

## Delia J Milliron

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### Education:

**University of California, Berkeley:** Ph.D. in Physical Chemistry, 2004.

Thesis title: New materials for nanocrystal solar cells

Advisor: A. Paul Alivisatos

**Princeton University:** A.B., *summa cum laude*, in Chemistry, Certificate in Materials Science and Engineering, 1999.

Thesis title: Charge injection and chemistry at the indium tin oxide-organic interface

Advisors: Jeffrey Schwartz, Antoine Kahn

### Positions Held:

- 2017 –** : Professor, Department of Chemical Engineering, University of Texas at Austin  
**2023 –** : Ernest Cockrell, Sr. Chair #1 in Engineering, University of Texas at Austin  
**2018 – 2023:** T. Brockett Hudson Professorship, University of Texas at Austin  
**2017 – 2018:** Henry Beckman Professorship, University of Texas at Austin  
**2013 – 2017:** Associate Professor, Department of Chemical Engineering, University of Texas at Austin  
**2016 – 2018:** Fellow of the Frank A. Liddell, Jr. Centennial Fellowship, University of Texas at Austin  
**2014 – 2017:** Fellow of the Henry Beckman Professorship, University of Texas at Austin  
**2008 – 2014:** Staff Scientist, Materials Sciences Division, LBNL, Berkeley, California  
**2005 – 2008:** Research Staff Member, IBM Almaden Research Center, San Jose, California  
**2004 – 2005:** Postdoctoral Researcher, IBM Watson Research Center, Yorktown Heights, New York

### Administrative Appointments:

- 2021 –** : Chair, Department of Chemical Engineering, University of Texas at Austin  
**2012 – 2013:** Deputy Director, Molecular Foundry, LBNL  
**2008 – 2012:** Director, Inorganic Nanostructures Facility, Molecular Foundry, LBNL

### Journal Publications:

Contact author(s) are marked with \*.

181) J Fortunato, BZ Zydlewski, M Lei, NP Holzapfel, M Chagnot, JB Mitchell, H-C Lu, D-E Jiang, DJ Milliron\*, V Augustyn\*, "Dual-band electrochromism in hydrous tungsten oxide," *ACS Photonics* **10** (2023), 3409-3418. <https://pubs.acs.org/doi/abs/10.1021/acsphotonics.3c00921>

180) V Seguí Barragan, BJ Roman, SA Shubert-Zuleta, MW Berry, H Celio, DJ Milliron\*, "Dipolar ligands tune plasmonic properties of tin-doped indium oxide nanocrystals," *Nano Lett.* **23** (2023), 7983-7989. <https://doi.org/10.1021/acs.nanolett.3c01943>

179) K Kim, ZM Sherman, A Cleri, WJ Chang, J-P Maria, TM Truskett\*, DJ Milliron\*, "Hierarchically doped plasmonic nanocrystal metamaterials," *Nano Lett.* **23** (2023), 7633-7641. <https://doi.org/10.1021/acs.nanolett.3c02231>

178) SA Shubert-Zuleta, B Tandon, BJ Roman, XY Gan, DJ Milliron\*, "How to quantify electrons in plasmonic colloidal metal oxide nanocrystals," *Chem. Mater.* **35** (2023), 3880-3891. <https://pubs.acs.org/doi/10.1021/acs.chemmater.2c03694>

177) P Banerjee\*, GR Burks, SB Bialik, M Nassr, E Bello, M Alleyne, BD Freeman, JE Barrick, CM Schroeder, DJ Milliron, "Nanostructure-derived anti-reflectivity in leafhopper brochosomes," *Adv. Photon. Res.* **4** (2023), 2200343. <https://onlinelibrary.wiley.com/doi/10.1002/adpr.202200343>

- 176) ZM Sherman, K Kim, J Kang, BJ Roman, HSN Crory, DL Conrad, SA Valenzuela, E Lin, MN Dominguez, SL Gibbs, EV Anslyn\*, DJ Milliron\*, TM Truskett\*, "Plasmonic response of complex nanoparticle assemblies," *Nano Lett.* **23** (2023), 3030-3037. <https://pubs.acs.org/doi/10.1021/acs.nanolett.3c00429>
- 175) B Tandon, SL Gibbs, C Dean, DJ Milliron\*, "Highly responsive plasmon modulation in dopant-segregated nanocrystals," *Nano Lett.* **23** (2023), 908-915. <https://pubs.acs.org/doi/10.1021/acs.nanolett.2c04199>
- 174) BJ Roman, SA Shubert-Zuleta, G Shim, V Kyveryga, M Faris, DJ Milliron\*, "Facet-enhanced dielectric sensitivity in plasmonic metal oxide nanocubes," *J. Phys. Chem. C* **127** (2023), 2456-2463. <https://pubs.acs.org/doi/10.1021/acs.jpcc.2c08495>
- 173) J Kang, ZM Sherman, HSN Crory, DL Conrad, MW Berry, BJ Roman, EV Anslyn\*, TM Truskett\*, DJ Milliron\*, "Modular mixing in plasmonic metal oxide nanocrystal gels with thermoreversible links," *J. Chem. Phys.* **158** (2023), 024903. <https://aip.scitation.org/doi/10.1063/5.0130817>
- 172) JT Bender, AS Peterson, FC Østergaard, MA Wood, SMJ Heffernan, DJ Milliron, J Rossmeisl, J Resasco\*, "Understanding cation effects on the hydrogen evolution reaction," *ACS Energy Lett.* **8** (2023), 657-665. <https://doi.org/10.1021/acsenergylett.2c02500>
- 171) K Kim, J Yu, J Noh, LC Reimnitz, M Chang, DR Gamelin, BA Korgel, GS Hwang, DJ Milliron\*, "Synthetic control of intrinsic defect formation in metal oxide nanocrystals using dissociated spectator metal salts," *J. Am. Chem. Soc.* **144** (2022), 22941-22949. <https://pubs.acs.org/doi/10.1021/jacs.2c08716>
- 170) CK Ofosu, J Kang, TM Truskett\*, DJ Milliron\*, "Effective hard-sphere repulsions between oleate-capped colloidal metal oxide nanocrystals," *J. Phys. Chem. Lett.* **13** (2022), 11323-11329. <https://doi.org/10.1021/acs.jpcllett.2c02627>
- 169) AM Green, S Kadulkar, ZM Sherman, TM Fitzsimons, CK Ofosu, J Yan, D Zhao, J Ilavsky, AM Rosales, BA Helms, V Ganesan, TM Truskett\*, DJ Milliron\*, "Depletion-driven assembly of polymer-coated nanocrystals," *J. Phys. Chem. C* **126** (2022), 19507-19518. <https://doi.org/10.1021/acs.jpcc.2c06279>
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- 167) A Kim, T Vo, H An, P Banerjee, L Yao, S Zhou, C Kim, DJ Milliron, SC Glotzer\*, Q Chen\*, "Symmetry-breaking in patch formation on triangular gold nanoparticles by asymmetric polymer grafting," *Nat. Commun.* **13** (2022), 6774. <https://www.nature.com/articles/s41467-022-34246-0>
- 166) M Singh, ZM Sherman, DJ Milliron, TM Truskett\*, "Linker-templated structure tuning of optical response in plasmonic nanoparticle gels," *J. Phys. Chem. C* **126** (2022), 16885-16893. <https://doi.org/10.1021/acs.jpcc.2c05353>
- 165) BZ Zydlewski, H-C Lu, H Celio, DJ Milliron\*, "Site-selective ion intercalation controls spectral response in electrochromic hexagonal tungsten oxide nanocrystals," *J. Phys. Chem. C* **126** (2022), 14537-14546. <https://pubs.acs.org/doi/10.1021/acs.jpcc.2c02865>
- 164) VS Lakhanpal, BZ Zydlewski, XY Gan, H Celio, H-RM Jhong, CK Ofosu, DJ Milliron\*, "Aqueous Transfer of Colloidal Metal Oxide Nanocrystals via Base-Driven Ligand Exchange," *Chem. Commun.* **58** (2022), 9496-9499. <https://pubs.rsc.org/en/content/articlelanding/2022/CC/D2CC02416K>
- 163) YJ Son, S Kim, V Leung, K Kawashima, J Noh, K Kim, RA Marquez, OA Carrasco-Jaim, LA Smith, H Celio, DJ Milliron, BA Korgel, CB Mullins\*, "Effects of Electrochemical Conditioning on Nickel-Based Oxygen Evolution Electrocatalysts," *ACS Catal.* **12** (2022), 10384-10399. <https://pubs.acs.org/doi/full/10.1021/acscatal.2c01001>
- 162) H-C Lu, BZ Zydlewski, B Tandon, SA Shubert-Zuleta, DJ Milliron\*, "Understanding the Role of Charge Storage Mechanisms in the Electrochromic Switching Kinetics of Metal Oxide Nanocrystals," *Chem. Mater.* **34** (2022), 5621-5633. <https://pubs.acs.org/doi/10.1021/acs.chemmater.2c00930>

