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Professional Experience

2015-present	Distinguished Member of Technical Staff, Sandia National Laboratories/CA
2011-present	Adjunct Associate Professor of Materials Science and Engineering, University of Maryland, College Park
2012-2015	Principal Member of Technical Staff, Sandia National Laboratories/CA.
2009-2012	Project leader, Nanoelectrochemistry Lab, Center for Nanoscale Science and Technology, NIST/MD.
2002-2009	Principal Member of Technical Staff, Sandia National Laboratories/CA.
2000-2002	Section Manager, Materials Characterization Laboratory, Motorola, AZ
1996-2000	Staff Scientist, Motorola, Tempe, AZ
1995-1996	Postdoctoral Fellow, Sandia National Laboratories/CA
1993-1994	DoE Graduate Fellow, Sandia National Laboratories/ CA
1989-1993	Teaching/research assistant, UCLA

Education

1995	Ph.D. in Materials Science & Engineering, U C Los Angeles
1989	BA in Chemistry, U C San Diego

Awards/Recognition

2022	Member, *Science* Board of Reviewing Editors
2017	Fellow, American Physical Society
2015	Distinguished Member of Technical Staff
2014	Sandia National Laboratories Employee Recognition Award
1993	DoE Graduate Student Fellowship, Sandia National Labs, Livermore, CA

Selected Publications

Full list: https://scholar.google.com/citations?user=1l-fEDkAAAAJ&hl=en

Neuromorphic Computing

- E. J. Fuller "Li-ion synaptic transistor for low power analog computing", *Advanced Materials* 29, 1604310 (2017).
- Y. B. van de Burgt et al., "An organic artificial synapse for low energy neuromorphic computing", *Nature Materials* 16, 414 (2017)
- E. J. Fuller et al., "Parallel programming of an ionic floating-gate memory array for scalable neuromorphic computing", *Science* 364, 570, (2019).
- Y. Li et al., "Filament-free bulk resistive memory enables deterministic analogue switching", *Adv. Materials* 32, 2070339, (2020).

Energy storage materials and devices

- E. J. Fuller et al., "Spatially resolved potential and Li-ion distributions reveal performance-limiting regions in solid-state batteries", *ACS Energy Lett*., 6, 3944, 2021.
- D. S. Ashby et al., "Modifying Ionogel Solid-Electrolytes for Complex Electrochemical Systems" ACS Appl. Mat. Interfaces, doi.org/10.1021/acsaem.2c02085.
- D. S. Ashby et al, "Understanding the Electrochemical Performance of FeS_2 Conversion Cathodes", ACS Appl. Mat. Interfaces, doi.org/10.1021/acsami.2c01021.

MOFs and coordination polymers for electronic, photonic and thermoelectric applications

- A. A. Talin, et al., "Tunable Electrical Conductivity in Metal-Organic Framework Thin Film Devices", *Science* **343**, 66 (2014).
- V. Stavila, et al., "MOF-based electronic and optoelectronic devices", *Chem. Soc. Reviews* 43, 5994 (2014).
- K. J. Erickson, et al., "Thin Film Thermoelectric Metal–Organic Framework with High Seebeck Coefficient and Low Thermal Conductivity", *Adv. Mat.* 27, 3453 (2015).

Contacts and interfaces

- F. Leonard and A. A. Talin, "Size-dependent effects on electrical contacts to nanotubes and nanowires", *Phys. Rev. Lett*. 97**,** 026804 (2006).
- A. A. Talin et al., "Unusually strong space-charge-limited currents in thin wires"*, Phys. Rev. Lett.* 101**,** 076802 (2008).
- F. Leonard and A. A. Talin, "Electrical contacts to one- and two- dimensional nanomaterials", *Nature Nanotech*. 6, 773, (2011)
- D. V. Esposito, et al., "Hydrogen Evolution at Si based Metal-Insulator-Semiconductor Photoelectrodes Enhanced by Inversion Channel Charge Collection and Hydrogen Spillover", *Nature Materials* 12, 562 (2013).