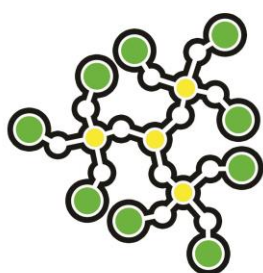

**The 8th International Conference
on BORATE GLASSES, CRYSTALS AND MELTS**

**The International Conference
on PHOSPHATE GLASSES**

**June 30 – July 4, 2014
Pardubice, Czech Republic**



**BORATE
PHOSPHATE**

2014 June 30 Pardubice
July 4 Czech Republic

PROGRAMME

PROGRAMME AT A GLANCE

■ SUNDAY, JUNE 29, 2014

- 16:30 – 19:00 Registration of participants
19:00 – 21:00 Welcome party at the University of Pardubice

■ MONDAY, JUNE 30, 2014

- 08:30 – 08:40 Borate Welcome
08:40 – 10:10 Opening Lectures
10:10 – 10:40 Coffee Break
10:40 – 12:30 Borate Crystals
12:30 – 14:00 Lunch
14:00 – 15:50 Borate Structure – NMR
15:50 – 16:20 Coffee Break
16:20 – 18:10 Borate Structure – Neutrons and X-rays

■ TUESDAY, JULY 1, 2014

- 08:30 – 10:00 Glass Transition, Relaxation in Borates
10:00 – 10:30 Coffee Break
10:30 – 12:20 Ion in Borate Glass
11:00 – 12:20 Fundamental Borate Science (parallel session)
12:20 – 13:50 Lunch
13:50 – 15:40 Dynamics in Borates
14:20 – 15:40 Structure and Properties of Borates (parallel session)
15:40 – 16:10 Coffee Break
16:10 – 18:00 Borate Applications
18:00 – 19:30 Borate Poster Session

■ WEDNESDAY, JULY 2, 2014

- 08:30 – 10:10 Borophosphates – Session 1
10:10 – 10:40 Coffee Break
10:40 – 12:00 Borophosphates – Session 2
12:00 – 14:00 Lunch
14:00 – 18:00 Excursion / Free afternoon
19:00 – 22:00 Conference Dinner at the Pardubice Castle

■ THURSDAY, JULY 3, 2014

- 08:30 – 08:40 Phosphate Welcome
08:40 – 09:40 Opening Lectures
09:40 – 10:10 Coffee Break
10:10 – 12:30 Phosphate Structure and Properties
12:30 – 14:00 Lunch
14:00 – 16:10 Phosphate Melts and Relaxation
14:30 – 16:10 Crystallized Phosphate Glasses (parallel session)
16:10 – 16:40 Coffee Break
16:40 – 18:00 Phosphate Optical Properties
18:00 – 19:30 Phosphate Poster Session

■ FRIDAY – JULY 4, 2014

- 08:30 – 10:00 Nano/Micro-Structures and Defects in Phosphate Glasses
10:00 – 10:30 Coffee Break
10:30 – 12:20 Phosphate Bioglasses and Surfaces
12:20 – 14:00 Lunch
14:00 – 16:10 Phosphate Modelling and Optical Properties
14:30 – 16:10 Phosphate Conductivity (parallel session)
16:10 – 16:30 Coffee Break
16:30 – 18:00 Phosphate Surfaces and Corrosion
18:00 End

PROGRAMME IN DETAIL

■ MONDAY, JUNE 30, 2014

BORATE OPENING SESSION

Chair: Koudelka L.

08:30		Borate Welcome Koudelka L.
08:40	169	Stanislav Konstantinovich Filatov: Life, Crystal Chemistry and Crystal Chemistry of Borates Krivovichev S.V.
09:10	055	High-temperature borate crystal chemistry Filatov S.K., Bubnova R.S.
09:40	178	Advances in photoelastic studies of borate glasses Zwanziger J. W.

COFFEE BREAK

10:10 – 10:40

BORATE CRYSTALS

Chair: Wright A.

