

Delia J Milliron

McKetta Department of Chemical Engineering
The University of Texas at Austin
100 E. 24th Street, NHB 6.404
Austin, Texas 78712
milliron@che.utexas.edu

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

2018 – : T. Brockett Hudson Professorship in Chemical Engineering, University of Texas at Austin

2017 – 2018: Henry Beckman Professorship in Chemical Engineering, 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:

2012 – 2013: Deputy Director, Molecular Foundry, LBNL

2008 – 2012: Director, Inorganic Nanostructures Facility, Molecular Foundry, LBNL

Journal Publications:

Contact author(s) are marked with *.

114) A Singh, L Lutz, GK Ong, K Bustillo, S Raoux, JL Jordan-Sweet, DJ Milliron*, "Controlling Morphology in Polycrystalline Films by Nucleation and Growth from Metastable Nanocrystals," *Nano Lett.* **18** (2018), 5530-5537. <https://pubs.acs.org/doi/10.1021/acs.nanolett.8b01916>

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.* (in press), doi:10.1073/pnas.1806927115. <http://www.pnas.org/content/early/2018/08/17/1806927115>

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111) CM Staller, ZL Robinson, A Agrawal, SL Gibbs, BL Greenberg, SD Lounis, UR Kortshagen, DJ Milliron*, "Tuning Nanocrystal Surface Depletion by Controlling Dopant Distribution as a Route Toward Enhanced Film Conductivity," *Nano Lett.* **18** (2018), 2870-2878. <https://pubs.acs.org/doi/10.1021/acs.nanolett.7b05484>

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- Composites by Interfacial Doping," *Chem. Mater.* **30** (2018), 2544–2549.
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<https://pubs.acs.org/doi/10.1021/acsp Photonics.7b01587>
- 108) BH Kim, CM Staller, SH Cho, S Heo, CE Garrison, J Kim, DJ Milliron*, "High Mobility in Nanocrystal-Based Transparent Conducting Oxide Thin Films," *ACS Nano* **12** (2018), 3200–3208.
<https://pubs.acs.org/doi/10.1021/acsnano.7b06783>
- 107) EL Runnerstrom, GK Ong, G Gregori*, J Maier, DJ Milliron*, "Colloidal Nanocrystal Films Reveal the Mechanism for Intermediate Temperature Proton Conductivity in Porous Ceramics," *J. Phys. Chem. C* **122** (2018), 13624-13635. <https://pubs.acs.org/doi/10.1021/acs.jpcc.7b12824>
- 106) A Agrawal, SH Cho, O Zandi, S Ghosh, RW Johns, DJ Milliron*, "Localized Surface Plasmon Resonance in Semiconductor Nanocrystals," *Chem. Rev.* **118** (2018), 3121–3207.
<https://pubs.acs.org/doi/10.1021/acs.chemrev.7b00613>
- 105) S Heo, J Kim, GK Ong, DJ Milliron*, "Template-Free Mesoporous Electrochromic Films on Flexible Substrates from Tungsten Oxide Nanorods," *Nano Lett.* **17** (2017), 5756-5761.
<http://pubs.acs.org/doi/abs/10.1021/acs.nanolett.7b02730>
- 104) A Singh, A Singh, GK Ong, MR Jones, D Nordlund, K Bustillo, J Ciston, AP Alivisatos, DJ Milliron*, "Dopant Mediated Assembly of Cu₂ZnSnS₄ Nanorods into Atomically Coupled 2D Sheets in Solution," *Nano Lett.* **17** (2017), 3421–3428. <http://pubs.acs.org/doi/abs/10.1021/acs.nanolett.7b00232>
- 103) TE Williams, D Ushizima, C Zhu, A Anders, DJ Milliron, BA Helms*, "Nearest-Neighbor Nanocrystal Bonding Dictates Framework Stability or Collapse in Colloidal Nanocrystal Frameworks," *Chem. Commun.* **53** (2017), 4853-4856. <http://pubs.rsc.org/-/content/articlehtml/2017/cc/c6cc10183f>
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- 100) N DeForest*, A Shehabi, S Selkowitz, DJ Milliron, "A Comparative Energy Analysis of Three Electrochromic Glazing Technologies in Commercial and Residential Buildings," *Appl. Energy* **192** (2017), 95-109. <http://www.sciencedirect.com/science/article/pii/S0306261917301216>
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- 98) BA Lindquist, S Dutta, RB Jadrich, DJ Milliron, TM Truskett*, "Interactions and Design Rules for Assembly of Porous Colloidal Mesophases," *Soft Matter* **13** (2017), 1335-1343.
<http://pubs.rsc.org/en/content/articlehtml/2017/SM/C6SM02718K>
- 97) Y Wang, J Kim, Z Gao, O Zandi, S Heo, P Banerjee, DJ Milliron*, "Disentangling Photochromism and Electrochromism by Blocking Hole Transfer at the Electrolyte Interface," *Chem. Mater.* **28** (2016), 7198-7202. <http://pubs.acs.org/doi/abs/10.1021/acs.chemmater.6b03793>
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- 95) BA Lindquist, RB Jadrich, DJ Milliron*, TM Truskett*, "On the Formation of Equilibrium Gels via a Macroscopic Bond Limitation," *J. Chem. Phys.* **145** (2016), 074906.

