

## CINT Publications for 2015 (236 Total)

### CINT Science (30)

Adams, P.G., Swingle, K.L., Paxton, W.F., Firestone, M.A., Mukundan, H., Montano, G.A. (2015) "Exploiting lipopolysaccharide-induced deformation of lipid bilayers to modify membrane composition and generate two-dimensional geometric membrane array patterns" Scientific Report: 5, 10331

Bolinteanu, D.S., Grest, G.S., Lechman, J.B., Silbert, L.E. (2015) "Diffusion in jammed particle packs" Physical Review Letters: 115, 088002

Chen, H.T. (2015) "Semiconductor activated terahertz metamaterials" Frontiers of Optoelectronics: 8, 27

Driben, R., Yulin, A., Efimov, A. (2015) "Resonant radiation from oscillating higher order solitons" Optics Express: 23, 19112

Efimov, A. (2015) "Scintillations of a partially coherent beam in a laboratory turbulence: Experiment and comparison to theory" Proceedings of the SPIE: 9354, 935404

Firestone, M.A., Hayden, S.C., Huber, D.L. (2015) "Greater than the sum: synergy and emergent properties in nanoparticle-polymer composites" MRS Bulletin: 40, 09

Ghosh, K., Balog, E.R.M., Sista, P., Martinez, J.S., Rocha, R.C. (2015) "Multicolor luminescence from conjugates of genetically encoded elastin-like polymers and terpyridine-lanthanides" Macromolecular Chemical Physics: 216, 18

Greenfield, M.T., McGrane, S.D., Bolme, C.A., Bjorgaard, J.A., Nelson, T.R., Tretiak, S., Scharff, R.J. (2015) "Photoactive high explosives: linear and nonlinear photochemistry of petrin tetrazine chloride" Journal of Physical Chemistry C: 119, 4846-4855

Hanson, C.J., Buck, M.R., Acharya, K., Torres, J.A., Kundu, J., Ma, X., Bouquin, S. Hamilton, C.E., Htoon, H., Hollingsworth, J.A. (2015) "Giant quantum dots: Matching solid-state to solution-phase photoluminescence performance for near-unity down-conversion efficiency" ACS Applied Material Interfaces: 7, 13125

Ji, Z., Doorn, S.K., Sykora, M. (2015) "Electrochromic Graphene Molecules" ACS Nano: 9, 4043

Kelly, J.C., Huber, D.L., Price, A.D., Roberts, M.E. (2015) "Switchable electrolyte properties and redox chemistry in aqueous media based on temperature-responsive polymers" Journal of Applied Electrochemistry: 45, 8

Leenheer, A.J., Sullivan, J.P., Shaw, M., Harris, C.T. (2015) "A sealed liquid cell for in-situ transmission electron microscopy of controlled electrochemical processes" Journal of Microelectromechanical Systems: 24, 4

Liang, L., Qi, M., Yang, J., Shen, X., Zhai, J., Xu, W., Jin, B., Liu, W., Feng, Y., Zhang, C., Lu, H.,

**Chen, H.T.**, Kang, L., Xu, W., Chen, J., Cui, T.J., Wu, P., Liu, S. (2015) “Anomalous terahertz reflection and scattering by flexible and conformal coding metamaterials” Advanced Optical Materials: 3, 1374

Li, J., Chen, S., Yang, H., Li, J., Yu, P., Cheng, H., Gu, C., **Chen, H.T.**, Tian, J. (2015) “Simultaneous control of light polarization and phase distributions using plasmonic metasurfaces” Advanced Functional Materials: 25, 704

Liu, J., Adamska, L., **Doorn, S.K.**, **Tretiak, S.** (2015) “Singlet and triplet excitons and charge polarons in cycloparaphenylenes: A density functional theory study” Physical Chemistry Chemical Physics: 17, 14613-14622

Nan, C.W., **Jia, Q.X.** (2015) “Obtaining ultimate functionalities in nanocomposites: Design, control, and fabrication” MRS Bulletin: 40, 719

Park, Y., Choi, J.S., Choi, T., Lee, M.J., **Jia, Q.X.**, Park, M., Lee, H., Park, B.H. (2015) “Configuration of ripple domains and their topological defects formed under local mechanical stress on hexagonal monolayer graphene” Scientific Reports: 5, 9390

