten, M. T., Roy Chowdhury, D., Taylor, A. J. (2012) "Impact of Resonator Geometry and Its Coupling with Ground Plane on Ultrathin Metamaterial Perfect Absorbers" Applied Physics Letters: 101, 101102

214. Huang, L., Chen, H.-T., Luo, S.-N., Roy Chowdhury, D., Ramani, S., Reiten, M. T., Taylor, A. J., (2012) "Experimental Demonstration of Terahertz Metamaterial Absorbers with a

Broad and Flat High Absorption Band" Optics Letters: 37, 154-156

215. Hudak, N.S., Huber, D.L. (2012) "Size Effects in the Electrochemical Alloying and Cycling of Electrodeposited Aluminum with Lithium" Journal of the Electrochemical Socitey: 159, 5
216. Ji, Y.D., Bi, Z., Chen, C.L., Jia, Q.X., Liang, W.Z., Pan, T.S., Specht, E.D., Wen, H.W.,
217. Zeng, H.Z., Zhang, H.W., Zhang, Y. (2012) "Influence of Defect-Induced Biaxial Strain on Flux Pinning in Thick Yba2cu3o7 Layers," Phys. Rev. B: 86, 094511

218. Jun, Y.C., Brener, I., Gabbay, A., Gonzales, E., Reno, J.L., Shaner, E.A. (2012) "Active Tuning of Mid-Infrared Metamaterials by Electrical Control of Carrier Densities" Optics Express: 20, 2

219. Jun, Y.C., Brener, I. (2012) "Electrically Tunable Infrared Metamaterials Based on Depletion-Type Semiconductor Devices" Journal of Optics: 14, 11

220. Jun, Y.C., Brener, I. (2012) "Optical Manipulation with Plasmonic Beam Shaping Antenna Structures" Advances in Optoelectronics

221. Kelly, J.C., Bunker, B.C., Huber, D.L., Pepin, M., Roberts, M.E. (2012) "Reversible Control of Electrochemical Properties using Thermally-Responsive Polymer Electrolytes" Advanced Materials: 24(7)

222. Kim, Y., Baldwin, J.K., Budiman, A., Han, S., Mara, N.A. (2012) "Microcompression Study of Al-Nb Nanoscale Multilayers" Journal of Materials Research: 27, 3

223. Kinzel, E.C., Boreman, G.D., Brener, I., Ginn, J.C., Lail, B.A., Olmon, R.L., Raschke, M.B., Shelton, D.J., Sinclair, M.B. (2012) "Phase Resolved Near-Field Mode Imaging for the Design of Frequency-Selective Surfaces" Optics Express: 20, 2

224. Liang, W., Bi, Z., Chen, C.L., Du, H., Huang, J., Ji, Y., Jia, Q.X., Lin, Y., Nan, T., Zeng,
225. H. (2012) "Growth Dynamics of Barium Titanate Thin Films on Polycrystalline Ni Foils using Polymer Assisted Deposition Technique" ACS Appl. Mater. & Interfaces: 4, 2199- 2203

226. Mccleskey, T., Bauer, E., Burrell, A., Jia, Q., Scott, B. (2012) "Optical Band Gap of NpO_2 and PuO_2 from Optical Absorbance of Epitaxial Films" Journal of Applied Physics: 113, 013515

227. Modine, N.A., Wright, A.F. (2012) "Charge States of the Silicon Self- Interstitial Revisited" Proceedings of the 6th International Symposium on Advanced Science and Technology of Silicon Materials

228. Peters, B., Grest, G., Ismail, A., Lane, M. (2012) "Fully Atomistic Simulations of the Response of Silica Nanoparticle" Langmuir: 28, 17443-17449

229. Prasankumar, R., Trugman, S. (2012) "Ultrafast Optical Probes of Coupled Systems" Materials Capability Review

230. Shepherd, D.P., Hong-Geller, E., Li, N., Munsky, B., Werner, J.H. (2012) "New Tools for Discovering the Role SRNA Plays in Cellular Regulation" Proc. of the SPIE: 8228, 8228-1

231. Singh, R., Azad, A. K., Chen, H.-T., Jia, Q. X., Taylor, A. J., Trugman, S. A., Xiong, J., Yang, H. (2012) "Optical Tuning and Ultrafast Dynamics of High-Temperature Superconducting Terahertz Metamaterials" Nanophotonics 1, 117-123

232. Temirov, J., Bradbury, A.R.M., Goodwin, P.M., Werner, J.H. (2012) "Sizing the Oligomers of Azami Green Fluorescent Protein with FCS and Antibunching" Proc. of the SPIE: 8228, 8228-1 to 8228-10

233. Van Gough, D., Austin, M.J., Bunker, B.C., Huber, D.L., Moore, D., Roberts, M.E., Spoerke, E.D., Wheeler, J.S., Zarick, H.F. (2012) "Thermally Programmable Ph Buffers" ACS Applied Materials & Interfaces: 4(11) P. 6247-51

234. Wang, P., Baldwin, J.K., Grubbs, R.K., Hicmott, D.D., Lerner, A.H., Majewski, J., Taylor, M. (2012) "High-Pressure and High-Temperature Neutron Reflectometry Cell for Solid-Fluid Interface Studies" European Physics Journal Plus: 127, 76

235. Wanke, M.C., Cich, M.J., Fuller, C.T., Grine, A.D., Lee, M., Nordquist, C.D., Reno, J.L. (2012) "Common Mode Frequency Instability in Internally Phase-Locked Terahertz Quantum Cascade Lasers" Optics Express: 19, 24810

236. Wright, J.B, Cicotte, K.N., Brener, I., Dirk, S.M., Subramania, G. (2012) "Chemoselective Gas Sensors Based on Plasmonic Nanohole Arrays" Optical Materials Express: 2, 11

237. Yarotski, D., Fu. E.G., Jia, Q.X., Taylor, A.J., Uberuaga, B.P, Wang, Y.Q., Yan, L. (2012) "Characterization of Irradiation Damage Distribution Near $TiO_2/SrTiO_3$ Interfaces Using Coherent Acoustic Phonon Interferometry" Appl. Phys. Lett.: 100, 251603

238. Zhang, Y., Gofryk, K., Mara, N.A., Ronning, F. (2012) "Aligned Carbon Nanotubes Sandwiched in Epitaxial NbC Film for Enhanced Superconductivity" Nanoscale: 4, 7

239. Zheludev, N., Padilla, W.J., Brener, I. (2012) "Editorial: Photonic Materials on Demand Photonic Materials on Demand" Journal of Optics: 14, 11

240. Zhuo, M.J., Dickerson, R.M., Fu, E.G., Jia, Q.X., Misra, A., Nastasi, M., Uberuaga, B.P., Wang, Y.Q., Yan, L. (2012) "Radiation Damage at the Coherent Anatase $TiO_2/SrTiO_3$ Interface Under Ne Ion Irradiation" J. Nuclear Mater.: 429, 177-184

241. Patent:

242. Brueck, S., Kuznetsova, Y., Neumann, A. (2012) “Imaging interferometric microscopy” Patent 8,203,782 B2

243. Klimov, V., Ivanov, S. (2012). “Single-Exciton Nanocrystal Laser.” US Patent Office: US 8,098,700 B2