

# Scientific Program

July 2, 2019

9<sup>00</sup> - 10<sup>00</sup>

Registration (closes on July 4, 10<sup>00</sup>)

## Plenary Session I

Chairs: S.V. Krivovichev, S.K. Filatov

10<sup>00</sup> – 11<sup>00</sup>

### Opening Remarks

11<sup>00</sup> – 11<sup>30</sup>

Peter Paufler

**E.S. Fedorov promoting the Russian-German scientific interrelationship**

11<sup>30</sup> – 12<sup>00</sup>

Patrick Cordier

**Crystal defects and flow in minerals from the Earth's mantle**

12<sup>00</sup> – 12<sup>20</sup>

## Coffee Break

### Oral Session I

Chair: O.I. Siidra

Chair: D.A. Zamyatin

### Oral Session II

12<sup>20</sup> – 12<sup>40</sup>

**Sergey N. Britvin**, Maria G. Krzhizhanovskaya, Andrey A. Zolotarev and Liudmila A. Gorelova

**Minerals of schreibersite-nickelphosphide series, Fe<sub>3</sub>P-Ni<sub>3</sub>P, in different meteorite groups**

**Daria V. Kiseleva**, Sergei L. Votyakov, Elizaveta A. Pankrushina, Yulia V. Mandra

**Raman spectroscopy and imaging in mineralogical stomatology**

12<sup>40</sup> – 13<sup>00</sup>

**Ella V. Sokol**, Victoria A. Danilovsky, Svetlana N. Kokh, Victor V. Sharygin

**Mineralogical diversity of the Hatrurim combustion metamorphic rocks (Dead sea region)**

**Vladimir P. Lyutov**, Alexander B. Makeev, Viktor A. Saldin, Andrei Yu. Lysiuk, Oxana S. Golovataya

**Application of Mössbauer, ESR, and FT-IR spectroscopy for mineralogical and technological studies of refractory Fe-Ti and Fe-Mn ores**

13<sup>00</sup> – 13<sup>20</sup>

**Rafał Juroszek**, Biljana Krüger, Irina Galuskina, Hannes Krüger, Yevgeny Vapnik and Evgeny Galuskin

**Siwaqaite, Ca<sub>6</sub>Al<sub>2</sub>(CrO<sub>4</sub>)<sub>3</sub>(OH)<sub>12</sub>×26H<sub>2</sub>O, a New Mineral Belonging to the Ettringite Group Minerals from Daba-Siwaqa Complex, Jordan**

Alexander V. Serdtsev, Irina D. Yushina, Sergey M. Aksenov and **Ivan I. Leonidov**

**[X<sub>12</sub>O<sub>36</sub>] rings, X = Si, Ge, in crystal structures of silicates and germanates**

13<sup>20</sup> – 13<sup>40</sup>

**Margarita S. Avdontceva**, Andrey A. Zolotarev, Maria G. Krzhizhanovskaya, Mikhail Rassomakhin, Sergey V. Krivovichev

**Fluorellestadite from Chelyabinsk coal basin: crystal structure refinement, chemical analysis, vibration spectroscopy data and thermal behavior**

**Galina A. Palyanova**, Nadezda D. Tolstykh, Veronika Yu. Zinina, Konstantin A. Kokh and Yurii V. Seryotkin

**Compositions and properties of gold chalcogenides synthesized in the Au-S-Se-Te system**

13 <sup>40</sup> – 14 <sup>00</sup>	<b>Andrey A. Zolotarev</b> , Elena S. Zhitova, Maria G. Krzhizhanovskaya, Mikhail A. Rassomakhin, Vladimir V. Shilovskikh and Sergey V. Krivovichev	<b>Crystal chemistry of ammonium phases from burned dumps of the Chelyabinsk coal basin</b>	<b>Ulyana O. Borodina</b> , Sergei V. Goryainov, Anton F. Shatskiy	<b>Raman study of hydroxide-perovskite [MgSi(OH)<sub>6</sub>] at high pressure up to 7 GPa</b>
14 <sup>00</sup> – 15 <sup>00</sup>	<b>Lunch</b>			
	<b>Plenary Session II</b>			<b>Chairs:</b> P. Cordier, M. Colmont
15 <sup>00</sup> – 15 <sup>30</sup>	Frank C. Hawthorne	<b>Bond Topology of Chain-, Ribbon- and Tube-Silicates</b>		
15 <sup>30</sup> – 16 <sup>00</sup>	Fernando Cámara	<b>Complexity and stability of Group-I of the ABC-6 family of zeolites</b>		
16 <sup>00</sup> – 16 <sup>30</sup>	Hubert Huppertz	<b>Renaissance of Alkali Lithosilicates with Surprising Luminescence Properties</b>		
16 <sup>30</sup> – 17 <sup>00</sup>	Elena Sokolova	<b>The Astrophyllite Supergroup: Topological Constraints and New Chemical Compositions</b>		
17 <sup>00</sup> – 17 <sup>20</sup>	<b>Coffee Break</b>			
	<b>Oral Session III</b>	Chair: V.V. Gurzhiy	Chair: V.N. Reutsky	<b>Oral Session IV</b>
17 <sup>20</sup> – 17 <sup>40</sup>	<b>Bruker AXS: Presentation</b>			
17 <sup>40</sup> – 18 <sup>00</sup>	<b>Pavel N. Gavryushkin</b> , N. Sagatov, A. Belonoshko, A. Rečnik, N. Daneau, E. Zhitova, D. Sagatova and K.D. Litasov	<b>New CaCO<sub>3</sub> polymorphs and polytypes stable at ambient conditions</b>	<b>Dmitriy I. Rezvukhin</b> , Taisia A. Alifirova, Andrey V. Korsakov and Alexander V. Golovin	<b>Crystal-chemistry, Raman spectroscopy and origin of some natural LILE-enriched exotic titanate minerals</b>
18 <sup>00</sup> – 18 <sup>20</sup>	<b>Alexander V. Romanenko</b> , Anastasia Brazhnikova, Anton Shatskiy, Sergey Rashchenko	<b>Influence of high-pressure on Na<sub>4</sub>Ca(CO<sub>3</sub>)<sub>3</sub> structure: single-crystal X-ray diffraction and Raman spectroscopy study</b>	<b>Kira A. Musiyachenko</b> , Mara Murri, Mauro Prencipe, Matteo Alvaro	<b>The complexity behind the simple Ti oxide structure: Can rutile be used as an elastic geobarometer?</b>
18 <sup>20</sup> – 18 <sup>40</sup>	<b>Thomas Schlothauer</b> , Gerhard Heide, Marcus Schwarz, Erica Brendler	<b>Chemical composition, IR-spectroscopy and etching behavior of <math>\gamma</math>-Si<sub>3</sub>N<sub>4</sub></b>	<b>Olga V. Rezvukhina</b> , A.V. Korsakov, D.I. Rezvukhin, D.A. Zamyatin, E.D. Greshnyakov and V.Ya. Shur	<b>Complex internal textures in kyanite: a CL, EBSD and Raman spectroscopic study</b>

