SCIENTIFIC PROGRAM OF XVII INTERNATIONAL CONFERENCE ON CRYSTAL CHEMISTRY, XRD & SPECTROSCOPY OF MINERALS

Micro Symposia

1. General Crystal Chemistry
2. Structure–Property Relationships
3. X-ray Diffraction Studies and Structural Typomorphism of Minerals and Technogenic Products
4. Spectroscopic Studies
5. High-Temperature and High-Pressure Diffraction Studies
6. Nano-Minerals and Methods of Their Studies

June, 20, Monday

10.00–17.00 Excursion to Tzarskoe Selo
15:00–17:30 Excursion to Mineralogical Museums of Mining Institute and St. Petersburg State University
15:00–18:00 Registration (Main Building of St. Petersburg State University)

June, 21, Tuesday (Morning)

09:00–10:00 Registration (Main Building of St. Petersburg State University)

Plenary Session (Plenary Hall)

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

10:00 Opening: *V.S. Kat'kalo, S.V. Aplonov*
10:30 V.S. Urusov. Crystal Chemical and Geochemical Factors Limiting the Number of Mineral Species
11:00 W. Depmeier. Substitution Effects in the Sodalite Family

11:30-11:50 Coffee Break

11:50 S.V. Borisov, S.A. Magarill, N.V. Pervukhina. Crystallographic Analysis of Heavy Metal Sulfides
12:20 F.C. Hawthorne. The Role of (H_2O) in Controlling the Degree of Polymerization in Oxysalt Structures: Quantitative Considerations
12:50 S.V. Krivovichev. Algorithmic Crystal Chemistry: Basic Principles and Applications

13:20-14:30 Lunch

June, 21, Tuesday (Evening)

Plenary Session (Plenary Hall)

Chairs: S.V. Krivovichev, E.V. Antipov

14:30 E.V. Antipov, A.M. Abakumov, M.G. Rozova, O.A. Tyablikov, O.E. Korneychik, J. Hadermann, G. Van Tendeloo. New Perovskites with Crystallographic Shear Plane Structures
15:00 O. Mentré, M. Colmont, D. Endara, A. Aliev, M. Huvé. Structural Topology of Phases in the Bi_2O_3-P_2O_5-MO_y Systems: Towards the Deduction of New Functional Materials
15:30 O. Yakubovich, W. Massa, A. Kotel'nikov, T. Shchekina, O. Dimitrova. Experimental Modelling and Prognosis of Novel Species in the Sodalite and Leucophosphite Mineral Groups
15:50 S.K. Filatov, R.S. Bubnova. Factor of Structural Diversity of Isomorphic Substitutions

16:10-16:30 Coffee Break

16:30 S. Votyakov, Yu. Shchapova, V. Khiller. Crystal chemistry and Physics of the Radiation Phenomena in U-T_H-bearing Minerals for the Electron-Microprobe Chemical Dating
17:00 D.O. Charkin. Advances of Modular Approach in Design and Synthesis of Layered Materials
17:20 A. Iwata, A. Nezu, K. Nagao, T. Kubo (RIGAKU). Particle Size Analysis in the Submicron Domain Using the Ultra Small X-Ray Scattering (USAXS) Method (RIGAKU Presentation) (30 min.)

19.00-21.00 WELCOME BOAT TRIP (Boat Terminal, Makarova Embankment, 20)

June, 22, Wednesday (Morning)

Plenary session / Plenary Hall

Chairs: O.V. Yakubovich, G. Ferraris

09:30 V.A. Liopo. The Biggest Sizes of Nanoparticles
10:00 A. Belger, M. Reibold, P. Paufler. Improving Hardness of Sapphire by Nanostructured Multilayers
10.30 BRUKER presentation (30 min.)