10:40	184	Recent Advances in the High-pressure Chemistry of Borates Huppertz H.
11:10	025	Recent Advances in the High-Pressure Chemistry of Alkali Metal and Alkali Metal Equivalent Borates Sohr G., Neumair S.C., Huppertz H.
11:30	092	High pressure borate apatites exhibiting boron in a fourfold coordination Glätzle M., Huppertz H.
11:50	141	The high viscosity of borate glasses and crystals Bubnova R.S., Filatov S.K.
12:10	054	Morphology of Phase Separation and Coarsening of BaO – SiO₂ – B₂O₃ by X-Ray microtomography Bouttes D., Vandembroucq D., Guillard E., Dalmas D., Boller E.

LUNCH

12:30 – 14:00

BORATE STRUCTURE - NMR

Chair: Zwanziger J.

14:00	183	The MD-GIPAW method: applications to borate and borophosphate glasses Charpentier T.
14:30	118	Structure and Speciation in Borogallate, Boroaluminate and Borovanadate Glasses: The View from Multinuclear Magnetic Resonance Kroeker, S., Wren, J.E.C., Michaelis, V.K., Aguiar, P.M., Feller, S.A.
14:50	022	Structure-Property Relationships in Pyrex® and Related Boroaluminosilicate Glasses Youngman R.E., Mauro J.C., Smedskjaer M.M.
15:10	100	Intermediate Range Structures of Alkali Borate Glasses as Determined by ¹⁰Boron Solid-state Nuclear Magnetic Resonance Rice R, Brown J, Feller S, Holland D, Smith M, Berkowitz J, Tholen K, McConnell M, Khristinko V, Troendle E, Barnes N, Goranson K, Faaborg M, Affatigato M
15:30	064	A new insight on rare-earth (RE) metaborate glass composition REB₃O₆ through a multi-spectroscopic approach Trégouët H., Caurant D., Majérus O., Cormier. L., Charpentier T., Vezin H., Pytalev D.

COFFEE BREAK

15:50 – 16:20

BORATE STRUCTURE – NEUTRONS AND X-RAYS

Chair: Hannon A.

16:20	157	Density-driven structural transformations in B₂O₃ glass Salmon P.S., Zeidler A.
16:50	024	Densified liquid B₂O₃: dynamic and structural properties Baroni A., Ferlat G., Salanne M., Micoulaut M.

- 17:10 004 **A Neutron Diffraction Study of Six M_2O M'_2O $5B_2O_3$ Mixed-Modifier Di-Pentaborate Glasses**
Wright A.C., Sinclair R.N., Stone C.E., Shaw J.L., Feller S.A., Williams R.B., Fischer H.E., Vedishcheva N.M.
- 17:30 130 **Probing the oxygen environment of lithium borate glasses/crystals using inelastic X-ray scattering at the oxygen K-edge.**
 Lelong G., Cormier L., Radtke G., Rouse G., Baptiste B., Rueff J-P., Ablett J.
- 17:50 146 **Multi-edge spectroscopic study in the lithium borate system**
Cormier L., Lelong G., Hennem L., Radtke G., Rueff J-P., Ablett, J.

■ TUESDAY, JULY 1, 2014

GLASS TRANSITION AND RELAXATION IN BORATES

Chair: Kamitsos E.I.

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- 08:30 142 **Glass Transition and Relaxation in Pressure-Quenched Borate and Borosilicate Glasses.**
 Yue Y.Z.
- 09:00 112 **Crystallization of $LaBGeO_5$ in La_2O_3 - B_2O_3 - GeO_2 boro-germanate glass; Second Harmonic Generation in the transparent glass ceramics**
Fargin E., Vigourou H., Truong L.N., De Ligny D., Champagnon B., Dussauze M., Adamietz F., Rodriguez V., Corcoran A., Messaddeq Y., Santos L.F.
- 09:20 096 **Ionic Conductivity of Binary Lithium Borate Glasses and Melts**
Fan H., Del Campo L., Ory S., De Sousa Meneses D., Malki M., Echegut P.
- 09:40 152 **Dissolution Kinetics of Borate Glasses in Aqueous Solutions**
Brow R.K., George J.L. Goetschius, K.L.

COFFEE BREAK

10:00 – 10:30

IONS IN BORATE GLASS

Chair: Feller S.

