

Chemical Engineering & Materials Science

UNIVERSITY OF MINNESOTA



Nathan Mara

Associate Professor

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Education

B.S., Mechanical Engineering/Materials Science and Engineering, University of California, Davis, 2000

Ph.D., Materials Science and Engineering, University of California, Davis, 2005

Research Areas

Electron Microscopy

Energy

Nanomaterials & Nanotechnology

Nanomechanics & Plasticity

Research Interests

Dr. Nathan Mara comes to CEMS from the Center for Integrated Nanotechnologies (CINT) at Los Alamos National Laboratory (LANL). There, he was a co-director of the Institute for Materials Science at LANL, and Thrust Leader for the Nanoscale Electronics and Mechanics thrust at CINT. His research focuses on the relationship between microstructure and mechanical behavior at the nanoscale, with an emphasis on structural applications in extreme environments such as high temperature, stresses, strain rates, and radiation environments. Dr. Mara is the past chairman (chair 2013-2015) of the Nanomechanical Materials Behavior Committee of TMS, and has published ~120 peer-reviewed journal articles spanning topics from synthesis of bulk nanocomposites to performance of advanced materials under extreme conditions and has been cited ~3120 times since 2012 (Google Scholar). He received the TMS Young Leader's Professional Development Award in 2012, the LANL Distinguished Mentor Performance Award in 2010 for his dedication to undergraduate and graduate student education at LANL, and the 2017 International Journal of Plasticity Young Investigator Award for his contributions to modeling plastic deformation and mechanisms of metals and nanocomposites.