18 <sup>40</sup> – 19 <sup>00</sup>	<b>Olga V. Frank-Kamenetskaya</b> , Alina R. Izatulina, Vlad V. Gurzhiy, Marina S. Zelenskaya, Aleksey V. Rusakov, Mariya A. Kuz'mina, Dmitry Yu. Vlasov	<b>Ion substitutions and nonstoichiometry of oxalic acid salts formed with participation of the litobiont microbial community</b>	<b>Elena U. Sidorova</b> , Lyalya M. Sitdikova, Nailia M. Khasanova, Victor G. Izotov	<b>Structural and morphological features of kaolinite of the weathering crust according to X-ray diffraction and electron paramagnetic resonance</b>
19 <sup>00</sup> – 19 <sup>20</sup>	<b>Elena N. Kotelnikova</b> , Anton I. Isakov, Heike Lorenz	<b>Binary systems of organic substances with chiral molecules: enantiomers of the same substance, enantiomers of different substances, and diastereomers</b>	<b>Dinesh Chakravarthy Senthurpandi</b> , M. Nethaji	<b>Single Crystal X-Ray Diffraction Studies of [Mn(5'-GMP)terpy] &amp; [Mn(5'-UMP)terpy-CO<sub>2</sub>H] ternary systems</b>
19 <sup>20</sup> – 19 <sup>40</sup>	<b>Alina R. Izatulina</b> , V.V. Gurzhiy, M.G. Krzhizhanovskaya, M.A. Kuz'mina, O.V. Frank-Kamenetskaya	<b>Hydrated calcium oxalates: crystal structures, thermal stability and phase evolution</b>	<b>Bella B. Zviagina</b> , Victor A. Drits, Olga V. Dorzhieva	<b>Al-rich K-dioctahedral 2M<sub>1</sub> micas: structural factors affecting the crystal-chemical variability</b>
19 <sup>50</sup> – 22 <sup>00</sup>	<b>Welcome Party</b>			

July 3, 2019

**Plenary Session III**

Chairs: P.C. Burns, P. Paufler

10 <sup>00</sup> – 10 <sup>30</sup>	Evgeny V. Antipov	<b>From minerals to cathode materials for metal-ion batteries</b>
10 <sup>30</sup> – 11 <sup>00</sup>	Marie Colmont	<b>Immersion into the fascinating world of anion-centered units</b>
11 <sup>00</sup> – 11 <sup>30</sup>	Irina P. Makarova	<b>Solid acid proton conductors: impact of changes in hydrogen bonds on properties</b>
11 <sup>30</sup> – 12 <sup>00</sup>	Olivier Mentré	<b>Exotic topochemical alterations of the cationic sub-lattice in oxides</b>

12<sup>00</sup> – 12<sup>20</sup> Coffee Break

**Oral Session V**

Chair: A.A. Zolotarev

Chair: Yu.V. Bataleva

**Oral Session VI**

12 <sup>20</sup> – 12 <sup>40</sup>	<b>Taras L. Panikorovskii</b> , Gregory Yu. Ivanyuk and Sergey V. Krivovichev	<b>Mineral phylogeny by means of secondary transformation of precursor species</b>	<b>Bogdan I. Lazoryak</b> , D.V. Deyneko, S.Y. Stefanovich, V.A. Morozov	<b>Polyfunctional materials based on <math>\beta</math>-Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> structure type</b>
12 <sup>40</sup> – 13 <sup>00</sup>	<b>Ira V. Rozhdestvenskaya</b> and Wulf Depmeier	<b>Polytypes in charoite and denisovite structures</b>	<b>Elena P. Kharitonova</b> , Ekaterina I. Orlova and Valentina I. Voronkova	<b>Phase formation and polymorphism of Bi<sub>2</sub>O<sub>3</sub>-based compounds in Bi<sub>2</sub>O<sub>3</sub>-Ln<sub>2</sub>O<sub>3</sub>-MeO<sub>3</sub> (Ln = La, Nd, Pr; Me = Mo, W) ternary systems</b>
13 <sup>00</sup> – 13 <sup>20</sup>	<b>Nadezhda V. Shchipalkina</b> , Alexey R. Kotelnikov, Sergey N. Britvin, Lyubov' V. Mel'chakova, Natalia N. Koshlyakova and Igor V. Pekov	<b>Sodalite-type aluminosilicates Na<sub>8</sub>[(Al,Si)<sub>12</sub>O<sub>24</sub>]X · nH<sub>2</sub>O (X = SO<sub>4</sub>, MoO<sub>4</sub>, WO<sub>4</sub>): synthesis, X-ray diffraction and thermal studies</b>	<b>Andrey A. Shiryaev</b> , Maximilian S. Nickolsky, Vasily O. Yapaskurt, Polina S. Mihaylowa, Nikolai N. Eremin, Boris E. Burakov	<b>Structure of aged <sup>238</sup>Pu-doped Eu-monazite</b>
13 <sup>20</sup> – 13 <sup>40</sup>	<b>Sergey M. Aksenov</b> , N.V. Chukanov, I.V. Pekov, R.K. Rastsvetaeva, A.E. Hixon	<b>Crystal structure and topological features of manganonaujakasite, Na<sub>6</sub>(Mn,Fe)[Al<sub>4</sub>Si<sub>8</sub>O<sub>26</sub>]</b>	<b>Polina S. Mikhailowa</b> , Alexei A. Averin, Boris E. Burakov, Vasily O. Yapaskurt, Andrey A. Shiryaev	<b>Structure of synthetic silicate-rich corium – model for Chernobyl lava</b>
13 <sup>40</sup> – 14 <sup>00</sup>	<b>Fabrice Dal Bo</b> , Tomas Husdal, and Henrik Friis	<b>(Y,REE)<sub>6</sub>(SiO<sub>4</sub>)(Si<sub>3</sub>O<sub>10</sub>)F<sub>6</sub>, a novel sorosilicate mineral based on a framework of fluorine-centered triangles and tetrahedra</b>	<b>Dmitry A. Zamyatin</b> , Sergey L. Votyakov, Yuiya V. Shchapova	<b>Thermal annealing of heterogeneous zircon with high concentration of impurity elements</b>

14<sup>00</sup> – 15<sup>00</sup> Lunch

**Plenary Session IV**

Chairs: H.-P. Schertl, F. Bosi

15 <sup>00</sup> – 15 <sup>30</sup>	Yury N. Palyanov	<b>Effect of crystallization conditions on the formation of defect-impurity centers in diamond</b>
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15 <sup>30</sup> – 16 <sup>00</sup>	Oleg G. Safonov	<b>Mineral indicators of modal potassic metasomatism in the upper-mantle: a review of natural, experimental and crystal chemical data</b>
16 <sup>00</sup> – 16 <sup>30</sup>	Pavel Yu. Plechov	<b>Multilayered mineralogical information in spectroscopy of minerals</b>
16 <sup>30</sup> – 17 <sup>00</sup>	Sergey V. Rashchenko	<b>Synchrotron Radiation in Geoscience: Current State and Future Perspectives</b>
17 <sup>00</sup> – 17 <sup>20</sup>	Coffee Break	
17 <sup>20</sup> – 17 <sup>40</sup>	E-Globoledge/Rigaku: Presentation	
17 <sup>40</sup> – 19 <sup>40</sup>	Poster Session	

