

YOGESH SURENDRANATH

Department of Chemistry
Massachusetts Institute of Technology
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Professional Appointments

Paul M. Cook Career Development Chair *Massachusetts Institute of Technology*
July **2016** – present

Assistant Professor of Chemistry *Massachusetts Institute of Technology*
July **2013** – present

Postdoctoral Fellow *Miller Institute for Basic Research in Science, UC Berkeley*
Host: Prof. A. Paul Alivisatos July **2011** – June **2013**
Research Focus: Controlled doping of nanocrystal solids

Education

Ph.D. in Inorganic Chemistry *Massachusetts Institute of Technology*
Advisor: Prof. Daniel G. Nocera May **2011**
Thesis Title: Oxygen Evolution Mediated by Co-Based Thin Film Electrocatalysts

B.S. Chemistry, B.A. Physics *University of Virginia*
Advisor: Prof. W. Dean Harman June **2006**
Thesis Title: Synthesis and Reactivity of Tungsten Diazine Complexes

Academic Standing

Refereed Publications **52**

Citations **>5700 citations (>100 citations/item)**

H-Index **29**

Patents **6**

Awards and Fellowships

Kavli Frontiers of Science Fellow, Kavli Foundation **2018**

Scialog Fellow in Advanced Energy Storage, Research Corporation **2017**

Cottrell Scholar Award **2017**

Alfred P. Sloan Research Fellow **2016**

Toyota Young Investigator Award, The Electrochemical Society **2015**

DOE Young Investigator Award **2015**

AFOSR Young Investigator Award **2015**

Kavli Frontiers of Science Fellow, Kavli Foundation **2015**

NSF CAREER Award **2015**

Dreyfus Fellowship in Environmental Chemistry **2014**

Miller Research Fellowship, UC Berkeley **2011–2013**

Alan Davison Prize for Best Inorganic Thesis, MIT Chemistry **2011**

Young Investigator Award, ACS Division of Inorganic Chemistry	2011
NSF Graduate Research Fellowship	2009–2011
DOD National Defense Science and Engineering Graduate Fellowship	2006–2009
Solar Revolution Project Fellow, Chesonis Family Foundation	2009–2011
Presidential Fellowship, MIT	2006
Merck Index Award	2006
Undergraduate Fellowship in Synthetic Organic Chemistry, GlaxoSmithKline	2005
Barry M. Goldwater Scholar	2004
Jefferson Scholar, University of Virginia	2002–2006
David A. Harrison Research Award	2005 and 2004
Kenneth C. Bass Scholarship	2005
Albert H. Small Independent Fellowship	2005
National Science Foundation Travel Award for 229th ACS National Meeting	2005
Phi Beta Kappa	2005

Professional Activities and Affiliations

Peer Reviewer Science, Journal of the American Chemical Society, Nature Communications, Nature Energy, Joule, Chemical Science, Energy and Environmental Sciences, Inorganic Chemistry, Electrochimica Acta, Nano Letters, Crystal Growth & Design, Chemical Communications, ACS Catalysis, Energy and Fuels

Member of American Chemical Society, Electrochemical Society

Scientific Publications

From Independent Career:

- (52) Yoon, Y.; Yan, B.; **Surendranath Y.** *J. Am. Chem. Soc.* **2018**, *140*, 2397–2400.
 “Suppressing Ion Transfer Enables Versatile Measurements of Electrochemical Surface Area for Intrinsic Activity Comparisons”
- (51) Jackson, M. N.; Oh, S.; Kaminsky, C. J.; Chu, S. B.; Zhang, G.; Miller, J. T.; **Surendranath Y.** *J. Am. Chem. Soc.* **2018**, *140*, 1004–1010.
 “Strong Electronic Coupling of Molecular Sites to Graphitic Electrodes via Pyrazine Conjugation”
- (50) Wuttig, A.; Yoon, Y.; Ryu, J.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2017**, *139*, 17109–17113.
 “Bicarbonate is Not a General Acid in Au-Catalyzed CO₂ Electroreduction”
- (49) O’Reilly, M.; Kim, R. S.; Oh, S.; **Surendranath, Y.** *ACS Cent. Sci.* **2017**, *3*, 1174–1179.
 “Catalytic Methane Monofunctionalization by an Electrogenenerated High-Valent Pd Intermediate”
- (48) Ricke, N.; Murray, A. T.; Shepherd, J.; Welborn, M.; Fukushima, T.; Van Voorhis, T.; **Surendranath, Y.** *ACS Catal.* **2017**, *7*, 7680–7687.
 “Molecular-Level Insights into Oxygen Reduction Catalysis by Graphite-Conjugated Active Sites”
- (47) Yan, B.; Krishnamurthy, D.; Hendon, C. H.; Deshpande, S.; **Surendranath, Y.**; Viswanathan, V. *Joule* **2017**, *1*, 600–612
 “Surface Restructuring of Nickel Sulfide Generates Optimally Coordinated Active Sites for Oxygen Reduction Catalysis”

