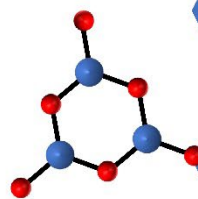


Corning, NY



Properties

Composition

Applications

Structure



Borate X

17-21 July 2023

Phosphate III

10th International Conference on Borate Glasses, Crystals, and Melts

&

3rd International Conference on Phosphate Materials

Conference Schedule

Sunday, July 16

17:00 – 19:00 Welcome Reception and Registration – Hotel Lobby

Monday, July 17

8:20 – 8:30	R. Youngman	Welcoming Remarks
8:30 – 8:50	A. Hannon	Summary of the 2017 Oxford Meetings
8:50 – 9:20	S. Feller	Introduction of Efstratios “Stratos” Kamitsos
9:20 – 10:00	E.I. Kamitsos	Structure of borate glasses: borate speciation and metal ion sites by vibrational spectroscopy (Borate X Honoree)
10:00 – 10:30		<i>Break</i>
10:30 – 11:10	G. LeLong	Alkali borates: Crystals, glasses and melts – how similar are they? (Invited)
11:10 – 11:30	E. Zanotto	Crystal nucleation and growth dynamics in supercooled and glassy lithium diborate
11:30 – 11:50	C. Bragatto	Utilizing electrical impedance spectroscopy (EIS) to observe in-situ phase changes in lithium diborate glasses
11:50 – 12:10	J. Finkeldey	Transparent, ion-exchangeable boron mullite glass ceramics
12:10 – 13:40		<i>Lunch (Provided)</i>
13:40 – 14:20	P. Burns	Borate structure fundamental building blocks: minerals and extension to borosulfates with structural units of various dimensionality (Invited)
14:20 – 14:40	D. Möncke	Differences in connectivities, preferential bonding and phase separation in low and high alkali borosilicate glasses
14:40 – 15:00	K. Chatzipanagis	Structure of lithium borate glasses by Raman spectroscopy
15:00 – 15:30		<i>Break</i>
15:30 – 15:50	S. Feller	A review of the fraction of four-coordinated boron in modified borate glasses
15:50 – 16:10	K-M Weitzel	Alkali ion transport in lithium borate glasses: New insights into the site distribution from experiment and theory
16:10 – 16:30	L. Huang	Deformation and cracking behavior of boron-containing glass under indentation
16:30 – 16:50	A. Clare	Microspheres made from recycled glasses

16:50 – 17:10	R. Brow	for flexible radiation protective clothing Inert Failure Strain Measurements of Sodium Borate Glass Fibers
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Tuesday, July 18

8:30 – 9:10	J. Du	Insights on the structures of borate and borosilicate glasses from atomistic simulations: effect of glass composition and cation field strength (Invited)
9:10 – 9:30	D. Neuville	Structure and properties of borate glasses and melts
9:30 – 9:50	A. Cachot	Study of the electrical properties of phase separated sodium borosilicate glasses from the solid to the molten state
9:50 – 10:10	O. Gulbiten	Fragility dependence of the relaxation dynamics in the sodium borosilicate glass system
10:10 – 10:40		<i>Break</i>
10:40 – 11:20	H. Eckert	High pressure experiments and network former mixing effects in borosilicate glasses (Invited)
11:20 – 11:40	N. Tostanoski	Terahertz Properties of Borosilicate Glasses
11:40 – 12:00	P. Malviya	Temperature dependence of configurational entropy for Adams-Gibbs modeling of melt viscosity
12:00 – 14:00		<i>Lunch (provided)</i>
12:00 – 14:00		Borate X Poster Session
14:00 – 14:40	A. Masuno	Multifunctionality in Rare-Earth-Rich Borate Glasses without B-O Networks (Invited)
14:40 – 15:00	L. Cormier	Structural evolution of environment around transition elements in alkali borate glasses
15:00 – 15:20	S. Kroeker	Composition-dependent role of Pb(II) in lead boroaluminate and borogallate glasses: a solid-state NMR study
15:20 – 15:50		<i>Break</i>
15:50 – 16:10	E. Tsekrekas	Structural aspects of lead borate glasses prepared in platinum and alumina crucibles
16:10 – 16:30	Q. Qin	Impact of high ionic field strength cations on the dissolution behavior of alkali/alkaline-earth aluminoborosilicate glasses in aqueous solutions
16:30 – 16:50	J. Icenhower	Dissolution of CaO-MgO-Al ₂ O ₃ -B ₂ O ₃ -SiO ₂ glasses: insights into how B-O versus Al-O bonding influences rates