**Paxton, W.F.**, Bouxsein, N.F., Henderson, I.M., Gomez, A., **Bachand, G.D.** (2015) “Dynamic assembly of polymer nanotube networks via kinesin powered microtubule filaments” Nanoscale: 7, 25

**Paxton, W.F.**, Sanchez, S., Nitta, T. (2015) “Editorial: Special issue micro- and nanomachines” Transactions on Nanobioscience: 14, 258-259

Salerno, K.M., **Grest, G.S.** (2015) “Temperature effects on nanostructure and mechanical properties of single-nanoparticle thick membranes” Faraday Discussions: 181, 339

Soh, D.B.S., Brif, C., Coles, P.J., Lütkenhaus, N., **Camacho, R.M.**, Urayama, J., Sarovar, M., (2015). “Self-Referenced Continuous-Variable Quantum Key Distribution Protocol” Phys. Rev. X: 5, 041010

Talbayev, D., Lee, J., **Trugman, S.A.**, Zhang, C.L., Cheong, S.W., Averitt, R.D., **Taylor, A.J.**, **Prasankumar, R.P.** (2015) “Spin-dependent polaron formation dynamics in Eu<sub>0.75</sub>Y<sub>0.25</sub>MnO<sub>3</sub> probed by femtosecond pump-probe spectroscopy” Physical Review B: 91, 064420

Ting, C.L., **Stevens, M.J.**, **Frischknecht, A.L.** (2015) “Structure and dynamics of coarse-grained ionomer melts in an external electric field” Macromolecules: 48, 809 U2013A0037

Wang, F., Wei, Q.H., **Htoon, H.** (2015) “Switchable and non-switchable zero backscattering of dielectric nano-resonators” Optical Materials Express: 5, 668-675

Wang, Z., Li, R., Bian, K., Wang, X., Xu, H., **Hollingsworth, J.A.**, Hanrath, T., Fang, J. (2015) “An obtuse rhombohedral superlattice assembled by Pt nanocubes” Nano Letters: 15, 6254

Watt, J., **Huber, D.L.**, Price, A.D., Roberts, M.E. (2015) “Effect of seed age on gold nanorod formation: a microfluidic, real-time investigation” Chemistry of Materials: 27, 18

White, A.J., Gorshkov, V.N., **Tretiak, S.**, Mozyrsky, D. (2015) “Non-adiabatic molecular dynamics by accelerated semiclassical monte carlo” Journal of Chemical Physics: 143, 014115

Wiley, M., Bagge-Hansen, M., Lauderbach, L., Hodgins, R., Hansen, D., May, C., VanBuuren, T., Gustavsen, R., Watkins, E., **Firestone, M.**, Dattelbaum, D., Jensen, B., Graber, T., Bastea, S., Fried, L. (2015) “Measurement of carbon condensates using small-angle X-ray scattering during detonation of high explosives” APS Topical Conference on the Shock Compression of Matter: O1.003

Zhang, Y., Li, T., Chen, Q., Zhang, H., O’Hara, J.F., Abele, E., **Taylor, A.J., Chen, H.T.**, Azad, A.K. (2015) “Independently tunable dual-band perfect absorber based on graphene at mid-infrared frequencies” Scientific Reports: 5, 18463

**Zhu, J.X.**, Albers, R.C., Haule, K., Wills, J.M. (2015) “First-principles study of the Kondo physics of a single Pu impurity in Th host” Physical Review B: 91, 165126

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**Acharya, K. P., Nguyen, H. M., Paulite, M., Piryatinski, A., Zhang, J., Casson, J. L., Xu, H., Htoon, H., Hollingsworth, J. A.** (2015) “Elucidation of Two Giants: Challenges to Thick-shell Synthesis in CdSe/ZnSe and ZnSe/CdS Core/Shell Quantum Dots” Journal of the American Chemical Society: 137, 3755-3758. U2013B0037

**Adamska, L., Nazin, G.V., Doorn, S.K., Tretiak, S.** (2015) “Self-trapping of charge carriers in semiconducting carbon nanotubes: Structural analysis” Journal of Physical Chemistry Letters: 6, 3873 U2012B0055

**Aguilar, R.V., Qi, J., Brahlek, M., Bansal, N., Azad, A., Bowlan, J., Oh, S., Taylor, A.J., Prasankumar, R.P., Yarotski, D.A.** (2015) “Time-resolved terahertz dynamics in thin films of the topological insulator Bi<sub>2</sub>Se<sub>3</sub>” Applied Physics Letters: 106, 011901 U2013B0125