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- 83) A Singh, BA Lindquist, GK Ong, RB Jadrich, A Singh, H Ha, CJ Ellison, TM Truskett*, DJ Milliron*, "Linking Semiconductor Nanocrystals into Gel Networks through All-Inorganic Bridges," *Angew. Chem. Int. Ed.* **54** (2015), 14840-14844. <http://onlinelibrary.wiley.com/doi/10.1002/anie.201508641/abstract>
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- "Nanocomposite Architecture for Rapid, Spectrally-Selective Electrochromic Modulation of Solar Transmittance," *Nano Lett.* **15** (2015), 5574-5579.
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- 37) AD Ostrowski, EM Chan, DJ Gargas, EM Katz, G Han, PJ Schuck, DJ Milliron, BE Cohen*, "Controlled synthesis of bright and biocompatible lanthanide-doped upconverting nanoparticles," *ACS Nano* **6** (2012), 2686.
- 36) EL Rosen, R Buonsanti, A Llordes, AM Sawvel, DJ Milliron, BA Helms*, "Exceptionally mild reactive stripping of native ligands from nanocrystal surfaces using Meerwein's salt," *Angew. Chem. Int. Ed.* **51** (2012), 684-689.
- 35) RY Wang, R Tangirala, S Raoux, JL Jordan-Sweet, DJ Milliron*, "Ionic and electronic transport in Ag₂S nanocrystal – GeS₂ matrix composites with size-controlled Ag₂S nanocrystals," *Adv. Mater.* **24**

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32) A Llordes, AT Hammack, R Buonsanti, R Tangirala, S Aloni, BA Helms, DJ Milliron*, "Polyoxometalates and colloidal nanocrystals as building blocks for metal oxide nanocomposite films," *J. Mater. Chem.* **21** (2011), 11631-11638. *Invited.* <http://pubs.rsc.org/en/Content/ArticleLanding/2011/JM/C1JM10514K>

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30) RJ Mendelsberg, SHN Lim, YK Zhu, J Wallig, DJ Milliron, A Anders*, "Achieving high mobility ZnO:Al at very high growth rates by dc filtered cathodic arc deposition," *J. Phys. D.* **44** (2011), 232003. *Chosen for highlights of 2011*

29) MJ Polking, JJ Urban, DJ Milliron, H Zheng, E Chan, MA Caldwell, S Raoux, CF Kieselowski, JW Ager, R Ramesh*, and AP Alivisatos*, "Size-Dependent Polar Ordering in Colloidal GeTe Nanocrystals," *Nano Lett.* **11** (2011), 1147.