<b>A1</b>	Ekaterina V. Kaneva, Roman Y. Shendrik, Nikolay V. Vladykin, and Ernesto Mesto	<b>Agrellite from Dara-i-Pioz (Tajikistan) and Murun (Russia) massifs: a comparative EPMA, SCXRD, FTIR, EPR and luminescence study</b>
<b>A2</b>	Elizaveta A. Pankrushina, Aleksandr S. Kobuzov, Yuliya V. Shchapova, Sergey L. Votyakov	<b>Statistical methods for processing large sets of spectroscopic digital data</b>
<b>A3</b>	Valery N. Cheredov	<b>Temperature curves of the entropy of hexagonal ice crystals</b>
<b>A4</b>	Valery N. Cheredov	<b>Formation of nanoclusters at the crystallization front in a percolation model of crystal lattice</b>
<b>A5</b>	Ivan V. Nikiforov, Dina V. Deyneko and Bogdan I. Lazoryak	<b>Europium as a spectroscopic probe to determination site symmetry</b>
<b>A6</b>	O. A. Golovanova, S. A. Gerk	<b>Structural and morphological of carbonate hydroxyapatite prepared in the presence of glycine</b>
<b>A7</b>	Aleksandr N. Zaloga, Sergey V. Burakov, Igor S. Yakimov, Konstantin A. Gusev and Petr S. Dubinin	<b>A multi-criteria genetic algorithm for a crystal structure determination from powder diffraction data</b>
<b>A8</b>	Ksenia E. Smetanina, Pavel V. Andreev, Evgeny A. Lantsev, Maksim S. Boldin	<b>Study of the effect of “free” carbon content in the initial micron powder of WC – Co and sintering temperature on the phase composition of hard alloys obtained by the SPS method</b>
<b>A9</b>	Sergey A. Fateev, Ekaterina I. Marchenko, Golib A. Mascharipov G., Nikolay N. Eremin	<b>Theoretically and experimentally investigation of deviation from the Vegard’s law for solid solutions: hybrid halide perovskite system</b>
<b>A10</b>	Nikolay V. Somov , Pavel V. Andreev, Evgeny V. Chuprunov	<b>The Quantitative Estimation of the Degree of Similarity of Coordination Polyhedra</b>

<b>A11</b>	Kseniya B. Aleynikova, Elena N. Zinchenko, Alexey A. Zmeykin, and Yuriy N. Perin	<b>Fragmentary model and atomic structure of metallic and semiconductor glasses</b>
<b>A12</b>	Alexander F. Khokhryakov, Yuri N. Palyanov, Yuri M. Borzdov, and Igor N. Kupriyanov	<b>Effect of REE oxides on diamond crystallization in Mg-based systems</b>
<b>A13</b>	Zainullin O.B., Komornikov V.A., Timakov I.S.	<b>Preparation of crystals of water-soluble salts of cobalt and nickel</b>
<b>A14</b>	Yurii V. Seryotkin, Vladimir V. Bakakin	<b>Crystal–Fluid Interaction: the Structural Evolution of Zeolites at High Pressure</b>
<b>A15</b>	Anatoliy V. Korneev, Olga V. Frank-Kamenetskaya, Maria A. Kuzmina, Vladimir K. Ryabchuk, Elena V. Sturm	<b>Ti-bearing hydroxyapatites: synthesis, crystal chemistry, properties</b>
<b>A16</b>	Anastasia S. Brazhnikova, Olga N. Koroleva, Sergey V. Rashchenko, Alexandr V. Romanenko, Boris A. Zakharov	<b>Study of K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub> Glasses at Pressures up to 9 GPa</b>
<b>A17</b>	Natalia N. Piskunova, Ludmila Y. Kruchkova	<b>Combining Atomic-Force Microscopy and X-ray microtomography. Studies to Reconstruct Natural Crystallogenic Processes</b>
<b>A18</b>	Anna Yu. Likhacheva, Sergey V. Goryainov, Sergey V. Rashchenko and Oleg G. Safonov	<b>Effect of chloride components in water fluid onto serpentine dehydration: in situ HP-HT Raman spectroscopic study</b>
<b>A19</b>	Xu-Ping Li	<b>Geochemical and mineralogical studies of amphiboles from garnet amphibolites in the Xigaze ophiolite, southern Tibet</b>
<b>A20</b>	Gleb S. Maksimov, Igor A. Nauhatsky, Elena M. Maksimova	<b>X-Ray Study of Deposits from the Emine-Bayir-Khosarcave</b>
<b>A21</b>	Anna S. Deviatiiarova	<b>Crystal-Chemical Element Fractionation Under HT-LP Metamorphic Conditions: Case Study From Kochumdek Contact Aureole (Podkamennaya Tunguska Basin)</b>
<b>A22</b>	Evgeny V. Galuskin and Irina O. Galuskina	<b>Sb, W and U in Perovskite from Pyrometamorphic Rocks</b>
<b>A23</b>	D. S. Ponomarev, K. D. Litasov, A. Ishikawa	<b>Detailed Mineralogy and Trace Element Composition of Silicate-Bearing IAB Iron Meteorite NWA11104</b>
<b>A24</b>	Svetlana S. Hontsova, Elena M. Maksimova and Igor A. Nauhatsky	<b>X-Ray Diffraction Study of Ordinary Chondrites</b>
<b>A25</b>	Anna V. Nekipelova, Ella V. Sokol, Dmitriy Artemyev, Olga A. Kozmenko, Svetlana N. Kokh	<b>Anapaite from the Kerch Oolitic Iron Ores: Geochemical Signals and Environment Marker</b>
<b>A26</b>	V. Zhdanova, A. Berezin	<b>Particular qualities of wollastonite from skarns of Kuparsaari occurrence</b>