11:00-11:20 Coffee Break

Oral Sessions

General Crystal Chemistry, MS 1 / Plenary Hall

Chairs: E.L. Belokoneva, F.C. Hawthorne

11.20 M. Colmont, O. Mentré, M. Huvé. Structural Deduction of Complex Inorganic Compounds from High Resolution Electron Microscope (HREM) Imaging
11.40 J. Majzlan, H. Schlicht, B.Brömme, H. Pöllmann. Crystal Chemistry and Sector Zoning in the Minerals of the Voltaite Group
12.00 E. Sokolova, F.C. Hawthorne, L.A. Pautov, A.A. Agakhanov, V.Yu. Karpenko. A New Si-O Topology: Mendeleevite-(Ce): a New Mineral and a New Microporous Material
12.20 R.S. Bubnova. Self-Assembly of Rigid Anionic Groups in Borates due to Anisotropy of Atomic Thermal Vibrations
12.40 B.B. Zviagina, V.A. Drits. Structural Regularities in $2M_1$ Dioctahedral Micas: The Structure Modelling Approach
13.00 G. Dmytriv, V. Pavlyuk, I. Tarasiuk, H. Ehrenberg, H. Pauly, I. Chumak. Crystallography of Li-Reach Intermetallic Compounds
13.20 O.I. Siidra, S.V. Krivovichev, R. Turner, N.V. Chukanov, I.V. Pekov. Influence of Additional Oxygen Atoms on the Crystal Structure of Novel Pb Arsenate and Arsenite Chloride Minerals

13:40-15:00 Lunch

Nano-Minerals and Methods of Their Studies, MS 6 / Petrovskii Hall

Chairs: N.R. Khisina, S.V. Tsybulya

11.20 K.B. Aleynikova, E.N. Zinchenko, A.A. Zmeykin. Using of the Fragmentary Model for X-Ray Diffraction Phase Analysis of Diffraction Amorphous Nanomaterials
11.40 N.R. Khisina, R. Wirth. Nanomineralogy of Extraterrestrial Samples: TEM Study
12.00 S.V. Tsybulya. Crystal Chemistry Features of Alumina Metastable Forms
12.20 A.A. Levin, C. Elschner, K. Leo, M. Riede. Atomic Structure of C_{60} Fullerene Powder and Films
12.40 S.N. Britvin, S.V. Krivovichev, W. Depmeier, L. Kienle. Structural Features of Nanocrystalline Layered Titanates
13.00 V.A. Ponomarchuk, V.V. Ryabov, A.T. Titov, D.V. Semenova, T.N. Moroz. Natural Carbon Nanotubes and Graphens in Igneous Rocks (Verhnetalnahskaya Intrusion, North West of the Siberian Platform)
13.20 S.V. Danilov, A.D. Fofanov. Theoretical Analysis of X-Ray Diffraction Images of Different Configuration Single-Walled Carbon Nanotubes (15 min.)

13:40-15:00 Lunch

June, 22, Wednesday (Evening)

Sessions 15.00-17.00

Spectroscopic Studies of Minerals, MS 4 / Petrovskii Hall

Chair: R. Mashkovtsev, S.V. Goryainov

15.00 S.V. Goryainov, A.S. Krylov, I.A. Madyukov, Y. Pan, M.B. Smirnov, A.N. Vtyurin. Raman Study of OH- and F-Apophyllites at Hydrostatic and Non-Hydrostatic Compression
15.20 S.B. Zayakina, G.N. Anoshin, K.R. Kovalev, Y.A. Kalinin, V.A. Labusov, A.N. Putmakov. Kinetic Spectroscopy of Minerals
15.40 O.N. Koroleva, P.V. Khvorov. Raman Spectroscopy and XRD Studies of Li_2O-SiO_2 System
16.00 G.G. Korinevskaya, V.A. Muftakhov, A.D. Pivikova. Raman Spectroscopy Method in Research of

Titanosilicate Systems

16.20 M.M. Godneva. IR-Spectroscopy of Zirconium (Hafnium) Fluorophosphate Minerals

16.40 A.P. Simakov, M.A. Ivanov, E.A. Vasiliev. Research of Plagioclase's Iridescent in Near Infrared (15 min.)

General Crystal Chemistry, MS 1 / Plenary Hall

Chairs: S.A. Magarill, M.I. Samoylovich

15.00 S.A. Magarill, S.V. Borisov, N.V. Pervukhina, N.N. Mozgova, I.V. Chaplygin. Data on Structure and Crystal Chemical Peculiarities of Heavy Metal Sulfo Salts of Complex Composition

