

2nd Announcement

The 9th International Conference on **BORATE GLASSES, CRYSTALS AND MELTS** July 24 - 26, 2017

The ninth conference follows the previous meetings held since 1977. The Borate Conference will embrace all current scientific research on borate materials, containing B_2O_3 , B_2S_3 or B_2Se_3 , including investigations of structure, properties and applications.

Invited speakers:

Honoree, Steve Feller (Coe College, Iowa, USA)

How do the fundamental physical properties of borate glass reveal its underlying atomic structure?

Mario Affatigato (Coe College, Iowa, USA)

44 years of borates: Steve Feller's legacy

Diane Holland (University of Warwick, UK)

NMR studies of alkali borogermanate glasses and comparison with borosilicates

Simona Ispas (University of Montpellier, France)

Ab initio modelling of multicomponent borosilicate glasses.

Mohamed Rahaman (Missouri University of Science and Technology, USA)

Bioactive borate glasses: Compositional effects on structure, reactivity and cell response

Oliver Alderman (Materials Development Inc., USA)

Borate melt structure: Temperature dependent B-O bond lengths and coordination numbers from x-ray diffraction

Jun Matsuoka (University of Shiga Prefecture, Japan)

Thermal properties and viscosity of isotope substituted borate glasses: Concept of vibrational connectivity

Frank Hawthorne (University of Manitoba, Canada)

Bond valence and Lewis-acid-base relations: Their effects on bond topology and chemical composition of borate minerals

The 2nd International Conference on **PHOSPHATE GLASSES, CRYSTALS AND MELTS** July 26 - 28, 2017

This conference follows the successful first conference held in Pardubice, Czech Republic (2014). It will cover the structures, properties and applications of phosphate- and phosphate-containing glasses and crystals, including those based on P-O, P-S, P-Se, and P-O-N networks.

Invited speakers:

Honoree, Uwe Hoppe (Rostock University, Germany)

*A career in diffraction:
Probing the structure of phosphate glasses*

Alex Hannon (ISIS Neutron and Muon Source, UK)

X-rays, neutrons and phosphates

Tsuyoshi Honma (Nagaoka University of Technology, Japan)

Phosphate glass and glass-ceramics for rechargeable batteries.

Delia Brauer (Friedrich Schiller University Jena, Germany)

Following phosphate glass dissolution by P-31 NMR.

Morten Smedskjaer (Aalborg University, Denmark)

Structure-property transformations in hot compressed phosphate glasses.

Jincheng Du (University of North Texas, USA)

Structures of rare earth containing phosphate and phosphosilicate glasses, insight from molecular dynamics simulations.

Leo Van Wullen (University of Augsburg Germany)

*Glass structure and its evolution at high temperatures:
Phase separation, crystallization and species exchange:
Lessons from solid state NMR spectroscopy*

Francisco Munoz (Spanish National Research Council)

Viscosity of phosphate melts

Important dates

Abstract Submission deadline: 24th February 2017

Confirmation of talk acceptance: 10th March 2017

Early-bird registration deadline: 31st March 2017

To register for more information, please visit the conference website:

WWW.BORATE-PHOSPHATE.SGT.ORG

Conference Themes

Major conference themes include:

- **Energy** including nuclear waste storage and electrolytes, super ionic systems and ionic conductivity.
- **Healthcare** including bone repair, bioactivity, dental and medical applications, glass ceramics and crystallisation.
- **Optical and data storage materials** including optical properties, glass fibres, luminescence, laser hosts.
- **Property-structure relationships** including mixed network glasses, structural modelling and simulations, mechanical properties, thermal properties, glasses in extreme conditions, glass ceramics, phase separation and inhomogeneities, thermodynamics, corrosion.
- **Fundamentals of the glassy state** including glass structure, short and intermediate range order, the glass transition, the boson peak, glass relaxation, crystallisation.
- **Novel glasses, crystals and melts** including synthesis and characterisation.
- **Technology and Industry** including current applications and future developments.

Conference Site – St Anne’s College, Oxford, UK.

St Anne’s College is one of the largest constituent colleges of the University of Oxford. It is located 15 minutes walk from the centre of Oxford and provides outstanding conference facilities. **Oxford** is home to the oldest University in the English speaking world and it is visited by leading academics from all over the world. It is also famous for its historic buildings, museums and shops. The architectural style of central Oxford has led to it being known as the “city of dreaming spires” – a term first used by poet Matthew Arnold. The conference venue is easily accessible from all major UK airports, with regular bus and train services running from Gatwick and Heathrow.

Committees

Local Organising Committee:

E.R. Barney (Chair: emma.barney@nottingham.ac.uk), A.C. Hannon, A.C. Wright, G. Mountjoy, I. Ahmed, J.K. Christie, J.V. Hanna, M. Marshall, N. Karpukhina, N.S. Barrow, P.A. Bingham, P.S. Salmon, D. Holland, R.A. Martin, **C. Brown (Secretary: christine@sgt.org)**

Borate International Organising Committee:

A.C. Hannon (UK; chair: alex.hannon@stfc.ac.uk), A.C. Wright (UK), A.G. Clare (USA), A. Takada (Japan), L. Cormier (France), S. Kroeker (Canada), N.M. Vedishcheva (Russia), J.W. Zwanziger (Canada), S.A. Feller (USA), H. Huppertz (Austria), N. Umesaki (Japan), R.E. Youngman (USA), E.I. Kamitsos (Greece), D. Möncke (Germany), E.R. Barney (UK), R. Jordanova (Bulgaria), F. Rocca (Italy), A.A. Osipov (Russia), L. Koudelka (Czech Republic), R.K. Brow (USA).

Phosphate International Organising Committee:

R.K. Brow (USA; chair: brow@mst.edu), L. Koudelka (Czech Republic), S.W. Martin (USA), L. Montagne (France), U. Hoppe (Germany), D. Ehrh (Germany), I. Ahmed (UK), F. Munoz (Spain), H. Takebe (Japan), H. Yang (Taiwan), A. Ghosh (India), J.E. Garbacz (Poland), Y. Messaddeq (Canada), H. Eckert (Brazil), A.C. Hannon (UK).

The conference is organised by the Society of Glass Technology and the conference proceedings will be published in Glass Technology: European Journal of Glass Science and Technology Part A and Part B

Images: 1; https://en.wikipedia.org/wiki/Oxford#/media/File:Oxford_Montage_2012.png.
2; <http://www.wphna.org/Oxford2014/about-oxford/>, 3; <http://www.st-annes.ox.ac.uk/home>.
4; https://commons.wikimedia.org/wiki/File:Punting_Cambridge_Summer.jpg, 5; <http://www.blenheimpalace.com/>
6; https://en.wikipedia.org/wiki/Oxford#/media/File:High_Street,_Oxford,_England,_1890s.jpg.