<b>A27</b>	Y.S. Simakova, V.P. Lyutoev, A.Yu. Lysiuk	<b>Crystal-chemical features of glauconite from Karinskoe deposit (South Urals)</b>
<b>A28</b>	Nikolai S. Chebykin, Ivan P. Sandalov, Dmitry A. Zamyatin	<b>Measurement of platinum group elements in catalysts processing products using SEM and energy dispersive spectrometer</b>
<b>A29</b>	Yulia V. Konevnik, Alexey V. Makarov, Yana Yu. Karaseva, Alexey V. Safonov, Elena V. Zakharova	<b>X-Ray Diffraction Study of Natural Sulfide Minerals for Technetium immobilization</b>
<b>A30</b>	K. Nedaivoda, M. Vetrova , A. Kulkov	<b>Mineral features of raw materials in the Early Iron Age pottery techniques from Northern Pontic Region</b>
<b>A31</b>	Raisa V. Lobzova, Oxana V. Karimova	<b>Textural and structural characteristics and composition of Russian tiles</b>
<b>A32</b>	Ivan A. Levitskii, Hanna N. Shymanskaya, Victoria S. Krasnova	<b>Features of structure and phase formation of basalt containing glazes for porcelain tiles</b>
<b>A33</b>	G.A. Kuznetsova, V.M. Kalikhman	<b>The X-ray determination of natural phlogopite monocrystals thermostability</b>
<b>A34</b>	N.S. Biske	<b>The Raman spectroscopy of meta-anthracite and coal graphite of contact metamorphism</b>
<b>A35</b>	Sergej L. Votyakov, Yuliya V. Shchapova	<b>Luminescence of natural zircon at VUV- and soft X-ray excitation induced by lazer and synchrotron</b>
<b>A36</b>	Tatyana N. Moroz, Nadezhda A. Palchik, Sergey M. Zhmodik	<b>Crystal Chemical and Structural Characterization of Minerals by Vibrational Spectroscopy and X-Ray Diffraction Methods</b>
<b>A37</b>	Vladimir S. Balitsky, Pavel S. Kvas, Elena Yu. Borovikova, Dmitry Yu. Pushcharovsky, Tatiana V. Setkova and Valentina A. Nesterova	<b>The Crystals of Ge,Ga-rich Topaz: Crystal Growth, Germanium and Gallium Distribution, Raman Spectroscopy</b>
<b>A38</b>	Marakhovskaya O.Y., Kuksa K.A., Sokolov P.B.	<b>VIS-spectroscopy Study of Co-blue spinel from Luc Yen, Vietnam</b>
<b>A39</b>	Elena Yu. Borovikova, Valentina A. Nesterova, Tatiana V. Setkova, Dmitry Yu. Pushcharovsky, Vladimir S. Balitsky, Pavel S. Kvas and Sofia A. Tetroeva	<b>Raman Spectra of Synthetic Ga-rich, Ge-bearing Tourmaline Crystals</b>
<b>A40</b>	Yaroslav P. Biryukov, Stanislav K. Filatov, Farit G. Vagizov, Almaz L. Zinnatullin, Rimma S. Bubnova, Igor V. Pekov	<b>Investigation of thermal behavior of synthetic (<math>\text{FeBO}_3</math>, <math>\text{Fe}_3\text{BO}_6</math>) and natural (vonsenite, hulsite) iron-containing borates by high-temperature X-ray powder diffraction and Mössbauer spectroscopy over a wide temperature range</b>
<b>A41</b>	Yuliya V. Shchapova, Elizaveta A. Pankrushina, Aleksander Yu. Kisin, Sergey L.Votyakov	<b>Optical spectroscopy for analyzing of the cation disordering in <math>\text{MgAl}_2\text{O}_4</math> spinel</b>
<b>A42</b>	S. Uporov, N. Uporova	<b>Magnetocaloric properties of Gd-Al-Me (Me=Ni, Co, Fe) bulk-amorphous alloys</b>

<b>A43</b>	D.G. Fukina, E.V. Suleimanov, Boryakov A.V., G.K. Fukin, S.G. Protasova and A.M. Ionov	<b>Mixed-valent tellurium oxides <math>ATe_{1-x}B_xO_6</math> (A= Rb, Cs, B=Mo, W) with pyrochlore-related structure</b>
<b>A44</b>	Vladimir P. Lyutoev, Nadezhda A. Zhuk	<b>Investigation of ceramics <math>BiNbO_4</math> doped by ions of Fe and Mn by ESR spectroscopy</b>
<b>A45</b>	Stanislav V. Borisov, Natalie V. Pervukhina, Svetlana A. Magarill	<b>Fedorov's group of crystallographic symmetry – transformation algorithms space and energy while implementing a stable atomic configurations</b>
<b>A46</b>	Mishel R. Markovski, Oleg I. Siidra	<b>Review of Tl(I) coordination polyhedra in oxysalt minerals and synthetic compounds</b>
<b>A47</b>	Lyalya M. Sitdikova	<b>Thermodynamic conditions of clay minerals formation in the deep horizons of the Earth crust</b>
<b>A48</b>	Margarita S. Avdontceva, Maria G. Krzhizhanovskaya, Sergey V. Krivovichev	<b>Cacoxenite and natrophosphate: crystal chemistry of very complex phosphates</b>
<b>A49</b>	Galina B. Kunshina, Irina V. Bocharova and Victor J. Kuznetsov	<b>Formation of the cubic modification of LLZ solid electrolyte with garnet structure</b>
<b>A50</b>	Volkov S.N., Bubnova R.S., Morozov N.A.	<b>Crystal structures of two novel borates in the <math>SrO-BaO-B_2O_3</math> system</b>



July 4, 2019

**Plenary Session V**

Chairs: Yu.N. Palyanov, I.V. Pekov

10 <sup>00</sup> – 10 <sup>30</sup>	Peter C. Burns	<b>New Landscapes of Uranium Mineralogy</b>
10 <sup>30</sup> – 11 <sup>00</sup>	Thomas Armbruster	<b>The Role of Four-Valent Vanadium in Mineral Structures</b>
11 <sup>00</sup> – 11 <sup>30</sup>	Ferdinando Bosi	<b>On the crystal chemical identification and classification of minerals</b>
11 <sup>30</sup> – 12 <sup>00</sup>	Frédéric Hatert	<b>The crystal chemistry of natural and synthetic beryll phosphates</b>