15.20 N.V. Podberezskaya, L.P. Kozeeva, M.Yu. Kameneva, A.I. Smolentsev, A.V. Alexeev, A.N. Lavrov. Crystal Chemistry of Cobaltates with Different Cations as Svedenborgite Type Manifestation

15.40 I.V. Rozhdestvenskaya, E. Mugnaioli, M. Czank, W. Depmeier, U. Kolb. The Polytypes of the Charoite Structure

16.00 E.L. Belokoneva. Brownmillerite as a Members of Unit OD-Family with the Two-Dimensional Disorder: Topology-Symmetry Analysis, Structure Prediction and Crystal Properties

16.20 M.I. Samoylovich, A.L. Talis. Hidden Symmetries and the Local Phase Transition: the Case of Tetrahedrally Coordinated Structures of Gas Hydrates.

16.40 M.A. Mikhailov. Creation of Phase Portraits of Matter as a New Way to Describe Its Structural States by Applying Crystal Chemistry Concepts

17.00-19.00 Posters (MS 1, 4, 5, 6)

June, 23, Thursday (Morning)

Sessions 09:30-13:30

Structure-Property Relationships, MS 2 / Plenary Hall

Chairs: E. Sokolova, W. Depmeier

09.30 M. Georgievskaya, C. Wickleder. Bi^{3+} Containing Borates as Novel Luminescent Materials

09.50 E. Gaudin, C. Mayer, S. Gorsse, B. Chevalier. Structural Properties of the Intermetallics $Gd_2Sc_3Si_4$, $Gd_2Sc_3Ge_4$, $Gd_3Co_{2.45}Si_{1.55}$ and Gd_5CoSi_2

10.10 E. Dorolti, L. Cario, B. Corraze, E. Janod, C. Vaju, H.-J. Koo, E. Kan, M.-H. Whangbo. Declusterisation, Half-Metal Ferromagnetic Behaviour and Magnetoresitance in the Series of Clustered Spinel Compounds $GaTi_{4-x}V_xS_8$

10.30 O. Janson, H. Rosner. Metallates with S = 1/2 Spins: Frustrated Magnetism in Exotic Minerals

10.50 J. Plášil, J. Majzlan, K. Fejfarová, M. Dušek, R. Škoda. Crystal Structure of Běhounekite, the First Hydrated Sulphate of U^{4+} in Nature

11.10 J.T. Assis, V.I. Monin, S.M. Iglesias. Fourier Analysis of X-ray Diffraction Line Broadening Caused by Superficial Stress Gradients

11:30-11:50 Coffee Break

Chairs: O.V. Frank-Kamenetskaya, V.A. Liopo

11.50 G.V. Bazuev, A.P.Tyutyuinnik, Yu.G. Zainulin, M.V. Kuznetsov, S.A. Ivanov, E.D. Politova, R. Mathieu, P. Nordblad. Synthetic Analog of Melanostibite Natural Mineral Mn_2FeSbO_6: Synthesis, Structure, Dimorphism and Magnetic Properties

12.10 V.V. Gurzhiy, S.V. Krivovichev, I.G. Tananaev. Crystal Chemistry of Uranyl Selenates

12.30 A.A. Zolotarev Jr, S.V. Krivovichev, M.M. Godneva, D.L. Motov. Crystal Structures of Water Fluoride and Sulphate of Zirconium

12.50 T.B. Bekker, P.P. Fedorov, A.E. Kokh. New Fluoraborate and Phase Equilibria in the Ternary Mutual System Na, Ba // BO_2, F (15 min.)