Wednesday, July 19

8:20 – 9:00	M. Edén	Recent Solid-state NMR results call for refined models for predicting the medium-range structures of boro(phospho)silicate glasses (Invited) ^{31}P , ^{11}B , ^{29}Si and ^{23}Na solid state NMR
9:00 – 9:20	U. Werner-Zwanziger	studies of phospho-boro-silicate glasses towards the understanding of crystal formation
9:20 – 9:40	K. Skerratt-Love	The effects of phosphorus pentoxide additions in sodium borosilicate glasses relevant to nuclear waste vitrification
9:40 – 10:00	N. Joseph	Investigating the Impact of P_2O_5 and Bi_2O_3 on Sulfur Solubility in Sodium Borosilicate Glasses
10:00 – 10:30		<i>Break</i>
10:30 – 10:50	M. de Oliveira, Jr.	Insight from solid state NMR about network former mixing effects in borotellurite and phosphotellurite glasses
10:50 – 11:10	X. Xu	The effect of phase separation on the toughness of modifier-free B_2O_3 - Al_2O_3 - P_2O_5 - SiO_2 glasses
11:10 – 11:30	A. Saitoh	Effect of B_2O_3 substitution for P_2O_5 on optical properties in pryo tin boro-phosphate glass
11:30 – 11:50	P. Keil	Single-step solution combustion synthesis towards mesoporous 1393-B3 bioglasses: insights by solid-state NMR
11:50 – 12:10	M. Abbasi	Borophosphate glasses for soft-tissue regeneration: correlation between structure and dissolution properties
12:10 – 12:30	P. Freudenberger	Network hydrolysis and the dissolution kinetics of Na-Ca-Borophosphate Glasses
12:30		<i>Lunch (provided)</i>
14:00 – 18:00		Corning Museum of Glass (on your own)
18:30 – 19:00		Conference Reception
19:00 – 21:00		Conference Banquet

Thursday, July 20

8:30 – 8:50	P. Mošner	Introduction of Ladislav Koudelka
8:50 – 9:30	L. Koudelka	Phosphate and borophosphate glasses - structure, properties and crystallization (Phosphate III Honoree)
9:30 – 10:10	I. Ahmed	Developing unique microspheres from phosphate glasses and their potential

		biomedical applications (Invited)
10:10 – 10:40		<i>Break</i>
10:40 – 11:20	J. Soulié	Amorphous calcium ortho/pyrophosphate for bone substitution: cluster-based materials with tunable physico-chemical and biological properties (Invited)
11:20 – 11:40	S. Shah	Preparing porous, antibacterial, and biocompatible GO/n-HAp/Bacterial Cellulose/Beta-Glucan Biocomposite Scaffold with enhanced phosphate content for bone tissue engineering
11:40 – 12:00	J. Christie	The development of reactive potentials to model phosphate glass dissolution
12:00 – 14:00		<i>Lunch (provided)</i>
12:00 – 14:00		Phosphate III Poster Session
14:00 – 14:40	L. Pavić	A versatile role of transition metal oxides in electrical transport in phosphate glasses (Invited)
14:40 – 15:00	M. Nowagiel	Highly-conductive nanocrystallized alluaudite-like cathode materials for sodium-ion batteries
15:00 – 15:20	F. Han	Lithium thiophosphate glass and glass-ceramic electrolytes for safe, energy-dense batteries
15:20 – 15:50		<i>Break</i>
15:50 – 16:10	T. Pietrzak	High-pressure thermal nanocrystallization of glassy analogs of cathode materials for lithium/sodium-ion batteries
16:10 – 16:30	P. Salmon	Structure of crystalline and amorphous materials in the NASICON systems $\text{Na}_{1+x}\text{Al}_x\text{Ge}_{2-x}(\text{PO}_4)_3$ and $\text{Na}_{1+x}\text{Ti}_2\text{Si}_x\text{P}_{3-x}\text{O}_{12}$
16:30 – 16:50	V. Torres III	The impact of LiPON incorporation on the structure and properties of Li-P-Si-S-O-N glassy solid electrolytes
16:50 – 17:10	S. Martin	On the role of P in Mixed Oxy-Sulfide Sodium Silicophosphate glassy solid electrolytes

Friday, July 21

8:30 – 9:10	S. Sen	Complex dynamics in metaphosphate glass-forming liquids: implications on the structure-fragility relationship (Invited)
9:10 – 9:30	H. Bradtmüller	Structural impact of niobium on phosphate glasses: results from advanced interaction-selective solid-state nuclear magnetic resonance
9:30 – 9:50	F. Muñoz	The model of associated solutions as a reliable way to predict the structure of

9:50 – 10:10	T-M Yeo	phosphate glasses Mixed-alkali effect on the fragility and viscoelasticity of metaphosphate glass forming liquids
10:10 – 10:40		<i>Break</i>
10:40 – 11:00	H. Eckert	Network structure and local environments in fluoride phosphate and niobium phosphate glasses: New dipolar NMR strategies
11:00 – 11:20	J. Du	Structures of iron phosphate glasses from molecular dynamics simulations
11:20 – 11:40	J. Endo	Structural key factors for remarkable anisotropy of (Li,Na,K)PO ₃ mixed alkali metaphosphate glass
11:40 – 12:00	K. Skerratt-Love	Impact of X-ray radiation on metal-doped phosphate glasses
12:00	Closing Remarks & Lunch (<i>provided</i>)	