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25) EM Chan, C Xu, AW Mao, G Han, JS Owen, BE Cohen, DJ Milliron*, "Reproducible, high-throughput synthesis of colloidal nanocrystals for optimization in multidimensional parameter space," *Nano Lett.* **10** (2010), 1874-1885. <http://pubs.acs.org/doi/abs/10.1021/nl100669s> *Highlighted by Materials Today and Nanotechnology Alert.*

24) R Tangirala, JL Baker, AP Alivisatos, DJ Milliron*, "Modular inorganic nanocomposites by conversion of nanocrystal superlattices," *Angew. Chem. Int. Ed.* **49** (2010), 2878-2882. *Highlighted by Chem. Eng. Prog.* <http://onlinelibrary.wiley.com/doi/10.1002/anie.200906642/pdf>

23) RY Wang, J Feser, X Gu, KM Yu, RA Segalman, A Majumdar, DJ Milliron*, JJ Urban*, "A Universal and Solution-Processable Precursor to Bismuth Chalcogenide Thermoelectrics," *Chem. Mater.* **22** (2010), 1943.

22) MA Caldwell, S Raoux, RY Wang, HSP Wong*, DJ Milliron*, "Synthesis and size-dependent crystallization of colloidal germanium telluride nanoparticles," *J. Mater. Chem.* **20** (2010), 1285. *Invited.* <http://pubs.rsc.org/en/content/articlelanding/2010/jm/b917024c>

21) HR Moon, JJ Urban, DJ Milliron*, "Size-controlled synthesis and optical properties of monodisperse colloidal magnesium oxide nanocrystals," *Angew. Chem. Int. Ed.* **48** (2009), 6278. *Selected by the editor as a "hot paper;" highlighted by Photonics Spectra.*

20) S Wu, G Han, DJ Milliron, S Aloni, V Altoe, DV Talapin, BE Cohen*, PJ Schuck*, "Non-blinking and photostable upconverted luminescence from single lanthanide-doped nanocrystals," *Proc. Natl. Acad. Sci.* **106** (2009), 10917.

- 19) Y Zhang, S Raoux, D Krebs, LE Krupp, T Topuria, MA Caldwell, DJ Milliron, A Kellock, PM Rice, JL Jordan-Sweet, HSP Wong*, "Phase change nanodots patterned using a self-assembled polymer lithography and crystallization analysis," *J. Appl. Phys.* **7** (2008), 074312.
- 18) DJ Milliron*, MA Caldwell, HSP Wong, "Synthesis of metal chalcogenide nanodot arrays using block copolymer-derived nanoreactors," *Nano Lett.* **7** (2007), 3504-3507.
- 17) Y Zhang, HSP Wong*, S Raoux, JN Cha, CT Rettner, LE Krupp, T Topuria, DJ Milliron, PM Rice, JL Jordan-Sweet, "Phase change nanodot arrays fabricated using a self-assembly diblock copolymer approach," *Appl. Phys. Lett.* **91** (2007), 013104.
- 16) DJ Milliron*, S Raoux, RM Shelby, J Jordan-Sweet, "Solution-phase deposition and nanopatterning of GeSbSe phase change materials," *Nature Mater.* **6** (2007), 352.
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- 14) P Peng, DJ Milliron, SM Hughes, JC Johnson, AP Alivisatos, RJ Saykally*, "Femtosecond spectroscopy of carrier relaxation dynamics in type II CdSe/CdTe tetrapod heteronanostructures," *Nano Lett.* **5** (2005), 587.
- 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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- 5) IG Hill, D Milliron, J Schwartz, A Kahn*, "Organic semiconductor interfaces: Electronic structure and transport properties," *Appl. Surf. Sci.* **166** (2000), 354.
- 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.
- 1) ME Hawley*, GW Brown, DJ Markiewicz, F Spaepen, EP Barth, "Magnetic force microscopy observation of the magnetic structure of deformation induced shear bands in amorphous Fe₈₀B₁₆Si₄," *J. Magn. Magn. Mater.* **190** (1998), 89.

Editorial & Commentary:

- 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:

- 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:

- 5) DJ Milliron, Y Wang, "Electrochromic Electrodes and Methods of Making and Use Thereof," 2016.
- 4) DJ Milliron, J Kim, "Electrochromic Electrodes and Methods of Making and Use Thereof," 2016.
- 3) DJ Milliron, BH Kim, "Nanostructured Conducting Films with a Heterogeneous Dopant Distribution and Methods of Making and Use Thereof," 2016.
- 2) DJ Milliron, G LeBlanc, A Bergerud, "Electrochromic-Thermochromic Devices and Methods of Making and Use Thereof," 2016.
- 1) DJ Milliron, A Llordes, Y Wang, G LeBlanc, "Method for Producing Electrochromic Films by Low Temperature Chemical Condensation of Polyoxometalates," 2014.