13.05 I.V. Korchemkin, V.I. Pet'kov, E.A. Asabina, V.S. Kurazhkovskaya, E.Yu. Borovikova. Synthesis and Characteristics of Caesium Containing Phosphates with β-Tridymite Structure (15 min)

13.20 T.I. Melnikova, G.M. Kuz'micheva, N.B. Bolotina, V.B. Rybakov, A.Cousson. Crystal Chemistry of Sillenites (15 min)

X-Ray Diffraction Studies and Structural Typomorphism of Minerals and Technogenic Products, MS 3 / Plenary Hall

Chairs: E.N. Kotel'nikova, G.A. Krinari

09.30 E.N. Kotel'nikova. Factors of Homological Isomorphism of Aliphatic Compounds
09.50 E.P. Solotchina, E.V. Sklyarov, P.A. Solotchin. Crystal Chemistry of Natural Low-Temperature Carbonates in Sediments of Small Saline Lakes: Response to Paleoclimatic Changes
10.10 O.V. Frank-Kamenetskaya, A.B. Kol'tsov, M.A. Kuz'mina, M.L. Zorina, L.G. Poritskaya. Isomorphism and Non-Stoichiometry of Carbonated Apatite-(CaOH) Synthesized by Precipitation and Hydrothermal Methods
10.30 G.A. Krinari. 3D Order of Secondary Micas: Topotaxis or Dissolution-Precipitations?
10.50 N.N. Firsov, K.A.Alekseeva, S.G. Titova, K.Yu. Shunyaev, S.I. Noritsyn, N.B. Romanova, A.N. Titov. Microbiological Processing of Silicate Ore Breeds
11.10 A.A. Valter, G.U. Ivakin, L.V. Chmil, A.I. Pisansky, V.N. Kuznetsov. X-Ray and Electron-Microprobe Study of Ancient Kiev Ceramics Nature

11:30-11:50 Coffee Break

High-Temperature and High-Pressure Diffraction Studies, MS 5 / Petrovskii Hall

Chairs: R.S. Bubnova, S.G. Titova

11.50 Yu.V. Seryotkin, V.V. Bakakin. Structural Evolution of Hemimorphite at High Pressure
12.10 N.A. Mikhailova, A.G. Padalko, L.I. Podzorova, G.V. Talanova, L.I. Shvorneva. T-ZrO_2 Solid Solutions Crystal Structure Change under Barothermal Effect
12.30 X. Liu, M.E. Fleet, S.R. Shieh, Q. He. An Experimental Investigation of the X-Ray Structure and Compressibility of Lead Bromapatite
12.45 M.G. Krzhizhanovskaya, R.S. Bubnova, S.K. Filatov. Thermal Behavior of Structurally Similar Boro- and Aluminosilicates (15 min)
13.00 A.N. Sapozhnikov, V.L. Tauson. Reversion of Incommensurate Modulation in Cubic Lazurite (15 min)
13.15 L.M. Plyasova, T.Yu. Kardash. X-ray Diffraction Studies of the Cu-Containing Catalysts under Reaction Conditions (15 min)
13.30 O.A. Bulavchenko, S.V. Cherepanova, E.Yu. Gerasimov, S.V. Tsybulya. High-Temperature XRD Investigation of $Mn_{3-x}Al_xO_4$ Solid Solutions (15 min)

13:50-15:00 Lunch

15:00-16:30 Posters (MS 2, 3)

June, 23, Thursday (Evening)

Plenary Session / Plenary Hall

16:30 G. Ferraris, M. Cadoni. Recent Polysomatic Evidences In Heterophyllosilicates
17:00 A. Ertl, E. Tillmanns. Tourmaline - still a Mystery
17:30 Closing of the Conference: *V.S. Urusov, P. Paufler*

18.00 CONFERENCE DINNER

June, 24, Friday (Morning)

09.30-15.00 Boat Tour to Peterhof

POSTER SESSIONS

1. General Crystal Chemistry

1.1. I.A. Baidina, S.N. Vorobyeva, A.V. Belyaev. THE STRUCTURE OF RHODIUM (III) AQUAION SALTS WITH TETRAHEDRAL ANIONS

1.2. E.L. Belokoneva, A.P. Zorina, O.V. Dimitrova. NEW LAYER SAMARIUM BORATE AND ITS PLACE IN THE STRUCTURAL SYSTEMATIC

1.3. D.N. Lebedev, D.O. Charkin, S.M. Kazakov, S.Yu. Stefanovich. NOVEL LAYERED PEROVSKITIC BISMUTH OXYHALIDES

1.4. A. Levtsova, G. B. Andreev, N. A. Budantseva, I. G. Tananaev. SYNTESIS AND CRYSTAL STRUCTURE OF U(VI) COMPLEXES WITH *p*-METOXYBENZOIC ACID

