Haimei Zheng
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Appointments

2018-	Senior Staff Scientist, Materials Sciences Division, LBNL, Berkeley, CA
2023-	Adjunct Professor, Materials Science Engineering, UC Berkeley, CA
2013-2023	Adjunct Assistant & Associate Professor, Materials Science Engineering, UC Berkeley, CA
2010-2017	Staff Scientist, Materials Sciences Division, LBNL, Berkeley, CA

Education & Training

Postdoc	Lawrence Berkeley National Laboratory & UC Berkeley	Electron Microscopy & Chemistry	2006-2010
Postdoc	UC Berkeley	Physics & Materials Sci. Eng.	2005-2006
Ph.D.	University of Maryland, College Park	Materials Sci. Eng.	2004
M.S.	Tianjin University	Materials Sci. Eng.	1997

Honors & Awards

2023	Microscopy Society of America Fellow
2021	Materials Research Society Fellow
2019	Materials Research Society Medal Award
2013	LBNL Director's Award for Exceptional Scientific Achievement
2011	DOE Office of Science Early Career Award
2003	Materials Research Society Graduate Student Gold Medal Award

Professional Membership

Materials Research Society, Microscopy Society of America, American Chemical Society

Synergistic Activity & Service

- Associate editor, *Frontiers in Chemistry* (Catalytic Reactions and Chemistry section) 2023-present.
- Member of the Editorial Board, *Scientific Report*, 2018-present.
- Member of the Editorial Advisory Board, *Chem*, 2016-present.
- Guest Editor, *MRS Bulletin* special issues: "Liquid Phase Electron Microscopy" 2020; "Frontiers of In Situ Electron Microscopy" 2015.
- Guest Editor, *Accounts of Chemical Research* special issue: "Direct Visualization of Chemical and Self-Assembly Processes with Transmission Electron Microscopy", 2017.
- Elected Chair, GRC "Liquid Phase Electron Microscopy" (2024 Vice Chair, 2026 Chair).
- Organizer, Symposium on "Organic chemistry: applications of liquid phase electron microscopy and other advanced microscopy methods", 20th International Microscopy Congress, Busan, Korea, Sep.10-15, 2023.
- Invited participant, NSF workshop "Challenges and prospects for the next 10 years of nanochemistry", June 22-23, 2023.
- Chair, MRS Fall Meeting, 2022.
- Organizer, Symposium on "Direct visualization of chemical and self-assembly processes with high-resolution microscopy", The International Chemical Congress of Pacific Basin Societies (Pacifichem), Honolulu, Hawaii, December 15-20, 2021.
- Invited participant, 2019 EU-US Frontiers of Engineering Symposium (EU-US FOE) organized by U.S. National Academy of Engineering (NAE).

- Organizer, Symposium on "In situ TEM characterization of dynamic processes during materials synthesis and processing", Microscopy & Microanalysis, Portland, Oregon, August 4-8, 2019.
- Organizer, Symposium on "In situ and operando microscopy of electronic and energy materials", XXVII International Materials Research Congress, Cancun, Mexico, August 19-24, 2018.
- Organizer, Symposium on "In situ electron microscopy of dynamic materials and phenomena", MRS Spring Meeting & Exhibit, Phoenix, Arizona, April 17-21, 2017.
- Organizer and Chair, DOE Office of Science Workshop on "Future Electron Scattering & Diffraction", Rockville, Maryland, February 25-26, 2014.
- Organizer, Symposium on "In situ microscopy", Microscopy & Microanalysis, Hartford, Connecticut, August 3-7, 2014.

Reviewer

Acta Materialia, Accounts of Chemical Research, ACS Applied Materials & Interfaces, ACS Catalysis, ACS Nano, Analytical Chemistry, Annual Review of Physical Chemistry, Applied Physics Letters, Chemical Communications, Journal of Materials Chemistry, Journal of Physical Chemistry, JACS, Microscopy and Microanalysis, MRS Bulletin, Nano Letters, Nanoscale, Nature, Nature Catalysis, Nature Communications, Nature Energy, Nature Materials, Nature Nanotechnology, Science, Science Advances, Scientific Reports, Ultramicroscopy

