

Matthew B. Lowry



Specialized Professional Competence

Mechanical testing of materials with an emphasis on the design and fabrication of novel data acquisition systems. Metallurgical failure mechanisms, processing (annealing, alloying), and sample preparation. Characterization of materials: high resolution microscopy, materials identification, and microstructural analysis. Materials selection and design.

Background and Professional Honors

B.S. (Chemical Engineering and Materials Science and Engineering), University of California, Berkeley

M.S. (Materials Science and Engineering), University of California, Berkeley

Ph.D. (Materials Science and Engineering), University of California, Berkeley

Engineer,

Talas Engineering, Inc.

Materials Scientist,

TDK Headway Technologies

Graduate Student Researcher,

Department of Materials Science and Engineering, University of California, Berkeley

Mechanics of Materials Group, Lawrence Livermore National Laboratory

Graduate Student Instructor,

Department of Materials Science and Engineering, University of California, Berkeley

Intern,

Thermal Protections Division, National Aeronautics and Space Administration

Memberships

Member, The Minerals, Metals and Materials Society

Member, Materials Research Society

Awards

Lawrence Scholars Program Fellowship, Lawrence Livermore National Laboratory

American Institute of Chemical Engineers Scholarship, Northern California Chapter

Selected Publications and Presentations

“Dislocation Starvation and Exhaustion Hardening in Mo Alloy Nanofibers,” *Acta Materialia*, 2012 (as 3rd author, with C. Chisholm, H. Bei, *et. al.*).

“Achieving the Ideal Strength in Annealed Molybdenum Nanopillars,” *Acta Materialia*, 2010 (with D. Kiener, M.M. LeBlanc, *et. al.*).

“*In situ* TEM Annealing and Compression of Molybdenum Nanopillars with Varying Dislocation Densities,” Oral presentation, Materials Research Society Spring Meeting, San Francisco, CA, 2011 (with M.M. LeBlanc, J.N. Florando, *et. al.*)

“Achieving the Ideal Strength in Annealed Molybdenum Nanopillars,” Invited oral presentation, Berkeley Materials Research Society Student Speaker Series, Berkeley, CA 2011 (with D. Kiener, M.M. LeBlanc, *et. al.*).

“Mitigating Focused Ion Beam Damage in Molybdenum Nanopillars by *In situ* Annealing,” Oral presentation, Microscopy and Microanalysis Conference, Portland, OR, 2010 (with D. Kiener, M.M. LeBlanc, *et. al.*).

“Quantitative *In situ* Observation of Dislocation Mobility in a TEM,” Poster presentation, Workshop on *In situ* Methods in Nanomechanics, Lawrence Berkeley National Lab, Berkeley, CA, 2007 (with J.N. Florando, M.M. LeBlanc, *et. al.*).