- 161) CM Staller, SL Gibbs, XY Gan, JT Bender, K Jarvis, GK Ong, DJ Milliron\*, "Contact conductance governs metallicity in conducting metal oxide nanocrystal films," *Nano Lett.* **22** (2022), 5009-5014. <https://doi.org/10.1021/acs.nanolett.2c01852>
- 160) B Tandon, H-C Lu, DJ Milliron\*, "Dual-Band Electrochromism: Plasmonic and Polaronic Mechanisms," *J. Phys. Chem. C* **126** (2022), 9228-9238. <https://doi.org/10.1021/acs.jpcc.2c02155>
- 159) AM Green, CK Ofori, J Kang, EV Anslyn\*, TM Truskett\*, DJ Milliron\*, "Assembling Inorganic Nanocrystal Gels," *Nano Lett.* **4** (2022), 1457-1466. <https://pubs.acs.org/doi/10.1021/acs.nanolett.1c04707>
- 158) J Kang, SA Valenzuela, EY Lin, MN Dominguez, ZM Sherman, TM Truskett\*, EV Anslyn\*, DJ Milliron\*, "Colorimetric quantification of linking in thermoreversible nanocrystal gel assemblies," *Sci. Adv.* **18** (2022), eabm7364. <https://www.science.org/doi/10.1126/sciadv.abm7364>
- 157) B Tandon, SA Shubert-Zuleta, DJ Milliron\*, "Investigating the Role of Surface Depletion in Governing Electron Transfer Events in Colloidal Plasmonic Nanocrystals," *Chem. Mater.* **34** (2022), 777-788. <https://pubs.acs.org/doi/10.1021/acs.chemmater.1c03635>
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- 155) KM Roccapiore\*, SH Cho, AR Lupini, DJ Milliron, and SV Kalinin\*, "Sculpting the plasmonic responses of nanoparticles by directed electron beam irradiation," *Small* **18** (2022), 2105099. <https://onlinelibrary.wiley.com/doi/abs/10.1002/sml.202105099>
- 154) H-C Lu, N Katyal, G Henkelman\*, DJ Milliron\*, "Controlling the Shape Anisotropy of Monoclinic Nb<sub>12</sub>O<sub>29</sub> Nanocrystals Enables Tunable Electrochromic Spectral Range," *J. Am. Chem. Soc.* **143** (2021), 15745-15755. <https://pubs.acs.org/doi/10.1021/jacs.1c06901>
- 153) H-RM Jhong, UO Nwabara, S Shubert-Zuleta, NS Grundish, B Tandon, LC Reimnitz, CM Staller, GK Ong, CA Saez Cabezas, JB Goodenough, PJA Kenis\*, DJ Milliron\*, "Efficient Aqueous Electroreduction of CO<sub>2</sub> to Formate at Low Overpotential on Indium Tin Oxide Nanocrystals," *Chem. Mater.* **33** (2021), 7675-7685. <https://doi.org/10.1021/acs.chemmater.1c01649>
- 152) D-H Lee, SA Valenzuela, MN Dominguez, M Otsuka, DJ Milliron\*, EV Anslyn\*, "A Self-Degradable Hydrogel Sensor for a Nerve Agent Tabun Mimic through a Self-Propagating Cascade," *Cell Rep. Phys. Sci.* **2** (2021), 100552. <https://doi.org/10.1016/j.xcrp.2021.100552>
- 151) B Tandon, SL Gibbs, BZ Zydlewski, DJ Milliron\*, "Quantitative Analysis of Plasmonic Metal Oxide Nanocrystal Ensembles Reveals the Influence of Dopant Selection on Intrinsic Optoelectronic Properties," *Chem. Mater.* **33** (2021), 6955-6964. <https://pubs.acs.org/doi/10.1021/acs.chemmater.1c01951>
- 150) SV Kalinin\*, KM Roccapiore, SH Cho, DJ Milliron, R Vasudevan, M Ziatdinov, JA Hachtel\*, "Separating Physically Distinct Mechanisms in Complex Infrared Plasmonic Nanostructures via Machine Learning Enhanced Electron Energy Loss Spectroscopy," *Adv. Opt. Mater.* **9** (2021), 2001808. <https://doi.org/10.1002/adom.202001808>
- 149) CJ Dahlman, S Heo, Y Zhang, LC Reimnitz, D He, M Tang, DJ Milliron\*, "Dynamics of Lithium Insertion in Electrochromic Titanium Dioxide Nanocrystal Ensembles," *J. Am. Chem. Soc.* **143** (2021), 8278-8294. <https://pubs.acs.org/doi/10.1021/jacs.0c10628>
- 148) SL Skjaervo, GK Ong, OG Grendal, KH Wells, W van Beek, K Ohara, DJ Milliron, S Tominaka, T Grande, M-A Einarsrud\*, "Understanding the Hydrothermal Formation of NaNbO<sub>3</sub>: Its Full Reaction Scheme and Kinetics," *Inorg. Chem.* **60** (2021), 7632-7640. <https://pubs.acs.org/doi/abs/10.1021/acs.inorgchem.0c02763>
- 147) MP Howard, ZM Sherman, AN Sreenivasan, SA Valenzuela, EV Anslyn, DJ Milliron, TM Truskett\*, "Effects of Linker Flexibility of Phase Behavior and Structure of Linked Colloidal Gels," *J. Chem. Phys.* **154** (2021), 074901. <https://doi.org/10.1063/5.0038672>