- (46) Yan, B.; Concannon, N. M.; Milshtein, J. D.; Brushett F. R.; **Surendranath, Y.** *Angew. Chem. Int. Ed.* **2017**, *56*, 7496–7499.
“A Membrane-Free Neutral pH Formate Fuel Cell Enabled by a Selective Ni₃S₂ Oxygen Reduction Catalyst”
- (45) Murray, A. T.; **Surendranath, Y.** *ACS Catal.* **2017**, *7*, 3307–3312.
“Reversing the Native Aerobic Oxidation Reactivity of Graphitic Carbon: Heterogeneous Metal-Free Alkene Hydrogenation”
- (44) Chu, S. B.; Fukushima, T.; **Surendranath, Y.** *Chem. Mater.* **2017**, *29*, 495–498.
“Minor Impact of Ligand Shell Steric Profile on Colloidal Nanocarbon Catalysis”
- (43) Yoon, Y.; Hall, A. S.; **Surendranath, Y.** *Angew. Chem. Int. Ed.* **2016**, *55*, 15282–15286.
“Tuning of Silver Catalyst Mesostructure Promotes Selective Carbon Dioxide Conversion into Fuels”
- (42) Wuttig, A.; Can, L.; Peng, Q.; Yaguchi, M.; Motobayashi, K.; Osawa, M.; **Surendranath, Y.** *ACS Cent. Sci.* **2016**, *2*, 522–528.
“Tracking a Common Surface-Bound Intermediate during CO₂-to-Fuels Catalysis”
- (41) Wuttig, A.; Yaguchi, M.; Motobayashi, K.; Osawa, M.; **Surendranath, Y.** *Proc. Natl. Acad. Sci. U. S. A.* **2016**, *113*, E4585–E4593.
“Inhibited Proton Transfer Enhances Au-Catalyzed CO₂-to-Fuels Selectivity.”
- (40) Jackson, M. N.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2016**, *138*, 3228–3234.
“Donor-Dependent Kinetics of Interfacial Proton-Coupled Electron Transfer.”
- (39) Miner, E. M.; Fukushima, T.; Sheberla, D.; Sun, L.; **Surendranath, Y.**; Dincă, M. *Nature Commun.* **2016**, *7*, 10942.
“Electrochemical Oxygen Reduction Catalyzed by Ni₃(hexaiminotriphenylene)₂.”
- (38) Oh, S.; Gallagher, J. R.; Miller, J. T.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2016**, *138*, 1820–1823.
“Graphite-Conjugated Rhenium Catalysts for Carbon Dioxide Reduction.”
- (37) Hall, A. S.; Yoon, Y.; Wuttig, A.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2015**, *137*, 14834–14837.
“Mesostructure-Induced Selectivity in CO₂ Reduction Catalysis.”
- (36) Fukushima, T.; Drisdell, W.; Yano, J.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2015**, *137*, 10926–10929.
“Graphite-Conjugated Pyrazines as Molecularly Tunable Heterogeneous Electrocatalysts.”
- (35) Falkowski, J. M.; Concannon, N. M.; Yan, B.; **Surendranath, Y.** *J. Am. Chem. Soc.* **2015**, *137*, 7978–7981.
“Heazlewoodite, Ni₃S₂: a Potent Catalyst for Oxygen Reduction to Water Under Benign Conditions.”
- (34) Wuttig, A.; **Surendranath, Y.** *ACS Catal.* **2015**, *5*, 4479–4484.
“Impurity Ion Complexation Enhances Carbon Dioxide Reduction Catalysis.”
- (33) Falkowski, J. M.; **Surendranath, Y.** *ACS Catal.* **2015**, *5*, 3411–3416.
“Metal Chalcogenide Nanofilms: Platforms for Mechanistic Studies of Electrocatalysis.”