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- 10:30 145 **Metal ions in borate and borosilicate glasses: cluster formation and borate ligand speciation**
Möncke D.
- 11:00 117 **Structural investigation of highly modified Eu^{2+} - Sr^{2+} -borate glasses**
Winterstein A., Möncke D., Palles D., Kamitsos E.I., Wondraczek L.
- 11:20 068 **Absorption and luminescent thermochromism of copper- and chlorine-containing potassium-alumina-borate glasses**
Babkina A.N., Nikonorov N.V., Shirshnev P.S., Sidorov A.I.
- 11:40 065 **Microstructure of Porous Glasses in System of SiO_2 - B_2O_3 - Na_2O Melted in Electric Heated Mini-melter**
 Saberi A., Rosin A., Kyrgyzbaev K., Gerdes T., Willert- Porada M.
- 12:00 039 **Structural role of titanium ions on the enhancement of bioactivity of B_2O_3 - SiO_2 - Na_2O - CaO glass system**
Sahaya Baskaran G., Jagan Mohini G., Veeraiah N.

FUNDAMENTAL BORATE SCIENCE (PARALLEL SESSION)

Chair: Takada A.

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- 11:00 143 **First-principles simulations of B_2O_3 : from crystals to liquid phases**
Ferlat G., Hay H., Seitsonen A.-P., Charpentier T., Lazzeri M., Mauri F.
- 11:20 132 **Short- and Intermediate-range Order in Sodium Borosilicate Glasses: A Quantitative Thermodynamic Approach**
Vedishcheva N.M., Wright A.C.
- 11:40 114 **O $2p$ Partial Density of States and Bond Angles around O Atoms in Borate Glass: Soft X-Ray Emission and Ab Initio Molecular Dynamics Studies**
Hosokawa S., Sato H., Mimura K., Tezuka Y., Fukunaga D., Shimojo F.
- 12:00 026 **Phase separation and magnetic particles in borate glasses**
 Edelman I., Ivanova O., Zubavichus Y., Zaikovskiy V., Curély J., Kliava J.

LUNCH

12:20 – 13:50

DYNAMICS OF BORATES

Chair: Youngman R.

-
- 13:50 170 **Structural, vibrational and thermal properties of borate glasses: influence of densification and modifying role of alkali metal cations**
 D'Angelo G.

- 14:20 122 Structural Units of the Alkali Borate Glasses and Melts.**
Osipov A.A., Osipova L.M., Zainullina R.T.
- 14:40 061 Network dimensionality and alkali modification driven elastic phases in alkali borates**
Vignarooban K., Boolchand P., Micoulaut M., Malki M., Kerner R.
- 15:00 063 Comparison between RMC structural modelling of a six-oxide borosilicate glass of nuclear interest and experimental data**
Bouty O., Delaye J.M., Peugeot S., Charpentier T., Beuneu B.

COFFEE BREAK
15:20 – 15:50

BORATE APPLICATIONS

Chair: Huppertz H.

-
- 15:50 150 Recent Progress in Laser Patterning in Borate Glasses**
Komatsu T.
- 16:20 075 Non-Isothermal Crystallization Analysis of Lithium Borate Glasses**
Kleman I., Feller S., Affatigato M.
- 16:40 021 ZnO and Bi₂O₃ effect on borate glass structure and properties**
Lönnroth N., Youngman R.
- 17:00 108 Investigation of Zinc Borate Glasses**
Spadaro F., Rossi A., Ricci C., Laine E., Hartle J., Spencer N.D.
- 17:20 010 High Quantum Yield and Low Concentration Quenching of Eu³⁺ Emission in Oxyfluoride Glass with High BaF₂ and Al₂O₃ Contents and Their Glass Structure**
Shinozaki K., Affatigato M., Honma T., Komatsu T.
- 17:40 Borate Poster Session**

■ **WEDNESDAY, JULY 2, 2014**

BOROPHOSPHATE SESSION I

Chair: Kroeker S.

