Aryeh (Ari) Gold-Parker, Ph.D.

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC. San Francisco, CA
Senior Associate

Dr. Gold-Parker recently joined E3 and brings with him extensive research experience in the development and testing of novel energy technologies. His Ph.D. research focused on metal halide perovskites, a promising family of materials with applications in solar cells and light emitting diodes. He also has experience developing Python software for the modeling and analysis of large scientific datasets.

Dr. Gold-Parker received a Ph.D. in Chemistry from Stanford University, and a B.A. in Chemistry and B.A. in Physics from Harvard University.

MIKE TONEY RESEARCH GROUP Menlo Park, CA
SLAC National Accelerator Laboratory – Ph.D. Student Researcher 2013 – 2018

- Designed and performed in-situ X-ray measurements of metal halide perovskite films for next-generation solar cells.
- Monitored the chemical mechanisms of film formation and degradation toward designing efficient and reliable solar cells.
- Developed Python software for analyzing the results of these measurements.

ALAN ASPURU-GUZIK RESEARCH GROUP Cambridge, MA
Harvard University – Undergraduate Student Researcher 2009 – 2012

- Performed computational research for the Clean Energy Project, a distributed computing project that screens organic molecules for use in solar cells

THE ENERGY SEMINAR Palo Alto, CA
Stanford University – Course Assistant 2014 – 2017

- Brainstormed speakers, managed logistics, and led student discussions with speakers.
- Speakers in Fall 2017 included Michael Mastrandrea, Danny Cullenward, Ren Orans, Sila Kiliccote, and Mason Willrich.

RISING ENVIRONMENTAL LEADERS PROGRAM Washington, D.C. & Sacramento, CA
Stanford University – Fellow 2016

- Attended a week-long workshop on science policy in Washington, D.C. with a cohort of 20 students funded by the RELP fellowship.
- Met with congressional, White House, and agency staff, think tanks, and NGOs.
- Attended a 2-day workshop in Sacramento focused on California energy and water policy.

Education

Stanford University Palo Alto, CA

Ph.D., Chemistry 2018
National Science Foundation Graduate Research Fellowship 2014
National Defense Science and Engineering Graduate Fellowship 2014

Harvard University Cambridge, MA
B.A., Chemistry and B.A., Physics 2012

Selected Publications

1. Gold-Parker et al. “Acoustic Phonon Lifetimes Limit Thermal Transport in Methylammonium Lead Iodide.” *Proc. Natl. Acad. Sci. U. S. A.* Accepted (2018)

2. Stone, Gold-Parker, et al. “Transformation from Crystalline Precursor to Perovskite in PbCl2 Derived MAPbI3.” *Nat. Commun.* Accepted (2018)

3. Leijtens, Prasanna, Gold-Parker, et al. "Mechanism of Tin Oxidation and Stabilization by Lead Substitution in Tin Halide Perovskites." *ACS Energy Lett.* 2.9 (2017)

4. Prasanna, Gold-Parker, et al. "Band Gap Tuning via Lattice Contraction and Octahedral Tilting in Perovskite Materials for Photovoltaics." *J. Am. Chem. Soc.* 139 (2017)

5. Pool, Gold-Parker, et al. "Chlorine in PbCl2-Derived Hybrid-perovskite Solar Absorbers." *Chem. Mater.* 27.21 (2015)

6. Hachmann, …, Gold-Parker, et al. "The Harvard Clean Energy Project: Large-scale Computational Screening and Design of Organic Photovoltaics on the World Community Grid." *J. Phys. Chem. Lett.* 2.17 (2011)

Citizenship

United States