1.5. E.V. Leonenko, V.S. Urusov. ATOMISTIC COMPUTER SIMULATION OF PROPERTIES AND POINT DEFECTS IN PEROVSKITE $CaXO_3$ (X=Zr, Ti, Sn) STRUCTURES

1.6. S.V. Prjanichnikov, S.G. Titova, Yan V. Zubavichus, A.A. Veligzhanin, S.S. Agafonov, E.V. Yakovenko. CRYSTAL STRUCTURE OF $Bi_2Sr_2CuO_6$ DETERMINED BY X-RAY AND NEUTRON DIFFRACTION, EXAFS AND XANES

1.7. R.K. Rastsvetaeva, S.M. Aksenov. STRUCTURAL FEATURES OF CALCIUM- AND FLUORINE-RICH TRICLINIC AMPHIBOLE FROM ROTTENBERG (GERMANY)

1.8. V.N. Skrobot, D.P. Romanov. OCTAHEDRA DISTORTIONS IN PEROVSKITE-TYPE STRUCTURES OF TRANSITION-METAL OXIDES La$M$$O_3$

1.9. N.V. Tarakina, Ya.V. Baklanova, T.A. Denisova, L.G. Maksimova, R.B. Neder. DEFECT CRYSTAL STRUCTURE OF $M(OH)_2$ (M = Ti, Zr, Hf) OXYHYDROXIDES

1.10. D.A. Tolmachev, N.V. Lukasheva. CALCULATIONS OF THE STRUCTURE OF COMPOSITE MATERIAL BASED ON CALCIUM PHOSPHATES AND BACTERIAL CELLULOSE

2. Structure-Property Relationships

2.1. M. Adlung, C. Wickleder. LUMINESCENCE OF Nd^{2+}, Dy^{2+}, Ho^{2+} AND Tm^{2+}

2.2. T.R. Aminov, S.V. Krivovichev, V.A. Muftakhov. DIFFRACTION STUDIES OF IRIDESCENT FELDSPAR FROM THE OTTUK RIDGE (KYRGYZSTAN)

2.3. M.S. Avdontseva, A.A. Zolotarev Jr, S.V. Krivovichev, A.I. Brusnitsyn. CRYSTAL CHEMISTRY OF MANGANOBABINGTONITE

2.4. E.L. Belokoneva, I.K. Shagivaleeva. TOPOLOGY-SYMMETRY ANALYSIS, STRUCTURE PREDICTION AND PROPERTIES OF CRYSTALS IN THE $Sr_2VO(XO_4)_2$ (X=V, P) FAMILY WITH THE TWO-DIMENSIONAL DISORDER.

2.5. N.N. Boroznovskaya, L.A. Zyryanova, I.V. Pekov, T.S. Nebera. X-RAY DIFFRACTION AND LUMINESCENT SPECTROSCOPY OF THE NATURAL COPPER AND SILVER IODIDES

2.6. A.P. Chernyatieva, S.V. Krivovichev, O.I. Siidra, M.N. Murashko, I.V. Pekov. CRYSTAL STRUCTURE OF NATURAL 'STEKLITE' $KAl(SO_4)_2$

2.7. T.V Demina, M.A. Mikhailov, S.G. Mamontova, L.A. Bogdanova, O.Yu. Belozerova. CRYSTAL OPTICS STUDIES OF STRUCTURAL STATES OF MATTER IN SUPERLIQUIDUS AND SUBSOLIDUS DOMAINS

2.8. M.Yu. Kameneva, L.P. Kozeeva, N.V. Podberezskaya, N.A. Rudina, A.I. Smolentsev, V.E. Fedorov. MICROSTRUCTURE OF BISMUTH FERRITE DENDRITE CRYSTALS