12<sup>00</sup> – 12<sup>20</sup> Coffee Break

**Oral Session V**

Chair: A. Ertl

Chair: O.G. Safonov

**Oral Session VI**

12 <sup>20</sup> – 12 <sup>40</sup>	<b>Galina V. Kiriukhina</b> , Olga V. Yakubovich, Iurii Dovgaliuk	<b>A novel high-potassium manaksite analogue, K(K<sub>0.72</sub>Na<sub>0.28</sub>)Mn[Si<sub>4</sub>O<sub>10</sub>] in the row of isotypic compounds</b>	<b>Koichi Momma</b>	<b>Evaluation of the best weighting scheme for the maximum entropy Patterson method</b>
12 <sup>40</sup> – 13 <sup>00</sup>	<b>Sergey V. Rashchenko</b> , Yurii V. Seryotkin, Ella V. Sokol and Svetlana N. Kokh	<b>Incommensurate modulation in <i>inflamite</i> – natural analogue of α<sub>H</sub>-Ca<sub>2</sub>SiO<sub>4</sub></b>	<b>Natalya Kabanova</b> , R.D. Shannon and R. X. Fischer	<b>Fast ion conductivity and deviations from additivity of empirical electronic polarizability in minerals: Voronoi-Dirichlet method</b>
13 <sup>00</sup> – 13 <sup>20</sup>	L.G. Gerasimova, <b>Gregory Yu. Ivanyuk</b> , G.O. Kalashnikova, S.V. Krivovichev, A.I. Nikolaev, Y.A. Pakhomovsky, T.L. Panikorovskii, G.O. Samburov, V.N. Yakovenchuk	<b>Nature-inspired synthesis technologies of functional titanosilicates</b>	<b>Ekaterina I. Marchenko</b> , Nikolay N. Eremin	<b>Evolutional search of own mineral phases of aluminum in the lower mantle of the Earth</b>
13 <sup>20</sup> – 13 <sup>40</sup>	<b>Galina O. Kalashnikova</b> , Taras L. Panikorovsky, Elena S. Zhitova, Ekaterina A. Selivanova, Yakov. A. Pakhomovsky, Sergey.V. Krivovichev	<b>Crystal chemistry of lintisite, AM-4 and their protonated form, SL3</b>	<b>Vladislav V. Gurzhiy</b> , Jakub Plášil and Sergey V. Krivovichev	<b>Crystal chemistry and structural complexity of the secondary uranium minerals and their synthetic analogs</b>
13 <sup>40</sup> – 14 <sup>00</sup>	<b>Rimma S. Bubnova</b> , Shablinskii A.P., Filatov S.K., Kolesnikov I.E., A.V. Povolotskiy	<b>Distribution of the Eu<sup>3+</sup> dopant ions over cation positions and luminescent properties in novel M<sub>3</sub>Bi<sub>2</sub>(BO<sub>3</sub>)<sub>4</sub>:Eu<sup>3+</sup> (M = Sr, Ba) red phosphors</b>	<b>Denis V. Pushkin</b> , Anton V. Savchenkov, Larisa B. Serezhkina, and Viktor N. Serezhkin	<b>UO<sub>n</sub> coordination polyhedra, U-substructures and the concept of antiliquid</b>

14<sup>00</sup> – 15<sup>00</sup> Lunch

**Plenary Session VI**

Chairs: F.C. Hawthorne, F. Camara

15 <sup>00</sup> – 15 <sup>30</sup>	Robert M. Hazen	<b>An evolutionary system of mineralogy: Proposal for a classification of planetary materials based on natural kind clustering</b>
15 <sup>30</sup> – 16 <sup>00</sup>	Shaunna M. Morrison	<b>Data-driven discovery in mineral systems: Applications of advanced analytics and visualization</b>
16 <sup>00</sup> – 16 <sup>30</sup>	Hans-Peter Schertl	<b>Cathodoluminescence (CL) microscopy and spectroscopy of magmatic and metamorphic minerals: New avenues for petrological applications</b>
16 <sup>30</sup> – 17 <sup>00</sup>	Matteo Leoni	<b>Quantitative nanostructure information from diffraction data: what can the diffraction pattern tell you?</b>
17 <sup>00</sup> – 17 <sup>20</sup>	<b>Coffee Break</b>	
17 <sup>20</sup> – 17 <sup>40</sup>	Technoinfo: Presentation	
17 <sup>40</sup> – 19 <sup>40</sup>	<b>Poster Session</b>	

<b>B1</b>	Alexandra Ostroverkhova, Anirudh Prabhu	<b>Evolution and structure complexity of Lithium minerals: applying of network analysis</b>
<b>B2</b>	Ivan V. Kuporev, Vladislav V. Gurzhiy	<b>Structural and topological complexity of the uranyl selenates and selenites</b>
<b>B3</b>	Ekaterina F. Rogaleva, Larisa B. Serezhkina, Mikhail S. Grigoriev	<b>The First Example of a 2D Uranyl Oxalatosuccinate Complex</b>
<b>B4</b>	Anton V. Savchenkov, Pavel A. Pirozhkov, Anna V. Vologzhanina, Yan V. Zubavichus, Pavel V. Dorovatovskii, Denis V. Pushkin and Larisa B. Serezhkina	<b>Advanced crystal-chemical role of secondary metals in a series of uranyl crotonates</b>
<b>B5</b>	Nikita A. Shimin, Larisa B. Serezhkina, Mikhail S. Grigoriev	<b>Noncovalent interactions in the new methacrylate uranyl complexes with organic monovalent cations</b>
<b>B6</b>	Anastasiya D. Ryanskaya, Sergey M. Aksenov, Nikolay V. Vladykin, Yulia V. Shchapova, Sergey L. Votyakov, and Ramiza K. Rastsvetaeva	<b>Crystal structure features of lamprophyllite-group minerals: Single crystal X-ray diffraction and Raman spectroscopy study</b>
<b>B7</b>	Irina O. Galuskina, Biljana Krüger, Evgeny V. Galuskin, Yevgeny Vapnik, Mikhail Murashko	<b>A New Mineral Khurayyimite, Ca<sub>7</sub>Zn<sub>4</sub>(Si<sub>2</sub>O<sub>7</sub>)<sub>2</sub>(OH)<sub>10</sub>·4H<sub>2</sub>O from Daba Siwaqa Pyrometamorphic Rock, Jordan</b>
<b>B8</b>	Yuliya M. Bronzova, Olga V. Frank-Kamenetskaya, Miriam S. Babushkina, Oleg S. Vereshchagin, Ira V. Rozhdestvenskaya, Anatoly A. Zolotarev	<b>Short-range order in Li-Al-tourmalines: a bond-valence theory, IR-spectroscopy and X-Ray single diffraction analysis approach</b>