- 146) ZM Sherman, AM Green, MP Howard, EV Anslyn\*, TM Truskett\*, DJ Milliron\*, "Colloidal Nanocrystal Gels from Thermodynamic Principles," *Acc. Chem. Res.* **54** (2021), 798-807. <https://pubs.acs.org/doi/10.1021/acs.accounts.0c00796>
- 145) MP Howard, ZM Sherman, DJ Milliron, TM Truskett\*, "Wertheim's Thermodynamic Perturbation Theory with Double-Bond Association and Its Application to Colloid-Linker Mixtures," *J. Chem. Phys.* **154** (2021), 024905. <https://aip.scitation.org/doi/10.1063/5.0033413>
- 144) N Borodinov, P Banerjee, SH Cho, DJ Milliron, OS Ovchinnikova, RK Vasudevan, JA Hachtel\*, "Enhancing Hyperspectral EELS Analysis of Complex Plasmonic Nanostructures with Pan-Sharpening," *J. Chem. Phys.* **154** (2021), 014202. <https://doi.org/10.1063/5.0031324>
- 143) MN Dominguez, MP Howard, JM Maier, SA Valenzuela, ZM Sherman, JF Reuther, LC Reimnitz, J Kang, SH Cho, SL Gibbs, AK Menta, DL Zhuang, A van der Stok, SJ Kline, EV Anslyn\*, TM Truskett\*, DJ Milliron\*, "Assembly of Linked Nanocrystal Colloids by Reversible Covalent Bonds," *Chem. Mater.* **32** (2020), 10235-10245. <https://doi.org/10.1021/acs.chemmater.0c04151>
- 142) SL Gibbs, CM Staller, A Agrawal, RW Johns, CA Saez Cabezas, DJ Milliron\*, "Intrinsic Optical and Electronic Properties from Quantitative Analysis of Plasmonic Semiconductor Nanocrystal Ensemble Optical Extinction," *J. Phys. Chem. C* **124** (2020), 24351-24360. <https://pubs.acs.org/doi/10.1021/acs.jpcc.0c08195>
- 141) A Maho, CA Saez Cabezas, KA Meyertons, LC Reimnitz, S Sahu, BA Helms, DJ Milliron\*, "Aqueous Processing and Spray Deposition of Polymer-Wrapped Tin-Doped Indium Oxide Nanocrystals as Electrochromic Thin Films," *Chem. Mater.* **32** (2020), 8401-8411. <https://pubs.acs.org/doi/10.1021/acs.chemmater.0c02399>
- 140) LC Reimnitz, T Lwin, M Lopez, DJ Milliron\*, "Oxygen Storage in Transition Metal-Doped Bixbyite Vanadium Sesquioxide Nanocrystals," *ACS Appl. Nano Mat.* **3** (2020), 9645-9651. <https://pubs.acs.org/doi/10.1021/acsanm.0c01588>
- 139) SL Gibbs, C Dean, J Saad, B Tandon, CM Staller, A Agrawal, DJ Milliron\*, "Dual-Mode Infrared Absorption by Segregating Dopants within Plasmonic Semiconductor Nanocrystals," *Nano Lett.* **20** (2020), 7498-7505. <https://pubs.acs.org/doi/10.1021/acs.nanolett.0c02992>
- 138) K Kim, LC Reimnitz, SH Cho, J Noh, Z Dong, SL Gibbs, BA Korgel, DJ Milliron\*, "The Effect of Non-Incorporative Cations on Size and Shape of Indium Oxide Nanocrystals," *Chem. Mater.* **32** (2020), 9347-9354. <https://pubs.acs.org/doi/10.1021/acs.chemmater.0c03281>
- 137) S Kadulkar, DJ Milliron, TM Truskett\*, V Ganesan\*, "Transport Mechanisms Underlying Ionic Conductivity in Nanoparticle-Based Single-Ion Electrolytes," *J. Phys. Chem. Lett.* **11** (2020), 6970-6975. <https://pubs.acs.org/doi/10.1021/acs.jpcclett.0c01937>
- 136) S Heo, SH Cho, CJ Dahlman, A Agrawal, DJ Milliron\*, "Influence of Crystalline and Shape Anisotropy on Electrochromic Modulation in Doped Semiconductor Nanocrystals," *ACS Energy Lett.* **5** (2020), 2662-2670. <https://pubs.acs.org/doi/10.1021/acsenergylett.0c01236>
- 135) H-C Lu, S Ghosh, N Katyal, VS Lakhanpal, G Henkelman, DJ Milliron\*, "Synthesis and Dual-Mode Electrochromism of Anisotropic Monoclinic Nb<sub>12</sub>O<sub>29</sub> Colloidal Nanoplatelets," *ACS Nano* **14** (2020), 10068-10082. <https://pubs.acs.org/doi/10.1021/acsnano.0c03283>
- 134) CA Saez Cabezas, K Miller, S Heo, A Dolocan, G LeBlanc, DJ Milliron\*, "Direct Electrochemical Deposition of Transparent Metal Oxide Thin Films from Polyoxometalates," *Chem. Mater.* **32** (2020), 4600-4608. <https://pubs.acs.org/doi/10.1021/acs.chemmater.0c00849>
- 133) CA Saez Cabezas, ZM Sherman, MP Howard, MN Dominguez, SH Cho, GK Ong, A Green, TM Truskett\*, DJ Milliron\*, "Universal Gelation of Metal Oxide Nanocrystals via Depletion Attractions," *Nano Lett.* **20** (2020), 4007-4013. <https://pubs.acs.org/doi/10.1021/acs.nanolett.0c01311>
- 132) MA Blemker, SL Gibbs, E Raulerson, DJ Milliron, ST Roberts\*, "Modulating the Visible Absorption and Reflection Profiles of ITO Nanocrystal Thin Films by Plasmon Excitation," *ACS Photonics* **7** (2020), 1188-1196. <https://pubs.acs.org/doi/abs/10.1021/acsp Photonics.9b01825>