Research Advisement

Doctor of Philosophy (all co-advisement) total 20
Postdoctoral Fellows total 18
Undergraduate students total 11

Highlighted Publications (from total **155** refereed papers; **2** book chapters; as corresponding author for all selected)

1. Y. Xie, J. Wang, B. H. Savitzky, Z. Chen, Y. Wang, S. Betzler, K. C. Bustillo, K. Persson, Y. Cui, L. Wang, C. Ophus, P. Ercuis, H. Zheng, "Spatially resolved structural order in low temperature liquid electrolyte." ***Science Advances*** 9, eadc9721 (2023).
2. X. Peng, F. Zhu, Y. Jiang, J. Sun, L. Xiao, S. Zhou, K. C. Bustillo, L. Lin, J. Cheng, J. Li, H. Liao, S. Sun. H. Zheng, "Identification of a quasi-liquid phase at solid-liquid interface." ***Nature Communications*** 13, 3601 (2022).
3. W. Wang, Tao Xu, J. Chen, J. Shangguan, H. Dong, H. Ma, Q. Zhang, J. Yang, T. Bai, Z. Guo, H. Fang, H. Zheng, L. Sun, "Solid-liquid-gas reaction accelerated by gas molecule tunneling-like effect." ***Nature Materials*** 21, 859–863 (2022).
4. Q. Zhang, X. Peng, Y. Nie, Q. Zheng, J. Shangguan, Chao Zhu, K. C. Bustillo, P. Ercius, L. Wang, D. T. Limmer, H.Zheng, "Defect-mediated ripening of core-shell nanostructures." ***Nature Communications*** 13, 2211 (2022).
5. S. Lee, J. Shangguan, J. Alvarado, S. Betzler, S. J Harris, M. M Doeff, H. Zheng, "Unveiling the mechanisms of lithium dendrite suppression by cationic polymer film induced solid electrolyte interphase modification." ***Energy & Environmental Science*** 13, 1832-1842 (2020).
6. J. Yang, Z. Zeng, J. Kang, C. Czarnik, X. Zhang, C. Ophus, C. Yu, K. Bustillo, M. Pan, J. Qiu, L. W. Wang, H. Zheng, "Formation of two-dimensional transition metal oxide nanosheets with nanoparticles as intermediates." ***Nature Materials*** 18, 970-976 (2019).
7. Y. Wang, X. Peng, A. Abelson, P. Xiao, C. Qian, L. Yu, C. Ophus, P. Ercius, L.Wang, M. Law, H. Zheng, "Dynamic deformability of individual PbSe nanocrystals during superlattice phase transitions." ***Science Advances*** 5, eaaw5623 (2019).

8. C. Zhu, S. Liang, E. Song, Y. Zhou, W. Wang, F. Shan, Y. Shi, C. Hao, K. Yin, T. Zhang, J. Liu, H. Zheng, L. Sun, "In-situ liquid cell transmission electron microscopy investigation on oriented attachment of gold nanoparticles." ***Nature Communications*** 9, 421 (2018).
9. K. Niu, Y. Xu, H. Wang, R. Ye, H. L. Xin, F. Lin, C. Tian, Y. Lum, K. C. Bustillo, M. M. Doeff, M. T. M. Koper, J. Ager, R. Xu, H. Zheng, "A spongy nickel-organic CO_2 reduction photocatalyst for nearly 100% selective CO production." ***Science Advances*** 3, e1700921 (2017).
10. H. G. Liao, D. Zherebetskyy, H. Xin, C. Czarnik, P. Ercius, H. Elmlund, M. Pan, L. W. Wang, H. Zheng, "Facet development during platinum nanocube growth." ***Science*** 345, 916-919 (2014).
11. Z. Zeng, W. Liang, H. G. Liao, H. L. Xin, Y. H. Chu, H. Zheng, "Visualization of electrode-electrolyte interfaces in $LiPF_6$/EC/DEC electrolyte for lithium ion batteries via in-situ TEM." ***Nano Letters*** 14, 1745-1750 (2014).
12. H. G. Liao, L. Cui, S. Whitelam, H. Zheng, "Real time imaging Pt_3Fe nanorod growth in solution." ***Science*** 336, 1011-1014 (2012).

Invited Talks (total 130+)
(Full CV available on request)