<b>B9</b>	Irina A. Chernyshova, Oleg S. Vereshchagin, Olga V. Frank-Kamenetskaya, Andrey A. Zolotarev, Maria G. Krzhizhanovskaya, Olga V. Malyshkina	<b>Thermal Behavior and Properties of Synthetic Ni-Bearing Tourmaline</b>
<b>B10</b>	Tatiana A. Eremina, Elena L. Belokoneva, Olga V. Dimitrova, Anatoliy S. Volkov	<b>Lead orthosilicate <math>\{Pb_4(O(OH)_2)\}_2[SiO_4]</math> with a framework of anion centered Pb tetrahedral related to sodalite</b>
<b>B11</b>	Anastasiia P. Topnikova, Elena L. Belokoneva, Anatoly S. Volkov, Olga V. Dimitrova, and Sergey Yu. Stefanovich	<b>Crystal structures of silicate-germanate family with a mixed microporous framework: <math>(K_{2.9}Cs_{0.1})(Sc_{0.7}In_{0.3})[(Si_{2.9}Ge_{0.1})O_9] \cdot H_2O</math> and <math>(K_{2.22}Cs_{0.78})Bi[(Si_{0.5}Ge_{0.5})O_9] \cdot H_2O</math></b>
<b>B12</b>	D.A. Ksenofontov, A.A. Artamonova, N.V. Zubkova, I.V. Pekov, A.Yu. Bychkov, V.O. Yapaskurt, D.Yu. Pushcharovsky	<b>Ion-exchanged forms of the microporous zirconosilicate <math>Na_6Zr_3[Si_9O_{27}]</math>, a product of catapleiite annealing</b>
<b>B13</b>	Galina O. Kalashnikova, Taras L. Panikorovsky, Elena S. Zhitova, Ekaterina A. Selivanova, Yakov. A. Pakhomovsky, Sergey.V. Krivovichev	<b>Crystal chemistry of lintisite, AM-4 and their protonated form, SL3</b>
<b>B14</b>	Fedor D. Sandalov, Nadezhda V. Schipalkina, Igor V. Pekov, Natalya N. Koshlyakova, Evgeny G. Sidorov	<b>Silica minerals from the Arsenatnaya fumarole, Tolbachik volcano (Kamchatka, Russia)</b>
<b>B15</b>	Dina V. Deyneko, Ivan V. Nikiforov, Insaaf Duskaev and Bogdan I. Lazoryak	<b>Transformation of the spectroscopy properties during the phase transition in phosphates <math>Ca_{9-x}Zn_xDy(PO_4)_7</math> related to mineral whitlockite family</b>
<b>B16</b>	Polina V. Krikunova, Larisa V. Shvanskaya	<b>Crystal structure of a novel <math>CsBP_2O_6(OH)_2</math> borophosphate and its relationship to the structures of minerals: fransoletite and parafransoletite</b>
<b>B17</b>	Anastasia P. Chernyatieva, Sergey V. Krivovichev, Vadim M. Kovrugin	<b>X-Ray Diffraction Study of Minerals from Kola Peninsula: Crystal chemistry and structural complexity of transition metal diphosphates with alkaline cations</b>
<b>B18</b>	Ekaterina M. Kochetkova, Galina V. Kiriukhina, Olga V. Yakubovich	<b>Products of hydrothermal synthesis in phosphate systems with alkaline and transition metals and the <math>K_2Mn_3(H_2O)_2[P_2O_7]_2</math> crystal structure</b>
<b>B19</b>	Arkadiusz Krz̄ała, Biljana Kr̄uger, Irina O. Galuskina, Hannes Kr̄uger, Yevgeny Vapnik and Evgeny V. Galuskin	<b>Zadovite With Anomalously High Si Content from Negev Desert, Israel</b>
<b>B20</b>	Elena V. Selezneva, Irina P. Makarova, Inna A. Malyshkina, Alla L. Tolstikhina, Radmir V. Gainutdinov, Vladimir A. Komornikov	<b>The cation replacements in the systems of superprotonic crystals</b>
<b>B21</b>	Ivan S. Timakov, Vadim V. Grebenev, Vladimir A. Komornikov, Oleg B. Zainullin, Irina P. Makarova, Elena V. Selezneva	<b>The Cation Substitution in Superprotonic Crystals</b>
<b>B22</b>	Vladimir A. Komornikov, Vadim V. Grebenev, Ivan S. Timakov, Oleg B. Zainullin	<b>Use of Nature-like Compounds at Synthesis of Proton-conducting Composite Materials</b>

<b>B23</b>	Dmitri O. Charkin, Vadim E. Kireev, Oleg I. Siidra, Aleksandr N. Zaloga, and Igor V. Plokhikh	<b>New structural analogies among layered nitrates and halides: synthesis and structure of a new Sillén-derived fluoride nitrate, BaPb<sub>2</sub>F<sub>5</sub>NO<sub>3</sub></b>
<b>B24</b>	Nina V. Podberezskaya	<b>Mathlokitite as a structural type of lanthanide polyhalogenides: crystallography and crystal chemistry – dichalcogenides REE</b>
<b>B25</b>	Anastasiia I. Zadoia, Oleg I. Siidra, Marie Colmont	<b>Crystal structures and comparative crystal chemistry of three new lead oxo-centered compounds</b>
<b>B26</b>	Vladimir V. Bakakin, Yurii V. Seryotkin	<b>Anion-Centered Clusters (X<sup>2-</sup>M<sub>4-12</sub>)<sup>n+</sup> in Oxides and Chalcogenides and its Structural Functions</b>
<b>B27</b>	Katarzyna Nowak, Rafał Juroszek, Biljana Krüger, Irina O. Galuskina and Evgeny V. Galuskin	<b>CO<sub>3</sub>-free and P-bearing Lanthanite from Esseneite Paralava of the Hatrurim Complex, Negev Desert, Israel</b>
<b>B28</b>	D.O. Charkin, K.A. Zagidullin, E.V. Nazarchuk, O.I. Siidra	<b>On the crystal structure of thorium hydrogen arsenate, Th<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub>(HAsO<sub>4</sub>)(H<sub>2</sub>O)</b>
<b>B29</b>	Nataliya E. Novikova, Timofey A. Sorokin, Alexander M. Antipin, Nadejda B. Bolotina, Olga A. Alekseeva, Nataliya I. Sorokina, and Valentina I. Voronkova	<b>Crystal Structure of La<sub>2</sub>W<sub>1+x</sub>O<sub>6+3x</sub></b>
<b>B30</b>	Ekaterina I. Orlova, Elena P. Kharitonova, Egor D. Baldin, and Valentina I. Voronkova	<b>Phase Relations and Properties of Oxygen-Conducting Li<sub>x</sub>Ln<sub>5-x</sub>Mo<sub>3</sub>O<sub>16.5-y</sub>F<sub>x</sub> (x= 0 – 1.6), Ln = La, Pr, Nd, Compounds</b>
<b>B31</b>	Valentina I. Voronkova, Elena P. Kharitonova, Ekaterina I. Orlova, Egor D. Baldin, Nataliya I. Sorokina, Alexander M. Antipin, Vadim V. Grebenev, and Timofey A. Sorokin	<b>Phase Formation, Structure and Physical Properties of Mg-Containing Nd<sub>2</sub>MoO<sub>6</sub> Compounds</b>
<b>B32</b>	Anna V. Shlyakhtina, Maxim Avdeev, Nikolay V. Lyskov, Ksenia S. Denisova, Igor V. Kolbanev, Sergey A. Chernyak, Lidia G. Shcherbakova, Olga S. Volkova, Alexander N. Vasiliev	<b>Polymorphs of rare-earth molybdates Ln<sub>10</sub>Mo<sub>2</sub>O<sub>21</sub> (Ln = Gd, Dy, Ho): structure, conductivity and magnetism</b>
<b>B33</b>	Anna V. Shlyakhtina, Nikolay V. Lyskov, Alexander N. Shchegolikhin, Galina A. Vorobieva, I.V. Kolbanev, L.G. Shcherbakova	<b>Evolution of the structure and ionic conductivity of the solid solutions based on Nd<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub></b>
<b>B34</b>	Volkov S.N., Bubnova R.S., Krzhizhanovskaya M.G., Petrova S.A.	<b>Thermal expansion of Li<sub>2</sub>B<sub>4</sub>O<sub>7</sub> revised</b>
<b>B35</b>	Yuriev A.A., Shablinsky A.P., Bubnova R.S., Filatov S.K.	<b>Synthesis and thermal behavior of borate CaBi<sub>2</sub>B<sub>4</sub>O<sub>10</sub>:Eu</b>
<b>B36</b>	Ekaterina S. Smirnova, Olga A. Alekseeva, Vladimir V. Artemov, Irina A. Gudim	<b>Structure of new mixed samarium aluminum-iron borates SmFe<sub>3-x</sub>Al<sub>x</sub>(BO<sub>3</sub>)<sub>4</sub></b>
<b>B37</b>	Olga N. Khrykina, Nadezhda B. Bolotina, Alexander P. Dudka	<b>Some crystallographic parameters of HoB<sub>12</sub> single crystals in the temperature range 86-500 K.</b>

