



UPSTATE NY ENERGY STORAGE FACULTY EXPERTISE

EXPERT (INSTITUTION)	FOCUS
 BATTERY MATERIAL & CHEMISTRY	
M. Stanley Whittingham (Binghamton)	Li & Na-ion cathodes, alternate electrolytes
Hao Liu (Binghamton)	Li & Na-ion cathodes, multivalent-ion batteries
Brent Melot (Binghamton)	Materials design, synthesis, Beyond Li chemistries
Chuan-Jian Zhong (Binghamton)	Cathode nanomaterials, nanoparticles
Lynden Archer (Cornell)	Hybrid materials for battery electrodes
Hector D. Abruna (Cornell)	New battery materials, Organic cathodes, Novel anodes
Vibha Kalra (Cornell)	Li/Na/K-S, solid-state batteries, anode-less designs, 3D printing
Matthew Ganter (RIT)	Li-ion electrode designs, silicon anodes, electrolyte incorporation
Anthony Leggiero (RIT)	Li-ion electrode, Li-metal, silicon anodes
Howard Tu (RIT)	Solid-state batteries, electrochemical & mechanical interactions
Jeongmin Ahn (Syracuse)	Solid-state Li-ion batteries and novel electrolytes
Wyatt E. Tenhaeff (U. Rochester)	Li-ion, Li metal batteries, all solid state
Enyuan Hu (BNL)	Solid state Electrolytes
Lauren Marbella (Columbia)	Li metal anodes, electrolyte engineering, SEI formation
Yuan Yang (Columbia)	Solid-state, Li-S, Na-S batteries
Peter Khalifah (Stony Brook)	Na-ion, Mg-ion battery cathodes
Amy C. Marschilok (Stony Brook)	Solid-state metal oxide, novel electrode fabrication
Esther Takeuchi (Stony Brook)	Li, Li-ion, aqueous batteries, characterization methods
Kenneth J. Takeuchi (Stony Brook)	Materials design, microstructure control
Stanislaus S. Wong (Stony Brook)	High-energy-density electrode materials
Nikhil Koratkar (RPI)	Li-ion, Li-S, Li-metal, Na, K, Ca, Al battery materials
Fudong Han (RPI)	Solid-state Li-ion, Na-ion batteries
G. Tayhas R. Palmore (Brown)	Bio composites as Na-ion cathodes
Andre Taylor (NYU)	Next-gen Li battery materials, catalysts, electrolyte, Li-O ₂ /Li-air
Sanjoy Banerjee (CCNY CUNY)	Zinc-ion batteries
Robert J. Messinger (CCNY CUNY)	Al metal batteries, Li-ion batteries
Sophia N. Suarez (Brooklyn CUNY)	Electrolytes, ion dynamics

 METROLOGY	
Xiao-Qing Yang (BNL)	In-situ X-ray diffraction and absorption
Enyuan Hu (BNL)	Synchrotron x-ray, Neutron scattering
Sooyeon Hwang (BNL)	Scanning TEM, battery degradation
Hao Liu (Binghamton)	Operando-characterization of battery cathodes
Vibha Kalra (Cornell)	Spectroscopic techniques
Hector D. Abruna (Cornell)	Spectroscopic methods, imaging
Daniel Steingart (Columbia)	X-ray imaging, acoustic sensing, impedance spectroscopy
Robert J. Messinger (CCNY CUNY)	NMR spectroscopy
 ELECTROCHEMICAL REACTIONS IN BATTERIES	
Alan C. West (Columbia)	Experimental & numerical methods, ion dynamics
Chuan-Jian Zhong (Binghamton)	Interfacial chemistry, cathode nanomaterials
Ben Akih-Kumgeh (Syracuse)	Thermodynamic analysis of energy systems
 RECYCLING	
Xiaotu Ma (Binghamton)	Battery recycling, advanced manufacturing, sustainability
Robert J. Messinger (CCNY CUNY)	Battery recycling
Yong Lak Joo (Cornell)	Nanofiber electrodes/separators, electrospinning/spray
 SAFETY	
Srikanth Rangarajan (Binghamton)	Digital twin, thermal management
Bahgat G. Sammakia (Binghamton)	Battery thermal management electronics
Hui Zhou (NECCES @ Binghamton)	Thermal measurements in cells
Quinn Qiao (Syracuse)	Li-ion safety, durability, reliability
 AI / MODELLING	
Weiping Diao (Binghamton)	ML for battery health & safety
Sara Kohtz (Binghamton)	ML for battery health & safety
Fengqi You (Cornell)	Computational models, optimization, ML
Alexander Urban (Columbia)	DFT, machine learning, recycling
Yue Qi (Brown)	Multi-scale simulations, battery modeling
Manuel Smeu (Binghamton)	Atomistic models, multivalent ion batteries
Zixiao Ma (Binghamton)	Optimization theory, microgrids
Ziang "John" Zhang (Binghamton)	Battery systems planning & operation
Sara Eftekharnejad (Syracuse)	Renewable energy integration, grid stability
Anwar Elhadad (Binghamton)	Energy harvesting, wireless charging

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