

## Joint winner of 2017 IAG Young Scientist Award

### Peter Onuk



Peter was a PhD student at the Department of Geology and Economic Geology, Montanuniversität, Leoben, Austria starting in 2014.

The subject of his thesis was the potential exploitation of high-technology elements in sphalerite from Eastern Alpine Pb-Zn ore deposits. His research involved the analysis of sphalerite (ZnS) using LA-ICP-MS, which necessitated the development of suitable reference materials for calibration of the LA-ICP-MS system. Peter devised a sintering technique to produce homogenous ZnS materials doped with a wide range of trace elements, which was published in *Geostandards and Geoanalytical Research* in 2016<sup>1</sup>.

In addition, he developed a cost-efficient method for sulphur isotope measurements by LA-ICP-MS, using N<sub>2</sub>O as the reaction gas in an ICP-MS/MS system (paper in preparation). The reference materials he developed, MUL-ZnS1 and MUL-ZnS2, have been distributed to many other laboratories, as the demand for such materials in research related to ore geology continues to grow. When he is not in the lab, Peter enjoys cave diving and renovating a 300 year old mill.

<sup>1</sup>Onuk, P., Melcher F., Mertz-Kraus, R., Gäbler, H-E. and Goldmann, S. (2016). Development of a matrix-matched sphalerite reference material (MUL-ZnS-1) for calibration of in situ trace element measurements by laser ablation-inductively coupled plasma mass spectrometry. *Geostandards and Geoanalytical Research* 41(2), 263-272.