Stanford

Kate Reidy

Affiliate, Materials Science and Engineering

Bio

BIO

Kate Reidy will begin as an Assistant Professor of Materials Science and Engineering at Stanford in September 2026. Her research takes a ‘bottom up' approach to nanoscale design, tailoring material properties by understanding and manipulating their atomic structure. She combines advanced characterization with in situ microscopy to elucidate growth mechanisms, chemical composition, and response to stimuli at the atomic scale.

Her research group aims to push the limits of nanoscale engineering by observing and controlling atomic-scale kinetic and thermodynamic phenomena such as adsorption, diffusion, nucleation, defect and interface formation - mapping such structural dynamics to quantum, energy, and opto-electronic properties. She is broadly interested in the functional utilization of quantum properties of nanomaterials in our classical world.

Prior to joining Stanford, Kate was a Miller Postdoctoral Fellow at UC Berkeley and Lawrence Berkeley National Lab. She completed her PhD in Materials Science & Engineering at MIT as a MIT Energy initiative and William Asbjornsen Albert Memorial Fellow, entitled 'Atomic-Scale Design at the 2D/3D Interface using Electron Microscopy'. She received her B.Sc in Nanoscience, Physics, and Chemistry of Advanced Materials from Trinity College Dublin, Ireland. Her work has been recognized by the MIT School of Engineering, Microscopy Society of America, Materials Research Society Gold Award, 'Best Doctoral Thesis' Award at MIT DMSE, and the Lemelson-Vest Award for Innovation.