

Pinshane Y. Huang

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Biography:

Pinshane Y. Huang is an Associate Professor in the Department of Materials Science and Engineering at the University of Illinois, Urbana-Champaign. Pinshane holds a Ph.D. and an M.S. in Applied and Engineering Physics from Cornell University, and B.A in Physics from Carleton College. Her research is focused around aberration-corrected scanning transmission electron microscopy, 4D-STEM, diffraction-based imaging, and spectroscopy of two-dimensional materials and electronic nanostructures. Her awards include a Presidential Early Career Award for Scientists and Engineers (PECASE), a Packard Fellowship, a Sloan Fellowship, Air Force Young Investigator and NSF CAREER awards, and her work has been featured in the Guinness Book of World Records. Outside of microscopy, she enjoys gardening, podcasts, and dogs.

Research interests and topics for presentation:

- Machine learning for the analysis of large electron microscopy datasets
- Imaging atomic-scale strain and fields with 4D STEM
- Electron microscopy of 2D materials
- Nanoelectronics and nanophotonics
- Materials for energy and catalysis
- Advanced image analysis for detecting and tracking single atoms