2.9. O.V. Karimova, O.A. Ageeva, N.I. Organova, C. Wilson. DISORDER IN THE CRYSTAL STRUCTURE OF BETALOMONOSOVITE

2.10. I.A. Kaurova, G.M. Kuz'micheva, V.B. Rybakov. ZINCITE: GROWTH, COMPOSITION, STRUCTURAL, OPTICAL AND ELECTRICAL PROPERTIES

2.11. D.A. Klimov, O.I. Siidra, S.N. Britvin, S.V. Krivovichev, W. Depmeier. HYDROXOCENTERED UNITS IN THE CRYSTAL STRUCTURES OF MONOVALENT THALLIUM HYDROXYSALTS: SYNTHESIS AND CRYSTAL STRUCTUTRE OF $Tl_8(SiO_4)(OH)_3Cl$

2.12. M.S. Kozin, O.I. Siidra. OBi_nA_{4-n} HETEROMETALLIC TETRAHEDRA IN Bi^{3+} OXYSALTS: SYNTHESIS AND CRYSTAL STRUCTURE OF Bi_2LaO_4Cl

2.13. V.M. Kovrugin, V.V. Gurzhiy, S.V. Krivovichev, I.G. Tananaev. GEOMETRICAL ISOMERISM IN LAYERED URANYL SELENITE-SELENATES: SYNTHESIS AND CRYSTAL STRUCTURE OF $(C_2H_8N)_3(C_2H_7N)[(UO_2)_3(SeO_4)_4(HSeO_3)(H_2O)]$

2.14. J. Majzlan, B. Lazic, Th. Armbruster, J. Plášil. CRYSTAL STRUCTURE OF BUKOVSKÝITE, $Fe_2(AsO_4)(SO_4)(OH)\cdot 7H_2O$

2.15. P.A. Mikhaylenko, V.V. Gurzhiy, S.V. Krivovichev, I.G. Tananaev. SYNTHESIS AND CRYSTAL STRUCTURE OF A NEW URANYL SELENATE WITH DIETHYLAMINE $((CH_3CH_2)_2NH_2)_3[(UO_2)_3(SeO_4)_4(HSeO_4)_{0.3}(HSeO_3)_{0.7}(H_2O)](H_2O)$

2.16. N.I. Naumkina, O.M. Ilicheva, I.N. Nigmatov. ORDER/DISORDER IN THE STRUCTURE OF NATURAL SILICA

2.17. A.S. Pakhomova, S.V. Krivovichev, S.V. Stefanovsky, S.V. Yudintsev. NATURAL MURATAITE AND ITS SYNTHETIC ANALOGUE MURATAITE-3C: A COMPARISON

2.18. Y.V. Pivovarova, E.A. Popova, S.G. Lushnikov, S.V. Krivovichev. THE X-RAY STUDIES OF SINGLE-CRYSTALS $(K_{0.5}Na_{0.5})_{0.2}(Sr_{0.75}Ba_{0.25})_{0.9}Nb_2O_6$ DOPED WITH Cu^{2+}

2.19. E.A. Popova, T.A. Shaplygina, S.N. Gvasaliya, S.G. Lushnikov, S.V. Krivovichev. FEATURES OF X-RAY SCATTERING IN $BaMg_{1/3}Ta_{2/3}O_3$ SINGLE CRYSTALS

2.20. D.V. Spiridonova, S.V. Krivovichev, M.G. Krzhizhanovskaya, V.N. Yakovenchuk. LAYERED TITANOSILICATE $Ti_2(OH)_2[Si_4O_{10}(OH)_2](H_2O)_2$

2.21. O.S. Tyumentseva, V.V. Gurzhiy, S.V. Krivovichev, I.G. Tananaev. SYNTHESIS AND CRYSTAL STRUCTURE OF A NEW POTASSIUM URANYL SELENATE $K_{2.5}[(UO_2)_2(SeO_4)_3(H_2O)](NO_3)_{0.5}(H_2O)_4$

2.22. O.S. Vereshchagin, I.V. Rozhdestvenskaya, O.V. Frank-Kamenetskaya, A.A. Zolotarev. THE REFINEMENT OF CRYSTAL STRUCTURES OF Cu-BEARING TOURMALINES