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- 130) SH Cho, KM Roccapiore, CK Dass, S Ghosh, J Choi, J Noh, L Reimnitz, S Heo, K Kim, K Xie, BA Korgel, X Li, JR Hendrickson, JA Hachtel, DJ Milliron\*, "Spectrally Tunable Infrared Plasmonic F,Sn:In<sub>2</sub>O<sub>3</sub> Nanocrystal Cubes," *J. Chem. Phys.*, **152** (2020), 014709. <https://aip.scitation.org/doi/full/10.1063/1.5139050>
- 129) GK Ong, CA Saez Cabezas, MN Dominguez, SL Skjaervo, S Heo, DJ Milliron\*, "Electrochromic Niobium Oxide Nanorods," *Chem. Mater.* **32** (2020), 468-475. <https://pubs.acs.org/doi/abs/10.1021/acs.chemmater.9b04061>
- 128) CJ Thomas, Y Zhang, A Guillaussier, K Bdeir, OF Aly, HG Kim, J Noh, LC Reimnitz, J Li, FL Deepak, D-M Smilgies, DJ Milliron, BA Korgel\*, "Thermal Stability of the Black Perovskite Phase in Cesium Lead Iodide Nanocrystals Under Humid Conditions," *Chem. Mater.* **31** (2019), 9750-9758. <https://pubs.acs.org/doi/10.1021/acs.chemmater.9b03533>
- 127) CM Staller, SL Gibbs, CA Saez Cabezas, DJ Milliron\*, "Quantitative Analysis of Extinction Coefficients of Tin-Doped Indium Oxide Nanocrystal Ensembles," *Nano Lett.* **19** (2019), 8149-8154. <https://pubs.acs.org/doi/10.1021/acs.nanolett.9b03424>
- 126) S Ghosh, HC Lu, SH Cho, T Maruvada, MC Prince, DJ Milliron\*, "Colloidal ReO<sub>3</sub> nanocrystals: Extra Re d-electron instigating a plasmonic response," *J. Am. Chem. Soc.* **141** (2019), 16331-16343. <https://pubs.acs.org/doi/abs/10.1021/jacs.9b06938>
- 125) MP Howard, RJ Jadrich, BA Lindquist, F Khabaz, RT Bonnezaze, DJ Milliron, TM Truskett\*, "Structure and Phase Behavior of Polymer-Linked Colloidal Gels," *J. Chem. Phys.* **151** (2019), 124901. <https://aip.scitation.org/doi/10.1063/1.5119359>
- 124) B Tandon, S Ghosh, DJ Milliron\*, "Dopant Selection Strategy for High Quality Factor Localized Surface Plasmon Resonance from Doped Metal Oxide Nanocrystals," *Chem. Mater.* **31** (2019), 7752-7760. <https://pubs.acs.org/doi/10.1021/acs.chemmater.9b02917>
- 123) SL Gibbs, CM Staller, DJ Milliron\*, "Surface Depletion Layers in Plasmonic Metal Oxide Nanocrystals," *Acc. Chem. Res.* **52** (2019), 2516-2524. <https://pubs.acs.org/doi/10.1021/acs.accounts.9b00287>
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- 116) CJ Dahlman, A Agrawal, CM Staller, J Adair, DJ Milliron\*, "Anisotropic Origins of Localized Surface Plasmon Resonance in n-Type Anatase TiO<sub>2</sub> Nanocrystals," *Chem. Mater.* **31** (2019), 502-511. <https://pubs.acs.org/doi/10.1021/acs.chemmater.8b04519>
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- 113) CA Saez Cabezas, GK Ong, RB Jadrich, BA Lindquist, A Agrawal, TM Truskett\*, DJ Milliron\*, "Gelation of Plasmonic Metal Oxide Nanocrystals by Polymer-Induced Depletion-Attractions," *Proc. Nat. Acad. Sci.* **115** (2018), 8925-8930. <https://www.pnas.org/content/115/36/8925.short>
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13) DJ Milliron, I Gur, AP Alivisatos\*, "Hybrid organic-nanocrystal solar cells," *MRS Bull.* **30** (2005), 41.

12) DJ Milliron, SM Hughes, Y Cui, L Manna, J Li, LW Wang, AP Alivisatos\*, "Colloidal nanocrystal heterostructures with linear and branched topology," *Nature* **430** (2004), 190.

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10) WU Huynh, JJ Dittmer, N Teclemariam, DJ Milliron, AP Alivisatos\*, KWJ Barnham, "Charge transport in hybrid nanorod-polymer composite photovoltaic cells," *Phys. Rev. B* **67** (2003), 115316.

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mediate charge transfer between CdSe nanocrystals and organic semiconductors," *Adv. Mater.* **15** (2003), 58.

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4) JP Chen, G Klaerner, JI Lee, D Markiewicz, VY Lee, RD Miller, JC Scott\*, "Efficient, blue light-emitting diodes using crosslinked layers of polymeric arylamine and fluorene," *Synth. Met.* **107** (1999), 129.

3) JP Chen, D Markiewicz, VY Lee, G Klaerner, RD Miller, JC Scott\*, "Improved efficiencies of light-emitting diodes through incorporation of charge transporting components in tri-block polymers," *Synth. Met.* (1999) **107**, 203.

2) G Klaerner, JI Lee, VY Lee, E Chan, JP Chen, A Nelson, D Markiewicz, R Siemens, JC Scott, RD Miller\*, "Cross-linkable polymers based on dialkylfluorenes," *Chem. Mater.* **11** (1999), 1800.