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- 08:30 147 On the Role of Boron on the Structure and Properties of Mixed Glass Former Na⁺ Ion Conducting Na₂O + B₂O₃ + P₂O₅ Glassy Solid Electrolytes**
Martin S.W., Mass P., Christensen R., Olson G., Schuch M., Trott C.
- 08:50 057 The structure of boro-phosphate glasses revisited by ¹¹B/³¹P correlation NMR**
Tricot G., Ragueneau B., Pradel A., Silly G., Ribes M.
- 09:10 023 Properties and trends in Na-containing boro- and phospho-aluminosilicate glasses in peralkaline, peraluminous and metaluminous compositional fields - The mixed-network formers effect**
Potuzak M., King E.A.
- 09:30 027 Low photoelastic property and structure in water durable ZnO-SnO-P₂O₅-B₂O₃ glasses**
Saitoh A., Grégory T., Takebe H.

COFFEE BREAK
09:50 – 10:20

BOROPHOSPHATE SESSION II

Chair: Martin S.

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- 10:20 116 Comparison of Structural Orders between B₂O₃, P₂O₅ and SiO₂ Systems by Computer Simulation**
Takada A.
- 10:40 033 Transformations in B₂O₃ and P₂O₅ melts under compression and structure of densified B₂O₃ and P₂O₅ glasses**
Brazhkin V.V., Katayama Y., Lyapin A.G.
- 11:00 058 De-clustering influence of Al³⁺ ions on up-conversion efficiency in Yb³⁺-Tm³⁺, Tm³⁺-Er³⁺ and Er³⁺-Ho³⁺ codoped CaF₂-B₂O₃-P₂O₅ glass system**
Gandhi Y., Piasecki M., Veeraiah N.
- 11:20 089 Thermoluminescence dose response of calcium fluoro boro phosphate glasses doped with some transition metal ions**
Veeraiah N., Gandhi Y., Bhaskar Sanyal, Swamy B.J.R.S.

LUNCH
11:40 – 14:00

EXCURSION / FREE AFTERNOON
14:00 – 18:00

CONFERENCE DINNER – PARDUBICE CASTLE
19:00 – 22:00

■ **THURSDAY, JULY 3, 2014**

PHOSPHATE OPENING SESSION

Chair: Koudelka L.

08:30		Phosphate Welcome Koudelka L.
08:40	144	Doris Ehart - Glass Chemical Research in the Spirit of Otto-Schott Möncke D., Müller M.
09:10	017	Phosphate and fluoride phosphate optical glasses - properties, structure and applications Ehart D.

COFFEE BREAK
09:40 – 10:10

PHOSPHATE STRUCTURE AND PROPERTIES

Chair: Montagne L.

10:10	084	Structure and properties of anisotropic phosphate glasses Inaba S., Hosono H., Ito S.
10:40	177	Chemical and geometrical disorder in phosphate and silicophosphate glasses by solid-state NMR Fayon F.
11:10	012	Structure-properties relationships in lithium oxynitride phosphate glasses Muñoz F., Mascaraque N., Durán A., Tricot G., Montagne L., Rodrigues A.C.M.
11:30	045	Atomic structure of ternary phosphate glasses: the compositional behavior of the oxygen coordination number of a second network-forming oxide Hoppe U.
11:50	008	The Structure of Molybdenum- and Tungsten-doped Lead Phosphate Glasses Hannon A.C., Koudelka L., Rösslerova I.
12:10	113	Structure-Property Relations in Antimony Molybdophosphate Glasses Youngman R.E., Aitken B.G.

LUNCH
12:30 – 14:00

PHOSPHATE MELTS AND RELAXATION

Chair: Brow R.

14:00	007	Dynamic light scattering in alkali phosphate melts and the role of intermediate range order in the fragility of network-forming oxides Sidebottom D.L., Tran T., Schnell S.E.
14:30	153	The structure of glasses and its evolution above T_g – crystallisation, phase separation and species exchange: lessons from <i>in situ</i> MAS-NMR. van Wüllen L., Venkatachalam S., Engelmayer M.
14:50	138	Influence of the structure on viscosity in phosphate glasses Muñoz-Senovilla L., Venkatachalam S., Muñoz F., Van Wüllen L.
15:10	003	Viscosity profiles of Phosphate Glasses Through Combined Quasi-static and Bob-in-Cup Methods Parsons A.J., Sharmin N., Shaharuddin S. I. S., Rudd C.D.
15:30	034	Melting Conditions Impact on the Properties of Copper Containing Phosphate Glasses for High-Power and High-Energy Amplifiers Arbuzov V.I., Fyodorov Yu.K., Nikitina S.I., Smirnov R.V., Volynkin V.M., Voroshilova M.V.
15:50	149	Structure and Glass Relaxation Studies of Melt Quenched and Mechanically Milled $\text{Na}_2\text{S} + \text{P}_2\text{S}_5$ Glasses Martin S.W., Marple M., Bischoff C., Schuller K., Berbano S.