Doctoral and Postdoctoral Research:

- (32) Manthiram, K.; **Surendranath, Y.**; Alivisatos, A. P. *J. Am. Chem. Soc.* **2014**, *136*, 7237–7240.

- "Dendritic Assembly of Gold Nanoparticles During Fuel-Forming Electrocatalysis."
- (31) Tarafder, K.; **Surendranath, Y.**; Olshansky, J. H.; Alivisatos, A. P.; Wang, L.-W. *J. Am. Chem. Soc.* **2014**, *136*, 5121–5131.
"Hole Transfer Dynamics from a CdSe/CdS Quantum Rod to a Tethered Ferrocene Derivative."
- (30) Beberwyck, B. J.; **Surendranath, Y.**; Alivisatos, A. P. *J. Phys. Chem. C* **2013**, *117*, 19759–19770.
"Cation Exchange: A Versatile Tool for Nanomaterials Synthesis." (**Review**)
- (29) Farrow, C. L.; Bediako, D. K.; **Surendranath, Y.**; Nocera, D. G.; Billinge, S. J. L. *J. Am. Chem. Soc.* **2013**, *135*, 6403–6406.
"Intermediate-Range Structure of Self-Assembled Cobalt-Based Oxygen-Evolving Catalyst"
- (28) Bediako, D. K.; **Surendranath, Y.**; Nocera, D. G. *J. Am. Chem. Soc.* **2013**, *135*, 3662–3674.
"Mechanistic Studies of the Oxygen Evolution Reaction Mediated by a Nickel–Borate Thin Film Electrocatalyst"
- (27) King, A. E.; **Surendranath, Y.**; Piro, N. A.; Bigi, J. P.; Long, J. R.; Chang, C. J. *Chem. Sci.* **2013**, *4*, 1578.
"A mechanistic study of proton reduction catalyzed by a pentapyridine cobalt complex: evidence for involvement of an anation-based pathway"
- (26) Lee, S. W.; Carlton, C.; Risch, M.; **Surendranath, Y.**; Chen, S.; Furutsuki, S.; Yamada, A.; Nocera, D. G.; Shao-Horn, Y. *J. Am. Chem. Soc.* **2012**, *134*, 16959–16962.
"The Nature of Lithium Battery Materials under Oxygen Evolution Reaction Conditions"
- (25) Engel, J. H.;* **Surendranath, Y.**;* Alivisatos, A. P. *J. Am. Chem. Soc.* **2012**, *134*, 13200–13203. (* denotes equal author contribution)
"Controlled Chemical Doping of Semiconductor Nanocrystals Using Redox Buffer"
- (24) **Surendranath, Y.**; Bediako, D. K.; Nocera, D. G. *Proc. Natl. Acad. Sci. U. S. A.* **2012**, *109*, 15617–15621
"Interplay of Oxygen-Evolution Kinetics and Photovoltaic Power Curves on the Construction of Artificial Leaves"
- (23) Thoi, V. S.; Karunadasa, H. I.; **Surendranath, Y.**; Long, J. R.; Chang, C. J. *Energy Environ. Sci.* **2012**, *5*, 7762–7770.
"Electrochemical Generation of Hydrogen from Acetic Acid Using a Molecular Molybdenum-Oxo Catalyst"
- (22) Bediako, D. K.; Lassalle-Kaiser, B.; **Surendranath, Y.**; Yano, J.; Yachandra, V. K.; Nocera, D. G. *J. Am. Chem. Soc.* **2012**, *134*, 6801–6809.
"Structure–Activity Correlations in a Nickel–Borate Oxygen Evolution Catalyst"
- (21) **Surendranath, Y.**; Lutterman, D. A.; Liu, Y.; Nocera, D. G. *J. Am. Chem. Soc.* **2012**, *134*, 6326–6336.
"Nucleation, Growth, and Repair of a Cobalt-Based Oxygen Evolving Catalyst"
- (20) McAlpin, J. G.; Stich, T. A.; Ohlin, C. A.; **Surendranath, Y.**; Nocera, D. G.; Casey, W. H.; Britt, R. D. *J. Am. Chem. Soc.* **2011**, *133*, 15444–15452.
"Electronic Structure Description of a [Co(III)₃Co(IV)O₄] Cluster: A Model for the Paramagnetic Intermediate in Cobalt-Catalyzed Water Oxidation"
- (19) Pijpers, J. J. H.; Winkler, M. T.; **Surendranath, Y.**; Buonassisi, T.; Nocera, D. G. *Proc. Natl. Acad. Sci. U. S. A.* **2011**, *108*, 10056–10061.
"Light-Induced Water Oxidation at Silicon Electrodes Functionalized with a Cobalt Oxygen-Evolving Catalyst"
- (18) **Surendranath, Y.**; Nocera, D. G. *Prog. Inorg. Chem.* **2011**, *57*, 505–560.
"Oxygen Evolution Chemistry of Oxide-Based Electrodes" (**Book Chapter**)

