

University of Arizona Geosciences Fall 2018

Geochemistry and Mineralogy



Greetings Alumni!

Outstanding research and geological excellence in geochemistry and mineralogy at UA Geosciences has shown no sign of slowing down in 2018. Many of our faculty and students received awards, there are lots of exciting projects being started, and new graduate students have arrived to inspire us with new ideas.

Faculty



Left: Bob Downs
Right: Mihai Ducea



Left: Jay Quade
Right: Pete Reiners

Robert Downs, Director and Curator of the University Gem and Mineral Museum, is focused on the move of the museum to the Old Pima County Courthouse, which is expected to raise the level of earth science exhibits to a new high. He is currently developing new miniaturized analytical tools for the lander for the next Mars probe Europa.

Mihai Ducea has been named science co-editor for GSA Today for the term January 2018 through December 2021. He received the Core Fulbright U.S. Scholar award for the academic year 2017-2018 for the project 'From Classroom to the Mountaintops: Linking Frontier Geoscience Research in the Carpathians With Tea' in Romania.

Jay Quade is named the Arthur L. Day Medalist for the Geological Society of America, 2018, in recognition of his outstanding contributions to understanding paleoclimate, environmental change, tectonic processes, geochemistry, and hominid evolution.

Peter Reiners and his team have recently published a new book, 'Geochronology and Thermochronology' published by the American Geophysical Union and featured in AGU Eos. He is leading a team of UA geoscientists studying subsurface fluid-rock systems in the Paradox Basin, now entering into the second year of their \$1 million grant from the W.M. Keck Foundation.

Graduate Students

Left: Ursula Ginster
Right: Derek Hoffman



Ursula Ginster presented her work on 'Kinetics of radiation damage annealing in zircon' at AGU, December 2017, and on 'Effects of radiation damage accumulation and annealing on He diffusion in zircon' at the International Conference of Thermochronology, September 2018.

Derek Hoffman has been analyzing zircon assemblages to look for Archean grains eroded out of cratons. Using methods developed in this department, by combining U-Pb age dating with simultaneously acquired trace element analyses, he is quantifying crustal thickness in early Earth history.

Jordan Jensen has just published an article in EPSL - 'Single-crystal hematite (U-Th)/He dates and fluid inclusions document widespread Cryogenian sand injection in crystalline basement'. He won the prize for best geochemistry talk at Geodaze 2018, and has since finished his MS and has been an exploration intern at ExxonMobil.

New Graduate Students

Left: Melli Rose
Right: Lydia Bailey



Lydia Bailey: PhD student, advisor: Pete Reiners

Anthony Krupa: MS student, advisor: Jay Quade

Melli Rose: MS student, advisor: Robert Downs

Undergraduate Success

Jessie McGraw won the prize for best undergraduate talk at Geodaze 2018. The talk was about the history of ENSO in the Galapagos in the 16th century using fossil coral geochemistry.