Vivian Li

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC. San Francisco, CA
Consultant III

Ms. Li joined E3 in 2017 following the completion of her Master of Science in Technology and Policy from the Massachusetts Institute of Technology. Prior to this, she received her B.S. in Chemical Engineering from the University of California, San Diego. Ms. Li brings to E3 experience with developing various energy planning tools, and an understanding of how quantitative models can assist with analyzing the effects of electricity policy and regulations on the planning of electricity networks. She is experienced with modeling software MATLAB, and Python. Her experience in electricity policy and regulations also extends to the assessment of environmental impacts of the electricity system.

MIT ENERGY INITIATIVE
ARPA-E: SMART-DS PROJECT Cambridge, MA
Research Assistant July 2016 – January 2017

- Worked with a small team to validate a novel U.S. electric distribution network planning tool in it's early stages of development.
- Focused on data compilation, and the computation of operational and design metrics and statistics in MATLAB to develop a data driven characterization of the existing distribution network.

MIT TATA CENTER FOR TECHNOLOGY AND DESIGN Cambridge, MA
Tata Fellow August 2014 – July 2016

- Studied the effects of electricity policy and regulations on rural electrification, with a focus on understanding how quantitative models can assist with the planning of electricity networks (as part of the MIT Universal Energy Access research group).
- Created a computational microgrid planning tool (MATLAB based) which sizes generation and simulates hourly operations (based on techno-economic factors and input selections) to aid in the decision-making process of rural microgrid design.
- Research involved extensive international travel and collaboration with local stakeholders and partners in India and Rwanda.
- Contributed to research analyzing the greenhouse gas implications of Canadian liquefied natural gas exports.

ELECTRIC POWER RESEARCH INSTITUTE (EPRI) Palo Alto, CA
Project Engineer June 2013 – August 2014
Technical Assistant II May 2012 – June 2013

- Contributed to technical research projects assessing the environmental impacts of the electricity system, focusing on water, shale gas, power plant waste management, and multimedia issues involving power plant pollutants.

- Co-authored technical reports, and participated in oral and technical communications.
- Co-managed the associated review and revision processes of a study on the environmental and policy implications of shale gas production.

NANOSYS INC. Palo Alto, CA
Production Chemist September 2011 – April 2012

- Supported CdSe nanoparticle manufacturing, process scale-up and development
- Performed multi-step synthetic chemistry following standard operating procedures
- Utilized air-free techniques for synthesis and subsequent processing of materials

TAO NANOENGINEERING RESEARCH LAB La Jolla, CA
Research Assistant July 2010 – September 2011

- Studied quantum dot and nanoparticle assembly strategies for the development of tunable plasmonic nanostructure systems
- Planned and conducted quantum dot synthesis experiments to optimize particle shape and size
- Performed surface modification and characterization of quantum dot nanoparticles and photonic nanocrystals
- Planned and conducted self-assembly studies that focus on selective binding strategies of gold nanorod and CdSe quantum dots

Education

Massachusetts Institute of Technology Cambridge, MA
S.M. in Technology and Policy June 2016

University of California, San Diego San Diego, CA
B.S. in Chemical Engineering June 2011
Cum Laude

Citizenship

United States

Technical and Peer-Reviewed Papers

1. *Kasumu, A., Li, V., Coleman, J. W., Liendo, J., Jordaan, S. 2018. "Country-level Life Cycle Assessment of Greenhouse Gas Emissions from Liquefied Natural Gas Trade for Electricity Generation." Environmental Science and Technology. Accepted.*
2. *Coleman, J., Kasumu, A. S., Liendo, J., Li, V., Jordaan, S. M. 2015. "Calibrating Liquefied Natural Gas Export Life Cycle Assessment: Accounting for Legal Boundaries and Post-Export Markets." Canadian Institute of Resources Law. LNG-OP49.*
3. *Electric Power Research Institute. 2014. "Use and Environmental Fate of Bromine in Power Plants." Palo Alto, CA.*
4. *Electric Power Research Institute. 2013. "Shale Gas Production in the United States: Environmental and Economic Resource Challenges and Opportunities." Palo Alto, CA. 3002002014.*