

RIMG SHORT COURSE ON PETROCHRONOLOGY: METHODS AND APPLICATIONS

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The short course entitled Petrochronology: Methods and Applications was held 22–23 (Saturday and Sunday, respectively) April 2017 in Vienna (Austria). It was co-organized by Pierre Lanari (University of Bern, Switzerland), Matt Kohn (Boise State University, USA) and Martin Engi (University of Bern), who also served as editors of the new volume (v83) of the Reviews in Mineralogy and Geochemistry (RiMG) series entitled *Petrochronology: Methods and Applications*. Sponsors of the short course included industry partners (SELFRAG, CAMECA, ESI) and scientific societies (Geochemical Society, European Association of Geochemistry, European Geosciences Union, la Société Française de Minéralogie et Cristallographie), which awarded six travel grants and offered reduced registration fees to eleven students. This short course brought together 85 participants from 25 countries, including graduate students, early career scientists, and senior researchers.

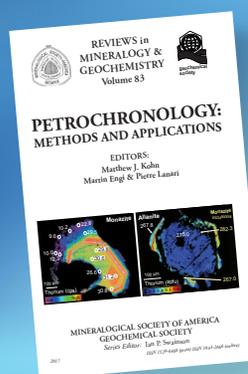
On Saturday, Chris Clark (Curtin University, Australia) provided a clear review of the use of equilibrium phase diagrams in petrogenetic modeling, including accessory minerals. Pierre Lanari then addressed issues of incomplete equilibration and potential pitfalls for thermobarometry, which was followed by Matt Kohn, who skillfully presented the effects (merits and perils) of diffusion, and Ralf Dohmen (University of Bochum, Germany), who gave a comprehensive overview of techniques used to study magmatic processes (chronometry and speedometry). In the afternoon, zircon – the most commonly used accessory mineral in petrochronology – was highlighted by Daniela Rubatto (University of Bern). Blair Schoene (Princeton University, USA) discussed opportunities and obstacles of U–Pb and Sm–Nd rock dating by thermal ionization mass spectrometry before Andrew Kylander-Clark (University of California, Santa Barbara, USA) gave a practical demonstration of laser ablation split-stream inductively coupled mass spectrometry monazite dating – which he did *on-line* from Vienna with his lab in California (USA)!

The morning session on Sunday was dominated by garnet, with Mark Caddick and Besim Dragovic (Virginia Tech, USA) taking the participants through a passionate review across observational, modeling and dating techniques. Petrochronological applications involving titanite and rutile were then presented, respectively, by Matt Kohn and Ellen Kooijman (Museum of Natural History, Stockholm, Sweden). After

lunch, Urs Schaltegger (University of Geneva, Switzerland) turned our attention to igneous systems, with a special focus on zircon. Axel Schmitt (University of Heidelberg, Germany) described the use of the secondary ionization mass spectrometry analysis. And to finish this short course, Emilie Janots (University of Grenoble, France) presented insights into recent experimental results on mechanisms of monazite dissolution and reprecipitation.

Overall, this RiMG short course was a scientific and social success. It promoted fruitful discussions among students and researchers between the presentations and during the social parts of the program. A second short course on this topic will follow in Seattle (USA) 20–21 October 2017 (<http://seattle2017.petrochronology.org>). The RiMG volume itself (v83, *Petrochronology: Methods and Application*) is available for purchase via the Mineralogical Society of America's website (<http://www.minsocam.org/msa/RIM/rim83.html>).

NEW TITLE



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