- (17) Symes, M. D.; **Surendranath, Y.**; Lutterman, D. A.; Nocera, D. G. *J. Am. Chem. Soc.* **2011**, *133*, 5174–5177.
"Bidirectional and Unidirectional PCET in a Molecular Model of a Cobalt-Based Oxygen Evolving Catalyst"
- (16) Esswein, A. J.; **Surendranath, Y.**; Reece, S. R.; Nocera, D. G. *Energy Env. Sci.* **2011**, *4*, 499-504.
"Highly Active Cobalt Phosphate and Borate Based Oxygen Evolving Catalysts Operating in Neutral and Natural Waters"
- (15) Cook, T. R.; Dogutan, D. K.; Reece, S. Y.; **Surendranath, Y.**; Teets T. S.; Nocera, D. G. *Chem. Rev.* **2010**, *110*, 6474–6502.
"Solar Energy Supply and Storage for the Legacy and Non-legacy Worlds" (**Review**)
- (14) **Surendranath, Y.**; Kanan, M. W.; Nocera, D. G. *J. Am. Chem. Soc.* **2010**, *132*, 16501–16509.
"Mechanistic Studies of the Oxygen Evolution Reaction by a Cobalt-Phosphate Catalyst at Neutral pH"
- (13) Kanan, M. W.; Yano, J.; **Surendranath, Y.**; Dincă, M.; Yachandra, V. K.; Nocera, D. G. *J. Am. Chem. Soc.* **2010**, *132*, 13692-13701.
"Structure and Valency of a Cobalt–Phosphate Water Oxidation Catalyst Determined by in Situ X-ray Spectroscopy"
- (12) McAlpin, J. G.; **Surendranath, Y.**; Dincă, M.; Stich, T. A.; Stoian, S. A.; Casey, W. H.; Nocera, D. G.; Britt, R. D. *J. Am. Chem. Soc.* **2010**, *132*, 6882-6883.
"EPR Evidence for Co(IV) Species Produced During Water Oxidation at Neutral pH"
- (11) Dincă, M.; **Surendranath, Y.**; Nocera, D. G. *Proc. Natl. Acad. Sci. U. S. A.* **2010**, *107*, 10337-10341.
"Nickel-Borate Oxygen-Evolving Catalyst that Functions Under Benign Conditions"
- (10) **Surendranath, Y.**; Dincă, M.; Nocera, D. G. *J. Am. Chem. Soc.* **2009**, *131*, 2615-2620.
"Electrolyte-Dependent Electrosynthesis and Activity of Cobalt-Based Water Oxidation Catalysts"
- (9) Lutterman, D. A.; **Surendranath, Y.**; Nocera, D. G. *J. Am. Chem. Soc.* **2009**, *131*, 3838-3839.
"A Self-Healing Oxygen-Evolving Catalyst"
- (8) Kanan, M. W.; **Surendranath, Y.**; Nocera, D. G. *Chem. Soc. Rev.* **2009**, *38*, 109-114.
"Cobalt-Phosphate Oxygen-Evolving Compound" (**Review**)
- (7) Cook, T. R.; **Surendranath, Y.**; Nocera, D. G. *J. Am. Chem. Soc.* **2009**, *131*, 28-29.
"Chlorine Photoelimination from a D diplatinum Core: Circumventing the Back Reaction"
- (6) Betley, T. A.; **Surendranath, Y.**; Childress, M. V.; Alliger, G. E.; Fu, R.; Cummins, C. C.; Nocera, D. G. *Philosophical Transactions of the Royal Society B-Biological Sciences* **2008**, *363*, 1293-1303.
"A Ligand Field Chemistry of Oxygen Generation by the Oxygen-Evolving Complex and Synthetic Active Sites" (**Review**)
- (5) Delafuente, D. A.; Kosturko, G. W.; Graham, P. M.; Harman, W. H.; Myers, W. H.; **Surendranath, Y.**; Klet, R. C.; Welch, K. D.; Trindle, C. O.; Sabat, M.; Harman, W. D. *J. Am. Chem. Soc.* **2007**, *129*, 406-416.
"Isomerization Dynamics and Control of the η^2/N Equilibrium for Pyridine Complexes"
- (4) Cooper, D. R.; **Surendranath, Y.**; Devedjiev, Y.; Bielnicki, J.; Derewenda, Z. S. *Acta Crystallographica Section D-Biological Crystallography* **2007**, *63*, 1269-1273.
"Structure of the *Bacillus subtilis* Ohrb Hydroperoxide-Resistance Protein in a Fully Oxidized State"
- (3) **Surendranath, Y.**; Welch, K. D.; Nash, B. W.; Harman, W. H.; Myers, W. H.; Harman, W. D. *Organometallics* **2006**, *25*, 5852-5853.
"Tungsten-Promoted Dearomatization of Heterocycles: Uncovering the Latent 2-Azadiene Character of Pyrimidines"
- (2) **Surendranath, Y.**; Harman, W. D. *Dalton Trans.* **2006**, 3957-3965.
"The Role of Electrochemistry in the Development of pi-Basic Dearomatization Agents" (**Review**)