CRYSTALLIZED PHOSPHATE GLASSES (PARALLEL SESSION)

Chair: Mošner P.

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- | | | |
|-------|-----|---|
| 14:30 | 020 | Glasses and glass ceramics in $\text{Li}_{1+x}\text{Cr}_x\text{Ge}_y\text{Ti}_{2-x-y}(\text{PO}_4)_3$ with Li-conducting NZP phase
<i>Lönnroth N., Abel B., Aitken B.</i> |
| 14:50 | 050 | Phosphate based glass-ceramics for the sodium ion batteries
<i>Honma T., Komatsu T.</i> |
| 15:10 | 059 | Correlation between structural changes and electrical properties of crystallized iron phosphate glass
<i>Moguš-Milanković A., Pavić L., Skoko Ž., Graca M.P.F., Costa B.F.O., Valente M.A.</i> |
| 15:30 | 062 | Effect of Crystallization on the Magnetic Properties of $40\text{Fe}_2\text{O}_3\text{-}60\text{P}_2\text{O}_5$ Glass
<i>Pavić L., Graca M.P.F., Skoko Ž., Valente M.A., Moguš-Milanković A.</i> |
| 15:50 | 163 | Synthesis and characterization of a new NZP material prepared from a phosphate based glass reactive sintering
<i>Chenu S., Bénard-Rocherullé P., Lebullenger R., Rocherullé J.</i> |

COFFEE BREAK

16:10 – 16:40

PHOSPHATE OPTICAL PROPERTIES

Chair: Möncke D.

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- | | | |
|-------|-----|--|
| 16:40 | 107 | Structural Approach on Optical Properties of $\text{BaO-Nb}_2\text{O}_5\text{-P}_2\text{O}_5$ Glass
<i>Kitamura N., Hisano Y., Fukumi K., Kohara S., Ofuchi H., Honma T., Kozuka H.</i> |
| 17:00 | 134 | Development of an ion conducting glass for electro-optical applications
<i>Rioux M., Ledemi Y., Viens J., Messaddeq Y.</i> |
| 17:20 | 037 | Phosphorous incorporation in silica during Modified Chemical Vapor Deposition (MCVD) combined with solution doping
<i>Lindner F., Unger S., Kriltz A., Scheffel A., Delith A., Delith J., Bartelt H.</i> |
| 17:40 | | Phosphate Poster Session |

■ FRIDAY, JULY 4, 2014

NANO/MICRO-STRUCTURES AND DEFECTS IN PHOSPHATE GLASSES

Chair: Ehart D.

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- | | | |
|-------|-----|---|
| 08:30 | 151 | Femtosecond laser structuring of zinc phosphate glasses
<i>Krol D.M., Troy N.W., Fletcher L.B., Smith C., Brow R.K.</i> |
| 09:00 | 109 | Silver containing phosphate photosensitive glass: from dosimetry to femtosecond direct laser writing.
<i>Desmoulin J.C., Thomas S., Cardinal T., Danto S., Marquestaut N., Hee P., Vangheluwe M., Petit Y., Fargin E., Canioni L., Messaddeq Y., Vallée R., Dussauze M.</i> |
| 09:20 | 006 | Formation of nanostructured metallic films from smart active phosphate glasses by bottom-up process: Ag^0 and Ni^0 synthesis
<i>Schneider R., Felix, J. F., Santa-Cruz P.</i> |
| 09:40 | 018 | Paramagnetic and diamagnetic P-related point defects in 2.5 MeV electron irradiated Yb-doped phosphate glasses
<i>Pukhkaya V., Ollier N., Tromprier F.</i> |

COFFEE BREAK

10:00 – 10:30

PHOSPHATE BIOGLASSES AND SURFACES

Chair: Takebe H.