<b>B38</b>	Ekaterina S. Smirnova, Olga A. Alekseeva, Alexander P. Dudka, Igor A. Verin, Vladimir V. Artemov, Dmitry N. Khmelenin, Irina A. Gudim, Kirill V. Frolov, Igor S. Lyubutin	<b>Structure features of rare-earth iron borates <math>(R_{1-x}Bi_x)Fe_3(BO_3)_4</math>, R = Nd, Gd, Ho, Y in the temperature range 30 – 500 K</b>
<b>B39</b>	Yu.A. Pankova, S.V. Krivovichev	<b>Comparative crystal chemistry of <math>NaA[B_{10}O_{14}(OH)_4]</math> (A = K, <math>NH_4</math>, Rb, Cs) borates</b>
<b>B40</b>	Viktoriia A. Vladimirova, Oleg I. Siidra	<b>Physical properties and structural features of synthetic analogs of averievite <math>[Cu^{2+}_5O_2](VO_4)_2 \cdot 2Cu^+Cl</math> and yaroshevskite <math>[Cu_9O_2](VO_4)_4Cl_2</math></b>
<b>B41</b>	Natalia V. Zubkova, Nikita V. Chukanov, Günter Blass, Igor V. Pekov, Dmitry A. Varlamov, Dmitry A. Ksenofontov and Dmitry Yu. Pushcharovsky	<b>The crystal structure of a new microporous mineral kruijenite, <math>Ca_4Al_4(SO_4)F_2(OH)_{16} \cdot 2H_2O</math></b>
<b>B42</b>	Olga U. Saprykina, Stanislav K. Filatov and Rimma S. Bubnova	<b>Thermal behavior of new mineral belomarinaite (<math>KNaSO_4</math>)</b>
<b>B43</b>	Eugenia A. Lukina, Anastasiia A. Meshcheriakova, Oleg I. Siidra, Igor V. Pekov	<b>Thermal behavior of kainite, ideally <math>KMg(SO_4)Cl \cdot 2.75H_2O</math></b>
<b>B44</b>	Rezeda M. Ismagilova, Andrey A. Zolotarev, Elena S. Zhitova, Sergey V. Krivovichev	<b>Crystal chemistry of compound <math>Cu(Rb,NH_4)(NO_3)(SO_4)</math></b>
<b>B45</b>	Artem S. Borisov, Oleg I. Siidra, Natalia V. Platonova, Wulf Depmeier, Evgeniya A. Lukina, Marie Colmont, Diana O. Nekrasova	<b>Thermal expansion and hydration/dehydration of euchlorine <math>KNaCu_3O(SO_4)_3</math></b>
<b>B46</b>	M.A. Nazarova	<b>Typomorphism of halotrichite-group minerals from volcanic exhalation (Kamchatka, Russia)</b>
<b>B47</b>	Anastasia V. Sergeeva and Elena S. Zhitova	<b>Spectral Characterization of the Ammonium Cation located in the structurally `Inappropriate` Positions</b>
<b>B48</b>	Veronika R. Abdulina, Oleg I. Siidra, Evgeny V. Nazarchuk, Artem S. Borisov	<b>High-temperature X-ray study and dehydration of coquimbite, ideally <math>Fe^{3+}_2(SO_4)_3 \cdot 9H_2O</math></b>
<b>B49</b>	Vladimir G. Krivovichev, Sergey V. Krivovichev	<b>The Fedorov–Groth Law Revisited: Complexity Analysis Using Mineralogical Data</b>
<b>B50</b>	Sergey V. Krivovichev, Taras L. Panikorovskii, Andrey A. Zolotarev, Vladimir N. Bocharov, Anatoly V. Kasatkin and Radek Škoda	<b>Jahn-Teller distortion and cation ordering: the crystal structure of paratooite-(La), a superstructure of carbocernaite</b>
<b>B51</b>	Ruiqi Chen, Oleg I. Siidra, Evgeny V. Nazarchuk, Evgeniya A. Lukina, Karim A. Zagidullin and Dmitri O. Charkin	<b>Belousovite - a sulfate mineral from the Tolbachik volcano, and its synthetic analogues <math>KZn(SO_4)X</math>, X = Cl, Br</b>
<b>B52</b>	S.A. Kalashnikova, I.V. Korniyakov, V.V. Gurzhiy	<b>Synthesis and Crystal Structure of the Two New Uranyl Hydrogencarbonate Compounds</b>

July 5, 2019

**Plenary Session VII**

Chairs: H. Huppertz, O. Mentre

10 <sup>00</sup> – 10 <sup>30</sup>	Wulf Depmeier	Still waters run deep
10 <sup>30</sup> – 11 <sup>00</sup>	Stuart Mills	Modern day mineralogy utilising X-ray diffraction
11 <sup>00</sup> – 11 <sup>30</sup>	Igor V. Pekov	Towards structural mineralogy and genetic crystal chemistry of boron: novel crystal structures of borate and borosilicate minerals from different geological formations
11 <sup>30</sup> – 12 <sup>00</sup>	Andreas Ertl	Relationships within the tourmaline supergroup and proposed <i>PT</i> conditions for a B-rich tourmaline endmember as well as for Li-rich tourmalines