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#### Editorial & Commentary:

5) RB Jadrach, DJ Milliron, TM Truskett\*, "Colloidal gels," *J. Chem. Phys.* **159** (2023), 090401. <https://doi.org/10.1063/5.0170798>

4) DJ Milliron\*, "Ultraviolet Photovoltaics: Share the Spectrum," *Nat. Energy* **2** (2017), 17116. <https://www.nature.com/articles/nenergy2017116>

3) BA Helms\*, TE Williams, R Buonsanti, DJ Milliron, "Colloidal Nanocrystal Frameworks," *Adv. Mater.* **27** (2015), 5820-5829. <http://dx.doi.org/10.1002/adma.201500127>

2) DJ Milliron\*, "Quantum Dot Solar Cells: The Surface Plays a Core Role," *Nat. Mater.* **13** (2014), 772-773. <http://www.nature.com/nmat/journal/v13/n8/full/nmat4032.html>

1) B Dubertret, J Hollingsworth, H Liu, D Milliron, J Owen, E Weiss, WE Buhro, F Caruso, SM Kauzlarich, M Ward, "Preface to the *Chemistry of Materials* Special Issue: Synthetic and Mechanistic Advances in Nanocrystal Growth," *Chem. Mater.* **25** (2013), 1153-1154. <http://pubs.acs.org/doi/abs/10.1021/cm4008359>

#### Book Chapters:

3) A Llordes, EL Runnerstrom, SD Lounis, DJ Milliron, "Plasmonic electrochromism of metal oxide nanocrystals," in *Electrochromic Materials and Devices*, RJ Mortimer, DR Rosseinsky and PMS Monk, Eds. Wiley, 2015.

2) JJ Urban, DJ Milliron, "Heterojunction solar cells based on colloidal quantum dots," in *Colloidal Quantum Dot Optoelectronics and Photovoltaics*, G Konstantatos and EH Sargent, Eds. Cambridge Univ. Press, 2013.

1) DJ Milliron, Q Huang, Y Zhu, "Novel Deposition Methods," in *Phase Change Materials: Science and Applications*, S Raoux and M Wuttig, Eds. Springer, 2009.

#### Issued Patents:

- 19) DJ Milliron, A Llordes, Y Wang, G LeBlanc, "Method for Producing Electrochromic Films by Low Temperature Chemical Condensation of Polyoxometalates," US10585322, 2020.
- 18) DJ Milliron, BH Kim, "Nanostructured Conducting Films with a Heterogeneous Dopant Distribution and Methods of Making and Use Thereof," US10515736, 2019.
- 17) DJ Milliron, A Llordes, R Buonsanti, G Garcia, "Electrochromic Nanocomposite Films," US9939662, 2018.
- 16) DJ Milliron, B Koo, G Garcia, CJ Dahlman, TM Mattox, L De Trizio, "Conductive Transition Metal Oxide Nanostructured Electrochromic Material and Optical Switching Devices Constructed Thereof," US9785031, 2017.
- 15) BA Helms, DJ Milliron, EL Rosen, R Buonsanti, A Llordes, "Surface Chemical Modification of Nanocrystals," US9595363, 2017.
- 14) BE Cohen, JP Schuck, DJ Gargas, EM Chan, AD Ostrowski, JJ Urban, DJ Milliron, "Controlled synthesis of bright and compatible lanthanide-doped upconverting nanocrystals," US9556379, 2017.
- 13) DJ Milliron, G Garcia, A Llordes, R Tangirala, R Buonsanti, "Nanostructured transparent conducting oxide electrochromic device," US9341913, 2016.
- 12) R Tangirala, DJ Milliron, A Llordes, "Nanocomposite and method of making thereof," US9287119, 2016.
- 11) DJ Milliron, EL Runnerstrom, BA Helms, A Llordes, R Buonsanti, G Garcia "Nanocrystal polymer composite electrochromic device," US9207513, 2015.
- 10) DJ Milliron, R Buonsanti, "Colloidal infrared reflective and transparent conductive aluminum-doped zinc oxide nanocrystals," US8961828, 2015.
- 9) AP Alivisatos, JJ Dittmer, WU Huynh, D Milliron, "Semiconductor-nanocrystal/conjugated polymer thin films," US8753916, 2014.
- 8) AP Alivisatos, I Gur, D Milliron, "Nanocrystal solar cells processed from solution," US8440906, 2013.
- 7) I Gur, D Milliron, AP Alivisatos, H Liu, "Methods of making functionalized nanorods," US8093494, 2012.
- 6) J Hedrick, DJ Milliron, A Nelson, R Pratt, "Method for forming and aligning chemically mediated dispersion of magnetic nanoparticles in a polymer," US7854878, 2010.
- 5) AP Alivisatos, JJ Dittmer, WU Huynh, DJ Milliron, "Semiconductor-nanocrystal/conjugated polymer thin films," US7777303, 2010.
- 4) MA Caldwell, DJ Milliron, "Inorganic metal chalcogen cluster precursors and methods for forming colloidal metal chalcogenide nanoparticles using the same," US7670584, 2010.
- 3) MA Caldwell, DJ Milliron, "Inorganic metal chalcogen cluster precursors and methods for forming colloidal metal chalcogenide nanoparticles using the same," US7563430, 2009.
- 2) DJ Milliron, DB Mitzi, "Solution deposition of chalcogenide films containing transition metals," US7341917, 2008.
- 1) AP Alivisatos, D Milliron, L Manna, SM Hughes, "Nanocrystals with linear and branched topology," US7303628, 2007.

#### **Pending Patent Applications:**

- 4) DJ Milliron, GK Ong, "Composite Films and Methods of Making and Use Thereof," 2022.
- 3) DJ Milliron, GK Ong, C Saez Cabezas, HC Lu, "Porous Electrochromic Niobium Oxide Films and Methods of Making and Use Thereof", 2021.
- 2) DJ Milliron, Y Wang, "Electrochromic Devices and Methods of Making and Use Thereof," 2019.
- 1) DJ Milliron, J Kim, "Electrochromic Electrodes and Methods of Making and Use Thereof," 2019.

