

ANTHONY SHOJI HALL

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Professional Appointments

Assistant Professor of Materials Science and Engineering, Johns Hopkins University, **July 2016**
- present

Education

Postdoctoral Fellow, **June 2014 – June 2016** – Department of Chemistry, Massachusetts
Institute of Technology, Cambridge, MA

Advisor: Yogesh Surendranath

Research Focus: Electrocatalytic CO₂ reduction at ordered porous metal thin films

Chemistry, Ph.D. **May 2014** – The Pennsylvania State University, University Park, PA

Advisor: Thomas E. Mallouk

Thesis Title: Template Replication of Nanomaterials

Chemistry, B.S. **April 2010** – University of California Los Angeles, Los Angeles, CA

Advisor: Richard B. Kaner

Research Focus: Synthesis of solution processed graphene colloids

Honors and Awards

SPIE Optics and Photonics Education Scholarship, The Pennsylvania State University (2013)

Roberts Fellowship, The Pennsylvania State University (2010)

Bunton-Waller Scholarship, The Pennsylvania State University (2010)

Arthur Furst Award for Undergraduate Research, UCLA (2009)

Center for Academic and Research Excellence Scholars Award, UCLA (2009-2010)

Center for Academic and Research Excellence Fellows Award, UCLA (2009)

Professional Affiliations

Member of American Chemical Society

International Society of Electrochemistry

Publications

- 11) Yoon, Y.; **Hall, A.S.** and Surendranath, Y. Tuning of Silver Catalyst Mesostructure Promotes Selective Carbon Dioxide Conversion into Fuels. *Angew. Chem. Int. Ed.* 128, 15508–15512 (2016)
- 10) **Hall, A.S.**; Yoon, Y.; Wuttig, A. and Surendranath, Y. Mesostructure-Induced Selectivity in CO₂ Reduction Catalysis. *J. Am. Chem. Soc.* ,137, 14834–14837 (2015)
- 9) Kondo, A.; **Hall, A.S.**; Mallouk, T.E. and Maeda, K. A New Synthetic Route to Microporous Silica with Well-Defined Pores by Replication of a Metal–Organic Framework. *Chemistry-A European Journal*, 21, 12148-12152 (2015)
- 8) Pulsifer, D.P.; Faryad, M.; Lakhtakia, A.; **Hall, A.S.** and Liu, L. Experimental Excitation of the Dyakonov–Tamm Wave in the Grating-Coupled Configuration. *Optics Letters*, 39, 2125-2128 (2014)
- 7) **Hall, A.S.**; Kondo, A.; Maeda, K. and Mallouk, T.E. Microporous Titania Made by Replication of Metal Organic Framework (MOF) Templates. *J. Am. Chem. Soc.* ,135, 16276-16279 (2014) *Science Editors' Choice*
- 6) **Hall, A.S.**; Frieson, S.A. and Mallouk, T.E. Wafer-scale Fabrication of Plasmonic Crystals from Patterned Silicon Templates Prepared by Nanosphere Lithography. *Nano Letters*, 13, 2623-2627 (2013)
- 5) **Hall, A.S.**; Faryad, M.; Barber, G.D.; Lui, L.; Mayer, T.S.; Lakhtakia, A. and Mallouk, T.E. Broadband Absorption of Visible Light with Multiple s and p Polarized Surface Plasmon Polariton Waves Excited at the Interface of a Metallic Grating and a One Dimensional Photonic Crystal. *ACS Nano*, 7, 4995-5007 (2013)
- 4) Solano, M.; Faryad, M.; **Hall, A.S.**; Mallouk, T.E.; Lakhtakia, A. and Monk, P. Optimization of the Absorption Efficiency of an Amorphous-Silicon Thin-Film Tandem Solar Cell Backed by a Metallic Surface-Relief Grating. *Applied Optics* 52, 966-979 (2013) .
- 3) Faryad, M.; **Hall, A.S.**; Barber, G.D.; Mallouk, T.E. and Lakhtakia, A. Excitation of Multiple Surface-Plasmon-Polariton Waves Guided by the Periodically Corrugated Interface of a Metal and a Periodic Multi-Layered Isotropic Dielectric Material. *JOSA B* 29, 714-713 (2012).
- 2) Lee, J.W.; **Hall, A.S.**; Kim, J.D. and Mallouk, T.E. A Facile and Template-Free Hydrothermal Synthesis of Mn₃O₄ Nanorods on Graphene Sheets for Supercapacitor Electrodes with Long Cycle Stability. *Chem. Mater.* 24, 1158–1164 (2012).

- 1) Dubin, S.; Gilje, S.; Wang, K.; Cha, K.; **Hall, A.S.**; Farrar, J.; Varshenya, R.; Yang, Y. and Kaner, R.B., A One-Step, Solvothermal Reduction Method for Producing Reduced Graphene Oxide Dispersions in Organic Solvents. *ACS Nano* **4**, 3845–3852 (2010).

Presentations

- 8) “Mesoscopic Materials: From Synthesis to Applications in Electrocatalysis” National Institute of Materials Science GREEN Seminar, Tsukuba, Japan, June 2016
- 7) “Mesoscopic Materials: From Synthesis to Applications in Electrocatalysis” MIT Chemistry Student Seminar, Cambridge, MA, April 2016
- 6) “Grain Boundary Rich Metals: Synthesis and Impact on Electrocatalysis”, Chemistry of Materials: Materials for Energy and Catalytic Applications, 250th ACS National Meeting, Boston, MA, August 2015
- 5) “Electrocatalytic CO₂ Reduction at Ordered Nanoporous Metallic Thin Films” Chemistry of Materials: Materials for Energy and Catalytic Applications, 250th ACS National Meeting, Boston, MA, August 2015
- 4) “Excitation of Multiple Surface-Plasmon-Polariton Waves and Waveguide Modes in a 1D Photonic Crystal Atop a 2D Metal Grating” SPIE Optics + Photonics, San Diego, CA, Sept. 2014
- 3) “Nanostructures for Improving the Spectral Response of Photovoltaic Cells” Nanotech, Washington, D.C. May 2013.
- 2) “Effect of Grating Periodicity on the Coupling of Multiple Surface Plasmon Polariton Waves at the Interface of a Metal and Photonic Crystal” SPIE Photonics West, San Diego, CA, Feb 2013
- 1) “Layer by Layer Oxidation of Graphite Into Graphite Oxide” California Nanosystems Institute (CNSI) and UCLA Science Poster Day, Westwood, CA, August 2009

Journal Referee

ACS Nano
ChemSusChem
Chemical Communications
RSC Advances