- (1) Devedjiev, Y.; **Surendranath, Y.**; Derewenda, U.; Gabrys, A.; Cooper, D. R.; Zhang, R. G.; Lezondra, L.; Joachimiak, A.; Derewenda, Z. S. *J. Mol. Biol.* **2004**, *343*, 395-406.
"The Structure and Ligand Binding Properties of the *B. subtilis* Ykof Gene Product, a Member of a Novel Family of Thiamin/HMP-Binding Proteins"

Invited Seminars (Past and Future)

From Independent Career:

- (83) Technical University of Denmark, Department of Chemistry – Copenhagen, Denmark, May 2018.
(82) Stockholm University, Department of Chemistry – Stockholm, Sweden, May 2018.
(81) Uppsala University, Department of Chemistry – Uppsala, Sweden, May 2018.
(80) Stanford University, Department of Chemistry – Stanford, CA, April 2018.
(79) University of Wisconsin, Madison, Department of Chemistry – Madison, WI, April 2018.
(78) Cornell University, Department of Chemistry – Ithaca, NY, March 2018.
(77) University of North Carolina, Chapel Hill, Department of Chemistry – Chapel Hill, NC, March 2018.
(76) 29th Kavli Frontiers of Science Symposium – Irvine, CA, February 2018.
(75) University of California, Irvine, Department of Chemistry – Irvine, CA, February 2018.
(74) University of California, Santa Barbara, Department of Chemistry – Santa Barbara, CA, February 2018.
(73) University of Southern California, Department of Chemistry – Los Angeles, CA, January 2018.
(72) University of California, Los Angeles, Department of Chemistry – Los Angeles, CA, January 2018.
(71) Purdue University, Department of Chemistry – West Lafayette, IN, January 2018.
(70) Gordon Research Conference on Electrochemistry – Ventura, CA, January 2018.
(69) Materials Research Society Fall Meeting, Symposium on Earth Abundant Metal Oxides; Sulfides and Selenides For Energy Systems And Devices – Boston, MA, December 2017.
(68) 44th Boston Regional Inorganic Colloquium – Medford, MA, October 2017.
(67) Global Research Center for Environment and Energy Based on Nanomaterials Science (GREEN), National Institute for Materials Science – Tsukuba, Japan, October 2017.
(66) Yale University, Department of Chemistry – New Haven, CT, October 2017.
(65) University of California, Berkeley, Department of Chemistry – Berkeley, CA, September 2017.
(64) SolarFuel17 Conference – Barcelona, Spain, September 2017.
(63) American Chemical Society National Meeting, Symposium on Innovative Chemistry & Electrocatalysis for Low-Carbon Energy & Fuels: Discovery to Application – Washington, DC, August 2017.
(62) American Chemical Society National Meeting, Symposium on Personal and Global Energy Conversion in Chemistry and Biology – Washington, DC, August 2017.
(61) Penn Conference on Theoretical Chemistry, University of Pennsylvania – Philadelphia, PA, August 2017.
(60) SUNCAT Summer Institute Conference, Stanford University – Stanford, CA, August 2017.
(59) Telluride Solar Solutions Workshop – Telluride, CO, June 2017.
(58) Boston University, Department of Materials Science and Engineering – Boston, MA, May 2017.
(57) American Chemical Society National Meeting, Presidential Symposium – San Francisco, CA, April 2017.
(56) Gordon Research Conference on Inorganic Reaction Mechanisms – Galveston, TX, March 2017.
(55) NSF-CCI Solar Annual Retreat – Newport Beach, CA, January 2017.
(54) Boston College, Department of Chemistry – Chestnut Hill, MA, September 2016.
(53) Michigan State University, Department of Chemistry – East Lansing, MI, September 2016.