**Ahmed, T., Modine, N.A., Zhu, J.X.** (2015) “Bonding between graphene and MoS<sub>2</sub> monolayers without and with Li intercalation” Applied Physics Letters: 107, 043903 U2013B0097

Benz, A., Campione, S., Klem, J.F., **Sinclair, M.B., Brener, I.** (2015) “Control of strong light-matter coupling using the capacitance of metamaterial nanocavities” Nano Letters: 15, 3 U2014A0057

Bjorgaard, J.A., Kuzmenko, V., **Velizhanin, K.A., Tretiak, S.** (2015) “Solvent effects in time-dependent self-consistent field methods I: optical response calculations” Journal of Chemical Physics: 142, 044103 U2013A0032

Bjorgaard, J.A., Nelson, T., Kalinin, K., Kuzmenko, V., **Velizhanin, K.A., Tretiak, S.** (2015) “Simulations of fluorescence solvatochromisms in substituted PPV oligomers from excited state molecular dynamics with implicit solvent” Chemical Physics Letters: 631, 66-69 U2013A0032

Bjorgaard, J.A., **Velizhanin, K.A., Tretiak, S.** (2015) “Solvent effects in time-dependent self-consistent field methods II: variational formulations and analytical gradients” Journal of Chemical Physics: 143, 054305 U2013A0032

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**Bussmann, E.**, Rudolph, M., **Subramania, G.S.**, **Misra, S.**, **Carr, S.M.**, **Langlois, E.**, **Dominguez, J.**, **Pluym, T.**, **Lilly, M.P.**, **Carroll, M.S.** (2015) "Scanning capacitance microscopy registration of buried atomic-precision donor devices" Nanotechnology: 26, 085701

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Campione, S., Liu, S., Benz, A., Klem, J.F., **Sinclair, M.B.**, **Brener, I.** (2015) "Epsilon-near-zero modes for tailored light-matter interaction" Physics Review Applied: 4, 044011

**Carpenter, J.S.**, **Nizolek, T.**, **McCabe, R.**, Knezevic, M., **Zheng, S.**, Eftink, B., Scott, J., Vogel, S., Pollock, T., **Mara, N.A.**, **Beyerlein, I.J.** (2015) "Bulk texture evolution of nanolamellar Zr-Nb composites processed via accumulative roll bonding" Acta Materialia: 92, 97-108 C2013A0022

**Chen, A.**, Poudyal, N., Xiong, J., Liu, J.P., **Jia, Q.X.** (2015) "Modification of structure and magnetic anisotropy of epitaxial CoFe<sub>2</sub>O<sub>4</sub> films by hydrogen reduction" Applied Physics Letters: 106, 111907 U2014A0041

Chou, S.S., Huang, Y.K., Kim, J., **Kaehr, B.**, Foley, B.M., Lu, P., Dykstra, C., Hopkins, P.E., Brinker, C.J., Huang, J., Dravid, V.P. (2015) "Controlling the metal to semiconductor transition of MoS<sub>2</sub> and WS<sub>2</sub> in solution" Journal of the American Chemical Society: 137, 5 U2014B0071

**Curry, M.J.**, England, T.D., Bishop, N.C., Ten-Eyck, G., Wendt, J.R., Pluym, T.P., **Lilly, M.P.**, **Carr, S.M.**, **Carroll, M.S.** (2015) "Cryogenic preamplification of a single-electron-transistor using a silicon-germanium heterojunction-bipolar-transistor" Applied Physics Letters: 106, 203505 U2013B0148

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**Gao, Y.**, **Roslyak, O.**, **Dervishi, E.**, **Karan, N.S.**, Ghosh, Y., **Sheehan, C.J.**, Wang, F., Gupta, G., **Mohite, A.**, Dattelbaum, A.M., **Doorn, S.K.**, **Hollingsworth, J.A.**, Piryatinski, A., **Htoon, H.** (2015) "Hybrid graphene-giant nanocrystal quantum dot assemblies with highly efficient biexciton emission" Advanced Optical Materials: 3, 39 RA2014A0017

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Liu, J., Adamska, L., Doorn, S.K., Tretiak, S. (2015) "Singlet and triplet excitons and charge polarons in cycloparaphenylenes: A density functional theory study" Physical Chemistry Chemical Physics: 17, 14613 U2012B0055

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#### CINT User Science - External (153)

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