Honors and Awards:

- Edith and Peter O'Donnell Award in Engineering, TAMEST (2018)
- Norman Hackerman Award, Welch Foundation (2017)
- Sloan Research Fellowship (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, 1st 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:

- 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:

Materials Physics	UT Austin CHE 384T (2016-2017)
Chemical Engineering Materials	UT Austin CHE 350 (2014-2015, 2017-2018)
General Chemistry	Graduate Student Instructor, UCB Chemistry
Statistical Mechanics and Thermodynamics	Graduate Student Instructor, UCB Chemistry (2 terms)

Graduate and Postdoctoral Advisors and Advisees:

First name	Last name	Relationship	Co-advisor	Current Affiliation
Shin Hum	Cho	student		UT Austin
Manuel	Dominguez	student	EV Anslyn	UT Austin
Stephen	Gibbs	student		UT Austin
Lauren	Gilbert	student		UT Austin
Sungyeon	Heo	student		UT Austin
Kihoon	Kim	student		UT Austin
Vikram	Lakhanpal	student	EV Anslyn	UT Austin
Hsin-Che	Lu	student		UT Austin
Camila	Saez	student	TM Truskett	UT Austin
Corey	Staller	student		UT Austin
Sandeep	Ghosh	postdoc		UT Austin
Molly	Jhong	postdoc		UT Austin
Gary	Ong	postdoc		UT Austin
Beth	Lindquist	postdoc	TM Truskett	UT Austin
Ankit	Agrawal	student		LBNL (postdoc)
Amy	Bergerud	student		Seagate
Marissa	Caldwell	student	H-SP Wong, Stanford	Medtronic
Clayton	Dahlman	student		UCSB (postdoc)
Guillermo	Garcia	student		Heliotrope Technologies
Robert	Johns	student		Intel
Sebastien	Lounis	student		LBNL
Evan	Runnerstrom	student		Penn State (postdoc)
Raffaella	Buonsanti	postdoc		EPFL
Emory	Chan	postdoc		LBNL
Gang	Han	postdoc	BE Cohen, LBNL	Univ. of Massachusetts Seoul National Univ. (postdoc)
Byung Hyo	Kim	postdoc		Ecole Polytechnique
Jongwook	Kim	postdoc	TJ Richardson, J Cabana, LBNL	
Natacha	Krins	postdoc		Univ. Pierre et Marie Curie
Gabriel	LeBlanc	postdoc		Univ. of Tulsa
Anna	Llodes	postdoc		CIC EnergiGUNE, Spain
Rueben	Mendelsberg	postdoc	A Anders, LBNL	Velo3D

Hoi Ri	Moon	postdoc	JJ Urban, LBNL	UNIST
Oun Ho	Park	postdoc		Applied Materials
Jessy	Rivest	postdoc		Palo Alto Research Center
Evelyn	Davies	postdoc	BA Helms, LBNL	LBNL
April	Sawvel	postdoc	BA Helms, LBNL	LLNL (postdoc)
Richa	Sharma	postdoc		Schlumberger Research
Amita	Singh	postdoc		LANL (postdoc)
Ajay	Singh	postdoc		Apple
Yizheng	Tan	postdoc		Santa Clara University
Ravisubhash	Tangirala	postdoc		Nanosys
Robert	Wang	postdoc		Arizona State Univ.
Yang	Wang	postdoc		Air Liquide
Omid	Zandi	postdoc		Tokyo Electron
Renjia	Zhou	postdoc		Linear Technologies
A. Paul	Alivisatos	PhD advisor		UC Berkeley/LBNL
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 -)
- *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:

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, New Orleans (2 talks)
12.2017	Materials Research Society National Meeting, Boston (2 talks)
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 talks)

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. Boussert 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 (two presentations)
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 (two presentations)
03.2015 BASF 150th 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 series

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