### **Honors and Awards:**

- MRS Medal (2023)
- AIChE Nanoscale Science and Engineering Forum (NSEF) Award (2023)
- Kurt Wohl Memorial Lecture, University of Delaware, Chemical & Biomolecular Engineering (2023)
- Senior Member, National Academy of Inventors (2023)
- Amol Ajinkya Memorial Lecture, University at Buffalo, Chemical & Biological Engineering (2022)
- Thiele Lecture, University of Notre Dame, Chemical & Biomolecular Engineering (2022)
- Full Member, Sigma Xi (2022)
- ACS Inorganic Nanoscience Award (2019)
- Edith and Peter O'Donnell Award in Engineering, TAMEST (2018)
- Norman Hackerman Award, Welch Foundation (2017)
- Sloan Research Fellowship (2016)
- Benjamin P. Boussert Lecture, Louisiana State University, Chemistry (2016)
- Defense Science Study Group member (2016-2017)
- Caltech Resnick Institute Resonate Award (2015)
- DOE Early Career Research Program Awardee (2010-2015)
- R&D 100 Award for Universal Smart Windows (2013)
- BASF/VW Science Award in Electrochemistry (finalist, 2012, 2013)
- Saint-Gobain NOVA External Venturing Innovation Competition (w/ Heliotrope, 1<sup>st</sup> place, 2012)
- NREL Innovation Growth Forum (w/ Heliotrope, finalist, 2012)
- Berkeley Lab Spot Award (2011)
- MDV (Mohr Davidow Ventures) Innovators Award (2010)
- LBNL Outstanding Performance Award (2010)
- DOE Outstanding Mentor Award (2010)
- Berkeley Lab Spot Award (2010)
- R&D 100 Award for Nanocrystal Solar Cells (2009)
- EPCOS Conference, Best Presentation Award (2009)
- MRS Spring Meeting, Best Poster Award (2007)
- Tech Transfer Award, LBNL (2004)
- National Defense Science and Engineering Graduate Fellowship (1999-2002)
- Barry M. Goldwater Scholarship (1997-1999)
- Robert C. Byrd Scholarship (1995-1999)
- National Science Scholars' Program award recipient (1995)
- Calvin Dodd MacCracken Senior Thesis Award (1999) – one of two awarded from 300 eligible
- Robert Thornton McCay Prize in Physical Chemistry (1999) – one of three (class of 40)
- Outstanding Achievement in Materials Science (1999) – only award in Materials Science
- William Foster Memorial Prize in Chemistry (1998) – only award (class of 40)

### **Synergistic Activities:**

- Founder and Chief Scientific Officer, Celadyne Technologies (2018 - )
- Gordon Research Conference on Colloidal Semiconductor Nanocrystals (founding vice chair, 2014; chair, 2016)
- Founder and Chief Scientific Officer, Heliotrope Technologies (2012 - 2017)
- Scientific Advisory Board, PLANT PV (2011-2017)
- Technical Advisory Board, Pacific Light Tech (2011-2015)
- Technical Advisory Board, Spectrawatt (2010-2011)
- Scientific Advisory Board, Nanosys (2009-2010)
- MRS/APS committee on Energy Critical Elements (2009-2011)

### **Teaching Experience:**

Advanced Thermodynamics	UT Austin CHE 387K
Materials Physics	UT Austin CHE 384T
Chemical Engineering Materials	UT Austin CHE 350

General Chemistry  
 Statistical Mechanics and Thermodynamics

Graduate Student Instructor, UCB Chemistry  
 Graduate Student Instructor, UCB Chemistry

**Graduate and Postdoctoral Advisors and Advisees:**

First name	Last name	Position	Co-advisor	Current Affiliation
Jay	Bender	student	J Resasco	UT Austin
Marina (Wren)	Berry	student		UT Austin
William	Brackett	student	TM Truskett	UT Austin
Diana	Conrad	student	EV Anslyn	UT Austin
Allison	Green	student	TM Truskett	UT Austin
Jiho	Kang	student	EV Anslyn	UT Austin
Charles (Kofi)	Ofori	student	TM Truskett	UT Austin
Victor	Segui Barragan	student		UT Austin
Sofia	Shubert-Zuleta	student		UT Austin
Akshat	Singh	student	J Resasco	UT Austin
Rebecca	Tafoya	student		UT Austin
Tanner	Wilcoxson	student	TM Truskett	UT Austin
Benjamin	Zydlowski	student		UT Austin
Woo Je	Chang	postdoc		UT Austin
Daniel	Davies	postdoc		UT Austin
Yujin	Park	postdoc		UT Austin
Benjamin	Roman	postdoc		UT Austin
Ziyi	Zhang	postdoc		UT Austin
Ankit	Agrawal	student		Quantumscape
Amy	Bergerud	student		Niron Magnetics
Marissa	Carey (Caldwell)	student	H-SP Wong, Stanford	Medtronic
Shin Hum	Cho	student		Keimyung University
Clayton	Dahlman	student		Quantumscape
Manuel	Dominguez	student	EV Anslyn	3M
Guillermo	Garcia	student		Samsar
Stephen	Gibbs	student		Univ. of Washington
Sungyeon	Heo	student		SeoulTech University
Robert	Johns	student		Micron
Kihoon	Kim	student		Argonne Natl Lab
Vikram	Lakhanpal	student		
Sebastien	Lounis	student		Sila Nanotechnologies
Hsin-Che	Lu	student		Phillips 66
Gary	Ong	student		Celadyne Technologies
Lauren	Reimnitz	student		Novacentrix
Evan	Runnerstrom	student		Army Research Office
Camila	Saez Cabezas	student	TM Truskett, UT Austin	Dow
Corey	Staller	student		Celadyne Technologies
Progna	Banerjee	postdoc		Argonne Natl Lab
Raffaella	Buonsanti	postdoc		EPFL
Emory	Chan	postdoc		LBL
Xing Yee	Gan	postdoc		Canon Nanotechnologies
Sandeep	Ghosh	postdoc		Applied Materials
Gang	Han	postdoc	BE Cohen, LBNL	Univ. of Massachusetts
Molly	Jhong	postdoc		Dow



Byung Hyo	Kim	postdoc		Soongsil University
Jongwook	Kim	postdoc		Ecole Polytechnique
Natacha	Krins	postdoc	TJ Richardson, J Cabana, LBNL	Sorbonne Univ.
Gabriel	LeBlanc	postdoc		Univ. of Tulsa
Beth	Lindquist	postdoc	TM Truskett, UT Austin	LANL
Anna	Llordes	postdoc		Fuelium, Spain
Rueben	Mendelsberg	postdoc	A Anders, LBNL	Freeform Future
Hoi Ri	Moon	postdoc	JJ Urban, LBNL	UNIST
Varada	Palakkal	postdoc		Sublime Systems
Jongsik	Park	postdoc		Kyonggi University
Oun Ho	Park	postdoc		Applied Materials
Jessy	Rivest	postdoc		Khosla Ventures
Evelyn	Davies	postdoc	BA Helms, LBNL	LBNL
April	Sawvel	postdoc	BA Helms, LBNL	LLNL
Richa	Sharma	postdoc		Schlumberger Research
Amita	Singh	postdoc		Quantumscape
Ajay	Singh	postdoc		STMicroelectronics
Yizheng	Tan	postdoc		Applied Materials
Bharat	Tandon	postdoc		Univ. of Waterloo
Ravisubhash	Tangirala	postdoc		Sila Nanotechnologies
Robert	Wang	postdoc		Arizona State Univ.
Yang	Wang	postdoc		EMD
Omid	Zandi	postdoc		Boston Consulting Group
Renjia	Zhou	postdoc		Analog Devices
A. Paul	Alivisatos	PhD advisor		U Chicago
David	Mitzi	PD advisor		Duke Univ.

