

STUDENT-INDUSTRY WORKSHOP AND FIELD TRIP

In an effort to attract more students into the mineral exploration industry, the Prospectors and Developers Association of Canada (PDAC) ran its sixth annual Student-Industry Mineral Exploration Workshop (S-IMEW) on May 5–18, 2012, in Sudbury, Ontario. The top 26 Canadian postsecondary geoscience students were selected from across the country to attend the workshop. Students participated in lectures, presentations, and hands-on courses covering exploration techniques, mineral deposits, geophysics, and geochemistry, as well as environmental, health and safety, and corporate social responsibility issues. Field trips to Timmins and Rouyn-Noranda were included in the workshop, allowing students to see what these world-class mining regions have to offer.

Among the highlights of this program is “Geochemistry Day,” organized and taught by Stew Hamilton and Richard Dyer from the Ontario Geological Survey, Beth McClenaghan from the Geological Survey of Canada, and Noelle Shriver from Vale, all of whom are members or fellows of the AAG. They introduced students to exploration geochemical techniques, but the main focus of the day was to provide the students with practical experience that they are unlikely to receive in the university setting. To that end, students carried out lake sediment sampling firsthand in boats on Ramsey Lake in Sudbury. Beth then introduced the students to the microscopic world of indicator minerals and to hands-on mineral picking using microscopes. Noelle took the students on a short field traverse to explore and review soil profiles and carry out soil sampling in typical glaciated terrain.

The field trip was a great opportunity for students to see new parts of Canada, learn about the wide variety of career opportunities in mineral exploration, gain experience with exploration techniques not typically taught to undergraduate students, and experience some of the adventures of being a geoscientist.

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26th International Applied Geochemistry Symposium,
incorporating the
New Zealand Geothermal Workshop

18-21 November, 2013
Rotorua, New Zealand
www.gns.cri.nz/iags for
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- Technical programme
- Short courses
- Field trips
- Partner activities

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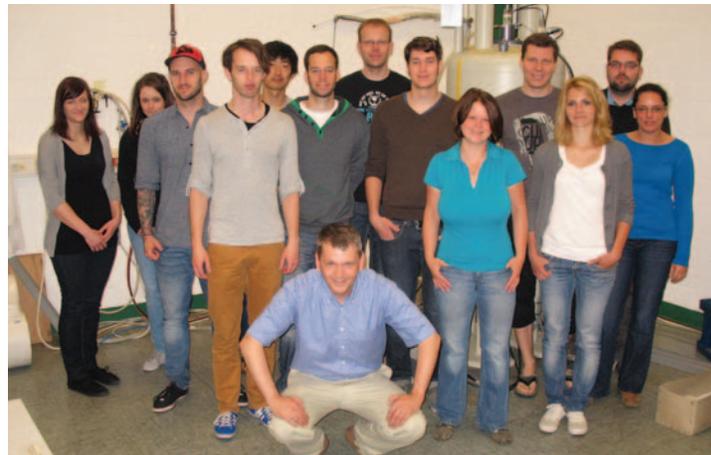


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REPORT ON THE DMG SHORT COURSE “APPLICATIONS OF SOLID STATE NMR SPECTROSCOPY IN MINERALOGICAL AND GEOSCIENTIFIC RESEARCH”

May 29–June 1, 2012, Bochum



Participants in the NMR short course at the University of Bochum, Germany

Now almost a tradition, the DMG/DGK short course on NMR spectroscopy took place at the University of Bochum from May 29 to June 1. Under the supervision of Dr. Michael Fechtelkord, 14 participants from universities in Germany, Austria, and Switzerland dedicated four days to exploring the possibilities of NMR spectroscopy.

After a theoretical introduction in the morning, the newly learned knowledge was carried into the lab to test it in the real world. Thus Tuesday afternoon was devoted to measuring the spin-relaxation of ^1H and the dynamics of tetramethylammonium iodide. In doing so, the participants learned how to handle a spectrometer and to prepare samples for measurement. But no analytical procedure is complete without the actual evaluation of the measured data.

Thus after getting to know the huge magnet better (see photo), the second day started with the theory of dipole and chemical interactions in solids. The aim was to find a solution to the problem of how to measure a good spectrum despite the presence of anisotropy effects. The answer is simple and fascinating at the same time: by using the magic angle. After solving these problems, the evaluation of spectra still needs a lot of experience and patience.

On Thursday, the participants took a peek into the rabbit hole. NMR spectroscopy not only can show the local distortions in the crystal lattice induced by doping, it can also distinguish between different atomic neighbors.

It is fascinating to see the possibilities provided by NMR spectroscopy for finding answers to many scientific problems. Also it is amazing to see how scientists come up with new solutions to experimental problems and measure what could not be measured before.

Last, but not least, this short course gave young scientists the opportunity to exchange experiences in a relaxed atmosphere. The two social events were well organized and great successes.

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