- (52) Summer School on Interfaces and Energy, Max Plank - EPFL Center for Molecular Nanoscience – Göttingen, Germany, September 2016.
- (51) Inorganic Chemistry Conference Erlangen, Friedrich-Alexander University – Erlangen, Germany, September 2016.
- (50) Siemens Central Research – Erlangen, Germany, September 2016.
- (49) Research Battery Technologies, BMW Group – Munich, Germany, August 2016.
- (48) American Chemical Society National Meeting – Philadelphia, PA, August 2016.
- (47) Toyota Research Institute of North America – Ann Arbor, MI, August 2016.
- (46) Young Investigator Program Review, Air Force Office of Scientific Research – Arlington, VA, June 2016.
- (45) National Rural Utilities Cooperative Financial Corporation National Forum – Seattle, WA, June 2016.
- (44) New England Catalysis Society, Spring Meeting – Providence, RI, May 2016.
- (43) ExxonMobil Chemical Company – Baytown, TX, April 2016.
- (42) University of Oregon, Department of Chemistry and Biochemistry – Eugene, OR, April 2016.
- (41) American Chemical Society National Meeting – San Diego, CA, March 2016.
- (40) Gordon Research Conference on Renewable Energy: Solar Fuels – Tuscany, Italy, March 2016.
- (39) IHS Energy CERAWEEK, Plenary Session – Houston, Texas, February 2016.
- (38) Bridgewater State University, Department of Chemistry – Bridgewater, MA, February 2016.
- (37) AFOSR MURI Novel Catalytic Mechanisms for the Chemical Reduction of Carbon Dioxide to Energy-Dense Liquids, University of California, San Diego – La Jolla, CA, January 2016.
- (36) Gordon Research Conference on Electrochemistry – Ventura, CA, January 2016.
- (35) Northwestern University, Argonne-Northwestern Solar Energy Research Center – Evanston, IL, December 2015.
- (34) University of California Berkeley, Nanosciences & Nanoengineering Institute – Berkeley, CA, November 2015.
- (33) University of Richmond, Department of Chemistry – Richmond, VA, September 2015.
- (32) University of Tokyo, Department of Chemical System Engineering – Tokyo, Japan, July 2015.
- (31) Hokkaido University, Catalysis Research Center – Sapporo, Japan, July 2015.
- (30) Kyoto University, Department of Synthetic Chemistry – Kyoto, Japan, July 2015.
- (29) Third Biennial CO₂ Workshop, Princeton University, Department of Chemistry – Princeton, NJ, March 2015.
- (28) Israeli-American Kavli Frontiers of Science Symposium – Jerusalem, Israel, February 2015.
- (27) AFOSR MURI Novel Catalytic Mechanisms for the Chemical Reduction of Carbon Dioxide to Energy-Dense Liquids, University of California, San Diego – La Jolla, CA, January 2015.
- (26) American Chemical Society National Meeting – San Francisco, CA, August 2014.
- (25) Brown University, Department of Chemistry – Providence, RI, August 2014.
- (24) Gordon Research Conference on Electrodeposition – Biddeford, ME, July 2014.
- (23) nanoGe: International Conference on New Advances in Materials Research for Solar Fuels Production – Montreal, Canada, June 2014.