### Professional Memberships:

- American Chemical Society
- Materials Research Society
- American Physical Society
- American Institute of Chemical Engineers
- Sigma Xi
- Phi Beta Kappa

### Research Proposal Review Activities:

- NSF Division of Materials Research, Division of Chemistry
- DOE Basic Energy Sciences
- Proposal Study Panels for Center for Functional Nanomaterials, Brookhaven National Laboratory and Center for Integrated Nanotechnologies, Los Alamos and Sandia National Laboratories
- Cyclotron Road, Lawrence Berkeley National Laboratory

### Journal Editorial Activities:

- *Nano Letters*, Associate Editor (2015 - 2020)
- *ACS Photonics*, Editorial Advisory Board (2016 - )
- *Chemistry of Materials*, Editorial Advisory Board (2015 - )
  - *Chemistry of Materials* Reviewer Award (2015)
- *ACS Combinatorial Science*, Editorial Advisory Board (2011 - 2015)
- *Scientific Reports*, Editorial Board (2013 - 2015)

### Invited Presentations and Seminars:

10.2023 Welch Conference on Chemical Research, Houston  
10.2023 Nanocrystal Surfaces and Defects, Beilstein Nanotechnology Symposium, Rudesheim  
09.2023 University of Oklahoma, School of Sustainable Chemical, Biological, and Materials Engineering  
09.2023 University of Delaware, Chemical & Biomolecular Engineering, Kurt Wohl Memorial Lecture  
09.2023 University of California, Berkeley, Nanoscience seminar  
08.2023 American Chemical Society National Meeting, San Francisco  
07.2023 Nanoscience with Nanocrystals (NaNaX), Klosterneuberg, Austria  
04.2023 Materials Research Society National Meeting, San Francisco (2)  
02.2023 Gordon Research Conference, Nanomaterials for Energy Applications  
02.2023 Designing Soft Matter In & Out of Equilibrium, Lorentz Center Workshop, Leiden  
01.2023 Texas A&M University, Materials Science & Engineering  
11.2022 University of Illinois Urbana-Champaign, Chemical & Biomolecular Engineering  
10.2022 University at Buffalo, Chemical & Biological Engineering, Amol Ajinkya Memorial Lecture  
09.2022 University of Florida, Chemical Engineering  
08.2022 University of Notre Dame, Chemical & Biomolecular Engineering, Thiele Lecture  
08.2022 Army Research Office  
08.2022 Tokyo Electron  
08.2022 Texas Soft Matter, Austin  
07.2022 Gordon Research Conference, Colloidal Semiconductor Nanocrystals  
07.2022 Gordon Research Seminar, Colloidal Semiconductor Nanocrystals  
06.2022 Princeton University, Chemistry  
05.2022 University of California, Santa Barbara, Chemical Engineering  
04.2022 University of Southern California, Chemistry  
03.2022 American Chemical Society, Inorganic Division Periodic Table Talks  
02.2022 Duke University, Mechanical Engineering & Materials Science  
01.2022 Auburn University, Chemistry  
01.2022 Penn State University, Chemical Engineering  
12.2021 Materials Research Society National Meeting, Boston  
11.2021 University of Minnesota, Chemistry  
10.2021 Columbia University, Chemistry  
10.2021 nanoGe Conference, Nanocrystal Fundamentals  
10.2021 University of Delaware, Chemistry & Biochemistry  
09.2021 New York University, Chemical Engineering  
09.2021 Rensselaer Polytechnic Institute, Chemical Engineering  
09.2021 Virginia Commonwealth University, Chemical Engineering  
06.2021 American Chemical Society Colloids and Surface Science  
05.2021 Naval Research Laboratory  
03.2021 Applied Nanotechnology and Nanoscience International Conference  
03.2021 nanoGe Conference, Chemistry of Nanomaterials  
03.2021 News in Nanocrystals, virtual symposium  
11.2020 University of Hamburg, Department of Chemistry  
10.2020 nanoGe Conference, Infrared Nanocrystals  
10.2020 Stanford University, Chemical Engineering  
09.2020 Texas State University  
06.2020 University of Toronto  
10.2019 University of California, San Diego, Nanoengineering  
08.2019 American Chemical Society National Meeting, San Diego (award lecture)  
06.2019 American Chemical Society Colloids and Surface Science, Atlanta  
04.2019 American Chemical Society National Meeting, Orlando

03.2019 Cotton Medal Symposium, Texas A&M, Chemistry  
12.2018 Machine Learning and Reverse Engineering of Soft Matter, Leiden  
07.2018 Gordon Research Conference, Plasmonics and Nanophotonics, Maine  
05.2018 University of Chicago, Chemistry  
04.2018 Harvard University and MIT, Inorganic Chemistry  
03.2018 American Chemical Society National Meeting, New Orleans (2)  
12.2017 Materials Research Society National Meeting, Boston (2)  
11.2017 American Institute of Chemical Engineers National Meeting, Minneapolis  
10.2017 University of Illinois, Urbana-Champaign, Department of Chemistry  
08.2017 Applied Materials, Santa Clara  
06.2017 Gordon Research Conference, Plasmonically Powered Processes, Hong Kong  
04.2017 American Chemical Society National Meeting, San Francisco (2)  
12.2016 PacSurf, Hawaii  
12.2016 Materials Research Society National Meeting, Boston  
11.2016 University of Washington, Chemical Engineering  
11.2016 American Institute of Chemical Engineers National Meeting, San Francisco  
11.2016 Caltech, Chemical Engineering  
11.2016 Caltech, Materials  
11.2016 Bowling Green State University, Center for Photochemical Science  
09.2016 Louisiana State University, Department of Chemistry, Benjamin P. Boussett Lecture  
06.2016 Fudan University, Department of Chemistry, Shanghai, China  
06.2016 Nature Conference on Materials for Energy, Wuhan, China  
04.2016 Notre Dame University, Department of Chemistry  
04.2016 Pennsylvania State University, Department of Chemistry  
04.2016 MIT, Center for Excitonics  
03.2016 Rice University, Materials Science & Nanoengineering Department  
01.2016 Ecole Polytechnique, Paris, France  
01.2016 Universite de Liege, Liege, Belgium  
12.2015 Pacifichem, Honolulu  
12.2015 Materials Research Society National Meeting, Boston (2)  
11.2015 Composites at Lake Louise, Lake Louise, Canada  
10.2015 stARTup Studio, Austin  
09.2015 CICbiomaGUNE seminar, Donostia-San Sebastian, Spain  
09.2015 CICenergiGUNE seminar, Vitoria-Gasteiz, Spain  
09.2015 FQDots Conference, nanoGe, Santiago de Compostella, Spain  
08.2015 American Chemical Society National Meeting, Boston, Massachusetts  
07.2015 Aspen Ideas Festival, Aspen  
05.2015 Electrochemical Society National Meeting, Chicago  
05.2015 Washington University, St. Louis, Institute for Materials Science & Engineering  
04.2015 Washington University, St. Louis, Department of Chemistry  
03.2015 American Chemical Society National Meeting, Denver (2 talks)  
03.2015 BASF 150<sup>th</sup> Anniversary Science Symposium, Ludwigshafen, Germany  
03.2015 American Physical Society National Meeting, San Antonio  
02.2015 Gordon Research Conference, Nanomaterials for Energy Technologies, Ventura  
02.2015 CORE-CM seminar, Michigan State University  
02.2015 Center for Nano- and Molecular Science, University of Texas at Austin  
01.2015 Materials Science & Engineering Department, North Carolina State University  
10.2014 KAUST, Applied Functional Materials Workshop, Saudi Arabia  
10.2014 Wayne State University, Nano@Wayne seminar, Detroit, Michigan  
09.2014 Center for NanoScience, Workshop: Walk and Talk at the Nanoscale, Venice, Italy  
08.2014 American Chemical Society National Meeting, San Francisco, California  
07.2014 Gordon Research Conference, Nanostructure Fabrication, University of New England  
07.2014 Gordon Research Conference, Plasmonics, Sunday River Resort

