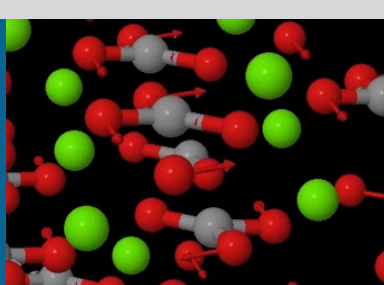


COMPRES

CONsortium for Materials Properties Research in Earth
Sciences



Newsletter
August 2017

COMPRES Sponsored Workshops



COMPRES supports open community workshops that cover a variety of topics relating to science and methodologies. Workshops serve to educate users about newly developed experimental techniques and their coupled scientific applications and to broaden and strengthen user communities of COMPRES-supported facilities. For graduate students and potential new users of facilities, COMPRES offers intensive hands-on workshops designed to highlight scientific applications of COMPRES-funded resources, and to bring attendees up to speed in newly developed specific techniques.

Workshop proposals will be considered by COMPRES at any time. We are particularly interested in sponsoring pre-meeting workshops that can be held in conjunction with the COMPRES annual meeting. For more information contact Carl Agee, COMPRES President (agee@unm.edu) and Suki Dorfman, Chair of the Education, Outreach, Infrastructure, Development (EOID) Committee (dorfman3@msu.edu).

Upcoming COMPRES Workshop

Workshop on CONUSS and Synchrotron Mössbauer Data Analysis

November 16-19, 2017, Advanced Photon Source, Argonne National Lab

Contact: Wenli Bi (wbi@aps.anl.gov); Ercan Alp (eea@aps.anl.gov)



Highlights

Introduction to Synchrotron Mössbauer Spectroscopy (SMS)

Introduction to CONUSS for data evaluation

Data analysis in ^{57}Fe , ^{119}Sn , ^{151}Eu , and ^{161}Dy isotopes

Some essential aspects of data analysis in CONUSS, e.g.: magnetic, valence & spin transitions, and relaxation effects.

Speakers and topics

Mössbauer Spectroscopy (Raphael Hermann, ORNL)

Introduction to synchrotron Mössbauer Spectroscopy (Wolfgang Sturhahn, Caltech)

CONUSS hands-on session (Wolfgang Sturhahn, Caltech)

Hyperfine interactions and studies of magnetism using NRS (Ralf Röhlsberger, DESY)

Geophysical Applications of Nuclear Resonant Scattering (Jennifer Jackson, Caltech)

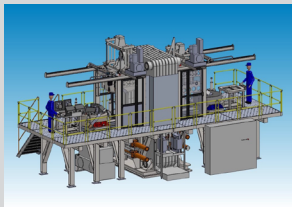
Instrumentation and recent development at Sector 3 (Jiyong Zhao, ANL)



COMPRES Workshops held in 2017

Workshop on Community Extreme Tonnage User Service (CETUS): 5000 Ton Press Research Facility

January 22-24, 2017, Lunar and Planetary Institute, Houston, TX, Lisa Danielson

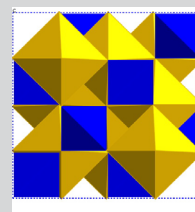
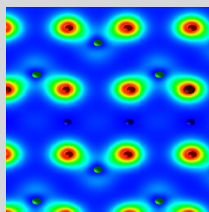


Purpose of workshop – strategic planning for CETUS via direct community input.

Collaborating institutions and participants in working group: COMPRES, ASU, Case Western Reserve, DERFORM, HEMI, Lehigh Univ., Lunar and Planetary Institute, Texas A&M, Union College, Univ. Chicago, Univ. Houston, Univ. Minnesota, Univ. Michigan, UNLV, Univ. New Mexico, Univ. Rochester.

Workshop on Ab Initio Tools for Hypothesis Testing

July 9, 2017, Tamaya Resort, Santa Ana Pueblo, NM, Wendy Panero & Razvan Caracas

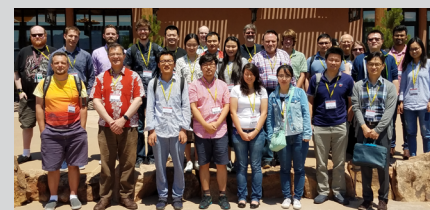
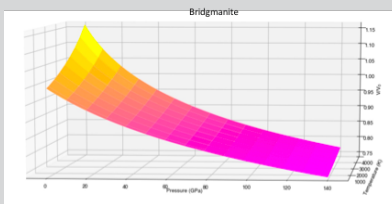


Hands on experience with visualizing vibrational modes
Discussion of the logistics of running ab initio calculations
Practical strategies for predicting new phases

28 attendees, the majority being graduate students and postdocs

Workshop on Software Toolkit

July 9, 2017, Tamaya Resort, Santa Ana Pueblo, NM, S.-H. Dan Shim, Cayman Unterborn, Przemyslaw Dera, Bin Chen & Christopher McGuire



Introduction to data science and interpretation of mineral physics data. The workshop included talks on the community software toolkit approach and existing tools and hands-on tutorials on python scripting combined with Jupyter notebook.

26 attendees, the majority being graduate students and postdocs

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