COMPRES

COnsortium for Materials Properties Research in Earth Sciences



Newsletter December 2017

In this and forthcoming newsletters we will highlight members of the COMPRES community. In this issue we spotlight the research and careers of recently appointed tenure track assistant professors (Part II). Stay tuned, Part III of "assistant professors" will be featured in the January 2018 issue.



Zhicheng Jing Assistant Professor (2013-present) Department of Earth, Environmental and Planetary Sciences Case Western Reserve University zhicheng.jing@case.edu http://casfaculty.case.edu/zhicheng-jing/

Zhicheng Jing studies the physical and chemical properties of Earth and planetary materials under planetary mantle and core conditions and applies these material properties to understanding the structure, composition, and dynamics of Earth and planetary interiors. He conducts high-pressure and high-temperature experiments in large-volume hydraulic presses in his Mineral and Melt Physics Lab at Case Western Reserve University and at synchrotron X-ray facilities. His current research focuses on determining the density and sound velocity of silicate melts, iron-alloying liquids, lower-mantle minerals, and subducting slab materials at high pressures through a range of experimental and theoretical approaches.

Zhicheng received a B.S. (2000) and an M.S. (2003) in Geophysics at Peking University, China, and a Ph.D. in Geophysics at Yale University (2010). After graduate school, he was a Postdoctoral Scholar at the Center for Advanced Radiation Sources (GSECARS), the University of Chicago.



Catherine Macris Assistant Professor (2015-present) Department of Earth Sciences Indiana University - Purdue University Indianapolis camacris@iupui.edu https://earthsciences.iupui.edu/people/ppgenesmacris-catherine

Catherine (Cam) Macris studies the interactions of minerals, melts, and fluids at high temperatures and pressures corresponding to a wide range of geological processes from crustal melting and vaporization caused by asteroid impacts on Earth's surface, to metasomatism of high pressure mineral assemblages in subduction zones. She approaches these interesting processes by looking at natural samples from the field, identifying the most intriguing questions they raise, then designing and implementing laboratory experiments to try to answer those questions. Cam uses a High Temperature Conical Nozzle Levitator (HT-CNL[™]) to simulate extreme temperatures relevant impact plumes (up to ~3500 °C), and a piston cylinder apparatus to simulate pressures and temperatures in the lower crust and upper mantle (up to 20 kbar and 1200 °C).

Cam received a B.S. in Geology from Louisiana State University (2002), and a M.S. and Ph.D. in Geochemistry from the University of California, Los Angeles (2008, 2012). Following grad school she was a Postdoctoral Fellow in Geochemistry at Caltech.



Lowell Miyagi Assistant Professor (2013-present) Department of Geology and Geophysics University of Utah Iowell.miyagi@utah.edu http://rocklab.earth.utah.edu/

Lowell Miyagi's main research interests include texture (crystallographic preferred orientation) and anisotropy development in mantle rocks, polycrystal plasticity, rheology of deep earth materials, and interpretation of seismic anisotropy in the Earth. Lowell's research on deformation and texture development in deep Earth mineral phases, and the consequences for seismic anisotropy and dynamics, was carried out, in part, at COMPRES supported beamlines Advanced Light Source (ALS), Lawrence Berkeley National Laboratory. This December he received the 2017 Mineral and Rock Physics (MRP) Early Career Award from the American Geophysical Union (AGU).

Lowell received a B.A. in Geology and East Asian Studies at Oberlin College (2004), and a Ph.D. in Earth and Planetary Sciences at the University of California, Berkeley (2009). After graduate school, he was a Bateman Postdoctoral Fellow in the Department of Geology and Geophysics, Yale University (2009-2011), and Adjunct Assistant Professor in the Department of Earth Sciences, Montana State University (2011-2012).

COMPRES Annual Meeting SAVE THE DATE! August 5-8, 2018



We are pleased to announce that the 2018 COMPRES Annual Meeting will be held on August 5-8, 2018 at the Hyatt Regency Tamaya Resort, New Mexico, USA.

 $\underline{http://compres.us/events/annual-meeting/2018/2018-compres-annual-meeting-general-information.}$

Meeting Questions? Contact Beth Ha: <u>beth3ha@unm.edu</u>. See you in New Mexico, August 2018!



Contact: Dr. Carl Agee COMPRES President agee@unm.edu 505-750-7172 www.compres.us



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