12<sup>00</sup> – 12<sup>20</sup> **Coffee Break**

**Oral Session VII** Chair: S.N. Britvin Chair: S.M. Aksenov **Oral Session VIII**

12 <sup>20</sup> – 12 <sup>40</sup>	<b>Oleg I. Siidra</b>	<b>Fumarolic sulfate minerals: new data and possible applications</b>	<b>Oxana V. Karimova,</b> Andrey A. Zolotarev	<b>Ordering of As and Sb in the crystal structures of arsenopalladinite Pd<sub>8</sub>As<sub>2.5</sub>Sb<sub>0.5</sub> and mertieite-II Pd<sub>8</sub>Sb<sub>2.5</sub>As<sub>0.5</sub></b>
12 <sup>40</sup> – 13 <sup>00</sup>	<b>Ilya V. Korniyakov,</b> Sergey V. Krivovichev	<b>Crystal Chemical Classification of Divalent Copper Oxysalt Minerals</b>	<b>Ramiza K. Rastsvetaeva,</b> S.M. Aksenov, and N.V. Chukanov	<b>New data on crystal chemistry of eudialyte-group minerals</b>
13 <sup>00</sup> – 13 <sup>20</sup>	<b>Michael S. Kozin,</b> Oleg I. Siidra, Wulf Depmeier, Roman A. Kayukov, Vadim M. Kovrugin	<b>Complex Cu-Pb selenite bromides: a new large family of layered compounds</b>	<b>Elena S. Zhitova,</b> Sergey V. Krivovichev, Igor V. Pekov and Nikita V. Chukanov	<b>Crystal chemistry of Cl-dominant hydrotalcite-supergroup members</b>
13 <sup>20</sup> – 13 <sup>40</sup>	<b>Diana O. Nekrasova,</b> Marie Colmont, Olivier Mentré, Alexander A. Tsirlin and Oleg I. Siidra	<b>Modification of spin-triplet state in novel copper synthetic sulfates</b>	<b>Andrey P. Shablinskii,</b> Lidiya G. Galafutnic, Rimma S. Bubnova, and Stanislav K. Filatov	<b>Synthesis, crystal structure and thermal expansion of gaudefroyite-type borates: Sr<sub>3</sub>Bi(YO)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Sr<sub>2</sub>CaBi(YO)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> and Sr<sub>2</sub>BaBi(YO)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub></b>
13 <sup>40</sup> – 14 <sup>00</sup>	<b>Dmitry O. Charkin,</b> V.Yu. Grishaev, Mishel R. Markovski, Diana O. Nekrasova, Oleg I. Siidra	<b>Layered copper hydrogen selenites: a family of decorated perovskite derivatives</b>	<b>Ravil A. Khasanov,</b> Nazim M. Nizamutdinov, Nailia M. Khasanova	<b>EPR in single crystals of technogenic gypsum and powders of its dehydration products</b>

14<sup>00</sup> – 15<sup>00</sup> **Lunch**

**Plenary Session VIII**

Chairs: W. Depmeier, P. Plechov

15 <sup>00</sup> – 15 <sup>30</sup>	Herbert Pöllmann	Quantitative X-ray analysis of natural and artificial supplementary cementitious materials originating from Industrial residues and natural
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15 <sup>30</sup> – 16 <sup>00</sup>	Hideo Toraya		<b>pozzolanitic rocks</b>
			<b>The direct derivation (DD) method: a new technique for quantitative phase analysis using observed intensities of individual phases and their chemical composition data</b>
16 <sup>00</sup> – 16 <sup>30</sup>	Nikolai N. Eremin		<b>Semi empirical atomistic modeling in inorganic crystal chemistry and structural mineralogy: limitations and possibilities</b>
16 <sup>30</sup> – 17 <sup>00</sup>	Stanislav K. Filatov, Rimma S. Bubnova		<b>200 years after discovery of the general phenomena of crystal chemistry by Eilhard Mitscherlich: iso- and polymorphism, highly anisotropic and negative thermal expansion</b>
17 <sup>00</sup> – 17 <sup>20</sup>	Coffee Break		
	<b>Oral Session IX</b>	Chair: N.N. Eremin	Chair: A.A. Shiryaev <b>Oral Session X</b>
17 <sup>20</sup> – 17 <sup>40</sup>	<b>Maria Krzhizhanovskaya</b> , Rimma Bubnova, Sergey Volkov, Ljudmila Gorelova, Nadezhda Zhuk and Stanislav Filatov	<b>Unusual polymorph transformations: <i>in situ</i> HTXRD data</b>	<b>Sergey V. Titkov</b> <b>Transformation of nitrogen centers in natural diamonds under plastic deformation</b>
17 <sup>40</sup> – 18 <sup>00</sup>	<b>Anna Yu. Likhacheva</b> , Sergey V. Rashchenko, Kira A. Musiyachenko, Andrey V. Korsakov, Ines E. Collings, Michael Hanfland	<b>High-pressure structure evolution of maruyamaite (K-tourmaline) from diamondiferous gneisses of the Kokchetav massif: the role of K</b>	<b>Vadim N. Reutsky</b> , Yury N. Palyanov <b>Preliminary experimental data on isotope and impurity' fractionation at diamond crystallization by dodecahedron and trapezohedron faces</b>
18 <sup>00</sup> – 18 <sup>20</sup>	<b>Oleg S. Vereshchagin</b> , Olga V. Frank-Kamenetskaya, Bernd Wunder, Sergey N. Britvin, Ira V. Rozhdestvenskaya	<b>New synthetic tourmalines: crystal chemistry, functional properties and possible implication for geological reconstructions</b>	<b>Christian Schmidt</b> , Lea Scholten, Pilar Lecumberri-Sanchez, Matthew Newville, Antonio Lanzirrotti, Mona-Liza C. Sirbescu and Matthew Steele-MacInnis <b>Fe(II) and Fe(III) complexation and the oxidation state of Fe in chloridic hydrothermal fluids</b>
18 <sup>20</sup> – 18 <sup>40</sup>	<b>Liudmila A. Gorelova</b> , Anna S. Pakhomova, Maria G. Krzhizhanovskaya, Leonid S. Dubrovinsky, Sergey V. Krivovichev	<b>Dynamical crystal chemistry of danburite-group minerals MB<sub>2</sub>Si<sub>2</sub>O<sub>8</sub> (M = Ca, Sr, Ba)</b>	<b>Yuliya V. Bataleva</b> , Ivan D. Novoselov, Aleksey N. Kruk and Yuri N. Palyanov <b>Experimental modeling of decarbonation reactions resulting in the formation of Mg,Fe,Ca,Mn-garnets and CO<sub>2</sub>-fluid under lithospheric mantle P,T-parameters</b>

18<sup>40</sup> – 19<sup>00</sup>

**Sergey N. Volkov**,  
Krzhizhanovskaya M.G.,  
Bubnova R.S., Belousova  
O.L., Povolotskiy A.V.,  
Kolesnikov I.E.

**Sr<sub>3-1.5y</sub>Eu<sub>y</sub>B<sub>2+x</sub>Si<sub>1-x</sub>O<sub>8-x/2</sub> solid  
solutions: synthesis, crystal  
structure, thermal expansion  
and luminescence**

**Alexey N. Kruk**, A. G.  
Sokol, Yu. N. Palyanov

**Formation of phlogopite and magnesite in  
kimberlite-like systems at 5.5–7.5 GPa**

19<sup>00</sup> – 19<sup>20</sup>

**Closing Ceremony**

19<sup>20</sup> – 22<sup>30</sup>

**Conference Banquet**