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- | | | |
|-------|-----|---|
| 10:30 | 168 | Processing and Utilisation of Phosphate Glass Fibres for Nerve Repair
<i>Knowles J.C., Hyun R.H.</i> |
| 11:00 | 066 | Boron doped Phosphate-Based Glasses: Development of bio-active formulations for fibre drawing.
<i>Sharmin N., Barney E., Kemp T., Parsons A., Furniss D., Ahmed I., Rudd C.</i> |
| 11:20 | 005 | Novel Phosphate-Based Glass Fibres for Biomedical Applications: Core-Clad Quaternary Formulations
<i>Ahmed I., Shaharuddin S. I. S., Furniss D., Rudd C.D.</i> |
| 11:40 | 091 | Dissolution of sodium calcium phosphate glasses
<i>Döhler F., Mandlule A., van Wüllen L., Friedrich M., Brauer D.S.</i> |
| 12:00 | 087 | Surface modification of Nd:phosphate laser glass
<i>He Dongbing, Hu Lili, Chen Huiyu, Xu Yongchun, Feng Suyu</i> |

LUNCH
12:20 – 14:00

PHOSPHATE MODELLING AND OPTICAL PROPERTIES

Chair: Munoz F.

14:00	110	Progress in atomistic models and simulations of phosphate glasses. Mountjoy G.
14:30	140	Topological modeling of calcium borophosphate glasses <u>Hermansen C.</u> , Yue Y.Z.
14:50	154	Thermodynamic model and structure of ZnO-MoO₃-P₂O₅ glasses <u>Liška M.</u> , Macháček J., Chromčíková M., Gedeon O.
15:10	074	Chemical activity of AgI and Ionic conductivity in xAgI(1-x)AgPO₃ glasses <u>Bragatto C.B.</u> , Rodrigues A.C.M.
15:30	071	Charge carrier mobility and concentration as a function of composition in AgPO₃-AgI glasses. <u>Rodrigues, A.C.M.</u> , Bragatto, C.B., Nascimento, M.L.F., Souquet, J.L.
15:50	067	Electro-chemical phosphate sensor. Normandeau C.O., Olivier-Caron W.; Landry A.K.; Viens J.F.; <u>Messaddeq Y.</u>

COFFEE BREAK
16:10 – 16:30

PHOSPHATE SURFACES AND CORROSION

Chair: Moduš-Milankovič A.

16:30	174	Surface chemistry and tribological properties of polyphosphate glasses Rossi A.
17:00	080	Composition Optimization of Iron Phosphate Glasses for Radioactive Sludge Takebe H., Kitamura N., Amamoto I., Kobayashi H., Mitamura N., Tsuzuki T.
17:20	009	Immobilization of radioactive iodine in phosphate glasses Montagne L., Lemesle T., Mear F.O., Campayo L., Pinet O.
17:40	053	Novel nanomaterials based on Li₂O-FeO-V₂O₅-P₂O₅ glasses <u>Pietrzak T.K.</u> , Garbarczyk, J.E., Wasiucioneck M., Nowiński J.L.
18:00		Closing

