

Meilin Liu

Hightower Chair and Regents' Professor
School of Materials Science & Engineering
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Home page: <http://fcbt.mse.gatech.edu/liu.htm>

Education

University of California at Berkeley, Materials Science & Engineering, PhD, 1989; MS, 1986
South China University of Technology, Materials Science & Engineering, BS, 1982

Appointments

1992- present Regents' Professor (2008-present), Professor (2000-2008), Associate Professor (1996-2000), Assistant Professor (1992-1996), School of Materials Science and Engineering, Georgia Institute of Technology, Atlanta, Georgia
2012-2022 Associate Chair, School of Materials Science and Engineering, Georgia Tech
2010-2015 Associate Director, *HeteroFoam* – a DOE Energy Frontier Research Center at USC
2001-2016 Co-Director, Center for Innovative Fuel Cell and Battery Technologies
1989-1992 Research Scientist, Ceramatec, Salt Lake City, Utah

Professional Service

Research interests include design, fabrication, *in situ* characterization, and simulation of charge and mass transport in membranes, thin films, coatings, porous electrodes, and devices for energy storage and conversion, including fuel cells, batteries, supercapacitors, and membranes for gas separation.

Co-organized **11** national/international symposia/workshops, co-edited **7** proceedings volumes, and chaired many sections in the area of fuel cells, batteries, supercapacitors, sensors, and membranes for gas separation.

Served on many *advisory committees* and *review panels* for US National Science Foundation, Dept. of Energy, Dept. of Defense, universities, and industries.

Editorial Board Membership: *Nano Energy* (IF: 19.0), Nature Publishing Group *Asia Materials* (IF: 10.76), *Solid State Ionics*, *Advances in Materials Science and Engineering*, and so forth.

Students Supervised: **35** postdoctoral, **43** PhD, **29** joint-PhD, and **13** MS students, ~**21** visiting scholars; many of his former students/advises are now conducting pioneering research in major industrial research centers and academia in the US and abroad. ~**30** of his former postdoctoral/PhD students are **faculty** members in universities in the US, China, South Korea, and Spain.

Sponsors: Federal Agencies: DOE Basic Energy Science; SECA, National Energy Technology Laboratory; ARPA-E; EERE; NSF-DMR; NSF-CTS, DARPA; ONR; ARO/DURIP; NASA.

National Labs: Argonne National Laboratory (ANL); Oak Ridge National Laboratory (ORNL)

Non-profit Organizations: American Chemical Society (ACS) - Petroleum Research Fund (PRF); Electric Power Research Institute (EPRI); Gas Research Institute (GRI); GT Research Corporation

Industries: Hyundai Motor Company; CBMM (Brazil); Nissan-North America; Samsung Advanced Institute of Technology (SAIT); TOPSOE Fuel Cells; Phillips 66; ConocoPhillips; nGmat, Pall Corporation; Nissan Motor Company; Samsung Display Devices; Toyota Technology Center, Toyota Motor Company; Shell Chemical; MicroCoating Technologies; Gazillion Bits; Symphonic Optical

Technologies; Reactive Energy; Johnson Electromechanical Systems; Engelhard; Caleb Technology Corporation; Kimberly-Clark; Ceramatec; Eka Nobel Chemicals; Cummins Engine Co., and Elkem

Publications, Presentation, and Patents

Published **20** review articles; **7** book chapters, and **~650** refereed papers in *Science* (1), *Nature* (1), *Nature Energy* (1), *Nature Comms* (8), *Energy Environ. Sci.*(22), *Adv. Mater.*(15), *Adv. Energy Mater.*(20), *Adv. Functional Mater.*(13), *Angew. Chem. Int. Ed.*(7), *Nano Letters* (8), *ACS Nano* (8), *JACS* (2), *Chem. Soc. Rev.* (1), *Mat. Sci. Eng. Report* (2), *Prog. in Mat. Sci.*(1), *Prog. in Energy & Comb. Sci.*(1), *Materials Today* (1), *Nano Energy* (28), *ACS Catalysis* (5), *Chem. Mater.* (12), *ChemSusChem* (8), *J. Mat. Chem. A* (23), and so forth

Web of Science (Research ID: [E-5782-2010](#)) citations: **~60,000**; h-index: **135**

[Google Scholar Citations](#): **~73,000**; h-index: **148**

Highly Cited Researcher (Clarivate Analytics), 2018, 2019, 2020, 2021, 2022

Presented **~200** invited, keynote, or plenary lectures around the world to conferences, workshops, universities, national labs, and industries

Awarded **~31** US/World Patents and filed **~10** patent applications on new materials and novel structures for batteries, fuel cells, supercapacitors, sensors, and membranes for gas separation; co-founded one company (**Polyplus**) based on some of the patents

Selected Awards and Honors

2022 - Highly Cited Researcher in the field of *Materials Science* and *Environment and Ecology*

2021 - Hightower Endowed Chair

2021 - Fellow, International Association of Advanced Materials (IAAM)

2021 - Highly Cited Researcher in the field of Materials Science

2020 - Highly Cited Researcher in the field of *Materials Science* and *Chemistry*

2019 - Highly Cited Researcher in the field of Materials Science

2018 - Highly Cited Researcher in Cross-Field (*Clarivate Analytics*)

2018 - HTM Outstanding Achievement Award (Electrochemical Society)

2018 - Charles Hatchett Award (CBMM, Institute of Materials, Minerals and Mining, UK)

2017 - Kolon Faculty Fellow (Kolon Industries)

2015 - B. Mifflin Hood Chair Professor

2013 - Outstanding Faculty Research Author Award (Georgia Tech)

2012 - Fellow, Electrochemical Society (ECS)

2011 - Fellow, American Ceramic Society (ACerS)

2010 - Ross Coffin Purdy Award (American Ceramic Society)

2008 - Regents' Professor

2007 - NASA Tech Brief Award

2007 - Invited participant, US-Japan Frontiers of Engineering (National Academy of Engineering)

2005 - Crystal Flame Innovation Award in Research (FuelCell South)

2003 - Outstanding Achievement in Research Program Development Award (Georgia Tech)

2003 - Sustained Research Award (Sigma Xi)

2002 - Senior Teaching Fellow (Georgia Tech)

2001 - Best Faculty Paper Award (Sigma Xi)

1999 - Outstanding Faculty Research Author Award (Georgia Tech)

1997 - Invited participant, Frontiers of Engineering (National Academy of Engineering)

1996 - Best MS Thesis Advisor Award (Sigma Xi)

1993 - National Young Investigator (NYI) Award (National Science Foundation)