Doctoral and Postdoctoral Research:

- (22) Argonne National Laboratory – Argonne, IL, March 2013.
- (21) University of Illinois, Department of Chemistry – Urbana-Campaign, IL, February 2013.
- (20) University of California, Department of Chemistry – Berkeley, CA, January 2013.
- (19) Harvard University, Department of Chemistry – Cambridge, MA, January 2013.
- (18) Columbia University, Department of Chemistry – New York, NY, January 2013.

- (17) Princeton University, Department of Chemistry – Princeton, NJ, January 2013.
- (16) Massachusetts Institute of Technology, Department of Chemistry – Cambridge, MA, January 2013.
- (15) California Institute of Technology, Department of Chemistry – Pasadena, CA, January 2013.
- (14) University of Wisconsin, Department of Chemistry – Madison, WI, December 2012.
- (13) University of Michigan, Department of Chemistry – Ann Arbor, MI, December 2012.
- (12) University of California, Department of Chemistry – San Diego, CA, December 2012.
- (11) University of Washington, Department of Chemistry – Seattle, WA, December 2012.
- (10) Yale University, Department of Chemistry – New Haven, CT, November 2012.
- (9) University of Chicago, Department of Chemistry – Chicago, IL, November 2012.
- (8) Young Investigator Award Symposium, 242nd ACS National Meeting – Denver, CO, August 2011.
- (7) Gordon Research Conference on Renewable Energy: Solar Fuels – Ventura, CA, January 2011.
- (6) Gordon Research Conference on Solid State Chemistry – New London, NH, August 2010.
- (5) Gordon Research Conference on Inorganic Chemistry – Biddeford, ME, June 2010.
- (4) Gordon-Kenan Research Seminar on Electrochemistry – Ventura, CA, January 2010.
- (3) OSA Optics and Photonics for Advanced Energy Technology – Cambridge, MA, June 2009.
- (2) 19th Boston Regional Inorganic Colloquium – Amherst, MA, May 2009.
- (1) Gordon-Kenan Research Seminar on Renewable Energy: Solar Fuels – Ventura, CA, February 2009.

Patents (Issued and Pending)

- (6) O'Reilly, M. O.; **Surendranath, Y.** Electrochemical Oxidation of Aliphatic and Aromatic Compounds U.S. Provisional Patent Application No: 62/373,558; 62/465,935
- (5) Fukushima, T; O'Reilly, M. O.; Oh, S.; Murray, A. T.; Kaminsky, C. J.; Chu, S. B.; Jackson, M. N.; **Surendranath, Y.** Molecularly Tunable Heterogeneous Catalysts by Edge Functionalization of Graphitic Carbons. U.S. Patent Application No: 15/236,963.
- (4) Kilyanek, S. M.; Chu, S. B.; **Surendranath, Y.** Fluorinated Coatings for High Performance Electrodes. U.S. Patent Application No: 15/012,089.
- (3) Nocera, D. G.; Kanan, M. W.; **Surendranath, Y.**; Reece, S. Y.; Esswein, A. J. Catalytic materials, photoanodes, and photoelectrochemical cells for water electrolysis and other electrochemical techniques. PCT Int. Appl. (2010), WO 2010042197 A1 20100415.
- (2) Nocera, D. G.; Kanan, M. W.; Moore, T. A.; **Surendranath, Y.**; Reece, S. Y.; Esswein, A. J. Catalytic materials, photoanodes, and photoelectrochemical cells for water electrolysis and other electrochemical techniques. PCT Int. Appl. (2010), WO 2010042196 A1 20100415.
- (1) Nocera, D. G.; Kanan, M. W.; **Surendranath, Y.**; Dinca, M.; Lutterman, D. A.; Reece, S. Y.; Esswein, A. J. Catalytic materials, electrodes, and systems for water electrolysis and other electrochemical techniques PCT Int. Appl. (2009), WO 2009154753 A2 20091223.