

Report of conference attendance - part funded by the UK 850 MHz solid-state NMR facility PhD travel fund, supported by Bruker

Mr Oliver L. G. Alderman from the University of Warwick was awarded £700 to attend the 7th International Conference on Borate Glasses, Crystals and Melts in Halifax, Canada, August 21-25, 2011. This is the leading conference dealing with the structures and applications of these important materials. He presented a 30 minute talk entitled “B-11 double rotation spin diffusion NMR as a probe of local and intermediate structure in borate crystals and glasses”. The presentation was well received and generated interest and questions from experts in the field such as Scott Kroeker (University of Manitoba) and Helmut Eckert (University of Münster). These were predominantly concerned with the, as yet, unexplained narrowing of the low C_Q tetrahedral boron site resonances under double rotation, with respect to “single” rotation about the magic angle. These questions, as well as the meeting in general, proved to be highly intellectually stimulating for the student (Mr Alderman) and have led to ideas for future experiments. The funding from the UK 850 MHz solid-state NMR facility PhD travel fund, supported by Bruker, was a very important element in funding attendance at this conference and was duly acknowledged in the talk.

See below a section of the conference program highlighting the talk of Mr Alderman.

Thursday, August 25

Session 13: Optical Response

9:00–9:40	S. Kamitsos:	Thermally Poled Glasses with Non-linear Optical Properties
9:40–10:10	I. Chermiti:	Femtosecond laser waveguide writing on sodium borotungstate glasses
10:10–10:40	M. Rodriguez:	Nucleation and growth mechanisms in a lead borate glass and their influence on thermoluminescence response

Session 14: Structure 3

11:00–11:40	H. Eckert:	New Magnetic Resonance Approaches to Structural Studies of Luminescent Borate Glasses
11:40–12:10	O. Alderman:	B-11 double rotation spin diffusion NMR as a probe of local and intermediate structure in borate crystals and glasses

Session 14: Structure 3 continued

13:30–14:00	T. Okajima:	Local structures of iron ions in borosilicate glass: theoretical calculations and high resolution measurement of Fe K-edge XANES spectra
14:00–14:30	J. Matsuoka:	Infrared Absorption Spectra of Borosilicate Glass Melts
14:30–15:00	N. Laorodphan:	Amorphous Structure in Thallium Borate Binary Glasses
15:00–15:30	Khristenko:	SpectraFit: A New Program to Simulate Distributed ^{10}B Powder Patterns
15:30–16:00	J. W. Zwanziger:	Structural aspects of the photoelastic response in lead borate glasses