■ BORATE POSTER SESSION

- 002** **Synthesis and spectral-luminescent properties of huntite-like glasses co-doped with Ce, Tb and Sb**
Ziyatdinova M., Golubev N., Malashkevich G., Mamadzhanova E., Sigaev V.
- 015** **Property Comparison of Ternary Borovanadate and Silicovanadate Glasses with Caesium and Lithium as Modifiers**
Rasmussen P.J., Delgado D., Maldonis J., Parish C., Bailey M., McCoy J., Kroeker S., Michaelis V., Morgan N., Drapes C., North J., Ramm A., Starkenburg D., Hopkins C., Affatigato M., Feller S.A.
- 016** **Anomalous Glass Transition Temperature Widths and Structure in Low Modifier Content Borate Glasses**
Perez B, Starkenburg D, Drapes C, Franke M, Barnes N, Troendle E, Affatigato M., Feller S, Zanotto E.D, Eckert H
- 029** **Investigation of 1-x(50PbO-20B₂O₃-30P₂O₅)-xMoO₃ glasses**
Rösslerová I., Koudelka L., Mošner P., Montagne L., Revel B.
- 035** **Synthesis and structure of Eu³⁺/Dy³⁺ doped 50ZnO-10WO₃-40B₂O₃ glass for optical application**
Aleksandrov L., Iordanova R., Wondraczek L, Herrmann A., Gao G., Dimitriev Y.
- 041** **Scintillation and dosimeter properties of 40Li₂O-40B₂O₃-20SiO₂ glass with different Sn concentrations.**
Yanagida T., Fujimoto Y., Masai H.
- 042** **NIR emission of Bi-doped TiO₂-ZnO-B₂O₃-Al₂O₃ glass.**
Masai H., Suzuki T., Takahashi Y., Fujiwara T., Ohishi Y.
- 046** **Structure of sodium niobato-borophosphate glasses: diffraction results**
Hoppe U., Brow R.K., Hannon A.C., von Zimmermann M.
- 047** **Modeling of Interionic Interaction in Borate Crystals Based on First-Principles Calculation**
Ishii Y., Kasahara K., Ohtori N., Shiraki K., Umesaki N., Salanne M., Madden P.A.
- 048** **Sol-Gel Materials and Glasses in the TiO₂-B₂O₃-TeO₂ System**
Gegova R., Bachvarova-Nedelcheva A., Iordanova R., Dimitriev Y.
- 051** **Thermal Transformation Bakerite→Datolite→Okayamalite**
Gorelova L.A., Krzhizhanovskaya M.G., Bubnova R.S.
- 060** **Valence state and structural geometry of polyvalent Fe and Ti ions in sodium borosilicate glasses by X-ray absorption spectroscopy**
Dubiel M., Ehrh D.
- 072** **Excitation energy transfer processes from Tb³⁺ to Ln³⁺ (Ln = Eu, Sm) in lead borate glasses**
Pisarska J., Kos A. Žur L., Sołtys M., Pisarski W.A.
- 073** **Pr³⁺ and Er³⁺ ions in lead-free oxyfluoride borate glasses**
Pisarski W.A., Pisarska J., Dorosz D., Dorosz J.
- 077** **Refractive index modification in fluoro-borate glasses containing WO₃ induced by femtosecond laser**
Ledemi Y., Bérubé J-P., Vallée R., Messaddeq Y.
- 081** **Fluorescence XAFS measurements and luminescence properties of Sm³⁺-doped borate glasses**
Fuchi S., Kimra R., Tabuchi M., Takeda Y.
- 082** **High-energy X-ray diffraction measurements and luminescence properties of Sm³⁺-doped borate glasses**
Watanabe K., Fuchi S., Kohara S.
- 086** **Crystal structures and glass-ceramics of solid solutions Sr_{1-x}Ba_xBi₂B₂O₇**
Shablinskii A.P., Bubnova R.S., Volkov S.N., Filatov S.K., Krzhizhanovskaya M.G., Drozdova I.A.
- 090** **Thermal decomposition of K_{1-x}Cs_xBSi₂O₆**
Derkacheva E.S., Krzhizhanovskaya M.G., Bubnova R.S., Filatov S.K., Ugolkov V.L.
- 097** **SMART FRIT: a Concept for Introducing Redox Sensitive Colorants in Glass Melts**
Saberi A., Willet- Porada M.
- 102** **New Glasses and Glassceramics-glazes in the Li₂O- K₂O- CaO-Al₂O₃-SiO₂-B₂O₃ complex system from Pegmatite Wastes**
Rincón- Mora B., Jordán M., Pardo F., Sanfeliú T., Rincón Ma.
- 111** **Immiscibility and Glass Formation in the System B₂O₃-MoO₃-CoO-ZnO**
Dimitriev Y., Ilieva D., Iordanova R., Kashchieva E., Petrov I.
- 115** **Glass and glass ceramics in the La₂O₃-Gd₂O₃-PbO-MnO-B₂O₃ system**
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