06.2014 The Molecular Foundry, Lawrence Berkeley National Lab, Berkeley  
05.2014 European Materials Research Society Spring Meeting, Lille, France (two presentations)  
05.2014 Nanoscience with Nanocrystals (NaNaX), Bad Hofgastein, Austria  
04.2014 Materials Research Society National Meeting, San Francisco, California  
03.2014 American Chemical Society National Meeting, Dallas, Texas  
02.2014 ARPA-E Energy Innovation Summit, Washington, DC  
02.2014 Studio One: The Nature of Programming Matter, University of California, Berkeley  
(plenary)  
01.2014 Middle Eastern Technical University, Ankara, Turkey  
10.2013 Norwegian University of Science and Technology, Trondheim, Norway  
09.2013 Department of Chemistry, Texas A&M University, College Station, Texas  
09.2013 American Chemical Society National Meeting, Indianapolis  
08.2013 Transatlantic Frontiers of Chemistry, Seeon, Germany  
07.2013 ICMAT, Singapore  
05.2013 BASF, Ludwigshafen, Germany  
04.2013 Ludwig Maximilian University, Department of Chemistry, Munich, Germany  
04.2013 Max Planck Institute for Chemical Energy Conversion, Muelheim, Germany  
04.2013 Max Planck Institute for Solid State Research, Stuttgart, Germany  
04.2013 Massachusetts Institute of Technology, Materials Science and Engineering Department  
04.2013 University of Texas at Austin, Chemical Engineering Department  
04.2013 Materials Research Society Spring Meeting, San Francisco  
03.2013 University of California, Berkeley, Nanoscale Science and Engineering seminar  
02.2013 University of California, Berkeley, Chemical Engineering Department  
02.2013 Cornell University, Materials Science and Engineering Department, Ithaca  
02.2013 University of Washington, Materials Science and Engineering Department, Seattle  
11.2012 ALS/CXRO Seminar Series, Berkeley  
11.2012 Seoul National University, Department of Chemical and Biological Engineering, Seoul  
11.2012 KAIST, EEWS Department, Daejeon  
11.2012 Yonsei University, Department of Chemistry, Seoul  
11.2012 Stanford University, Optics and Electronics seminar, Palo Alto, California  
10.2012 Advanced Light Source Workshop on mesoscale science beamline, Berkeley  
10.2012 Molecular Foundry Workshop on Nanoscale Battery Materials, Berkeley  
10.2012 Bay Area Photovoltaics Consortium Annual Meeting, Berkeley (plenary)  
09.2012 University of California, Berkeley, Department of Chemistry  
08.2012 Dow Chemical, Midland, MI  
08.2012 Tenth International Meeting on Electrochromism, Holland, MI (plenary)  
06.2012 Gordon Research Conference, Inorganic Chemistry, University of New England  
06.2012 Istituto Italiano di Tecnologia, Genoa, Italy  
06.2012 CIMTEC, Montecatini Terme, Italy  
04.2012 Princeton University, Department of Chemistry  
04.2012 University of California, Los Angeles, CNSI  
02.2012 University of California, Santa Barbara, Materials Department  
01.2012 SPIE Photonics West, BIOS, San Francisco, California  
11.2011 Marin Science Seminar, San Rafael, California  
10.2011 ARPA-E, US Department of Energy, Washington, DC  
09.2011 European Materials Research Society Meeting, Warsaw  
08.2011 American Chemical Society National Meeting, Denver  
07.2011 Gordon Research Conference, Clusters, Nanocrystals, & Nanostructures, Mount Holyoke  
07.2011 Argonne National Laboratory, Center for Nanoscale Materials  
05.2011 LBNL Carbon Cycle 2.0 Seminar, Berkeley  
05.2011 University of California, San Diego, Nanoengineering Department  
04.2011 University of California, Berkeley, EECS Solid State Seminar  
04.2011 California Institute of Technology, Forum on Nanotechnology for Sustainability

02.2011 University of California, Santa Barbara, MROP  
09.2010 Istituto Italiano di Tecnologia, Genoa, Italy  
08.2010 LBNL Summer Lecture Series, Berkeley  
06.2010 Crystal Growth West, South Lake Tahoe, California  
05.2010 DNV Materials Forum, Columbus, Ohio  
01.2010 University of California, Santa Barbara, Materials Department  
09.2009 European Phase Change and Ovonic Science conference, Aachen, Germany, Selected  
as "Best Presentation."  
06.2009 NSRC contractors meeting, Annapolis, Maryland  
04.2009 MRS Spring Meeting, San Francisco  
01.2009 Oregon State University, Eugene  
10.2008 University of California, Berkeley, Nanoscience seminar  
09.2008 LBNL, The Molecular Foundry  
09.2008 European Phase Change and Ovonic Science Conference, Prague  
04.2008 SUNY, Stonybrook, Department of Physics and Astronomy  
04.2008 MRS Spring Meeting, San Francisco  
10.2007 CCNY, New York, Department of Chemistry  
11.2006 Palo Alto Research Center (PARC)  
03.2003 International Symposium on Compound Semiconductors (ISCS), San Diego  
03.2003 Nanoscale Science Research Centers Workshop, Washington, DC