2.23. A.A. Zaytsev, G.B. Andreev. SYNTHESIS AND STRUCTURE OF Th(IV), U(IV) AND Nd(III) HETEROPOLYTUNGSTATES

2.24. E.S. Zhitova, S.V. Krivovichev, A.A. Zolotarev, V.N. Yakovenchuk. THE CRYSTAL STRUCTURE OF QUINTINITE-2*H-1c* FROM THE KOVDOR ALKALINE MASSIF, KOLA PENINSULA, RUSSIA

3. XRD Studies and Structural Typomorphism of Minerals and Technogenic Products

3.1. L.A. Aleshina, T. A. Ekimova. THE STRUCTURE OF PSEUDOWOLLASTONITE FROM X-RAY DIFFRACTION DATA

3.2. L.A. Aleshina, T.A Ekimova, T.U. Shvedaite. THE STRUCTURAL FEATURES OF PSEUDOMALACHITE

3.3. L.A. Aleshina, D.V. Loginov, A.D. Fofanov. X-RAY STUDY AND COMPUTER SIMULATION STRUCTURE OF AMORPHOUS AND NANOPOROUS CARBON MATERIALS

3.4. Yu.G. Baklagina, A.V. Bogomazov, S.N. Archipov, V.A. Petrova, S.V. Kononova, E.V. Kruchinina, R.V. Kremnev, D.P. Romanov, V.K. Lavrentyev, L.A. Nudga. STUDY OF STRUCTURAL CHANGES IN THIN POLYMER LAYERS OF COMPOSITE MATERIALS

3.5. E.V. Belogub, E.E. Palenova, Z.V. Stafeeva, M.G. Krzhizhanovskaya, R.S. Bubnova. MINERAL DIVERSITY OF KAOLIN DEPOSIT ZHURAVLINIY LOG

3.6. L.V. Belskaya, O.A. Golovanova. THE COMPLEX INVESTIGATION OF DENTAL AND SALIVARY CALCULI AND EXPERIMENTAL MODELLING OF THEIR FORMATION

3.7. I.A. Blinov, V.A. Kotlyarov. ELECTRON DIFRACTION STUDY OF THE CLAY MINERALS FROM OXIDATION ZONE OF THE AMUR STRATIFORM Zn-DEPOSIT, SOUTH URAL

3.8. K.E. German, A.B. Melentev, Ya.V. Zubavichus, S.N. Kalmykov,A.A. Shiryaev, I.G. Tananaev. THE STUDY OF STRUCTURE AND PROPERTIES OF NOVEL TECHNETIUM COMPOUND WITH DIETHILENETRIAMINEPENTAACETATE

3.9. O.A. Golovanova, C.A. Gerk, N.N. Ctrunina, B.N. Baycova. DETERMINATION OF MACRO- AND MICROELEMENTAL COMPOSITION OF HUMAN BONE TISSUE BY ATOMIC EMISSION SPECTRAL ANALYSIS

3.10. A.I. Isakov, E.N. Kotelnikova, L.Yu. Kryuchkova, H. Lorenz. X-RAY DIFFRACTOMETRY OF POLYMORPHIC MODIFICATIONS OF MALIC ACID

3.11. A.R. Izatulina, Yu.O. Punin, O.V. Frank-Kamenetskaya, V.V. Gurzhiy, A.G. Shtukenberg. INFLUENCE OF "ZEOLITIC" WATER ON THE STRUCTURE OF WEDDELLITE – ONE OF THE MAIN MINERALS OF KIDNEY STONES

3.12. L.V. Liskovaya, O.E. Kovalchuk, A.C. Ivanov. REFINEMENT OF GARNET STRUCTURE FROM KIMBERLITE OF YAKUTIA

3.13. A.I. Korobkova, O.V. Frank-Kamenetskaya, A.G. Shtukenberg, G.M. Polozov. QUANTITATIVE PHASE COMPOSITION OF PORTLAND CLINKER FROM RUSSIAN CEMENT WORKS

3.14. K.V. Martynov, A.M. Kovalsk, M.S. Grigoriev, A.M. Safiulina, M.V. Vazhenkov, A.R. Kotelnikov, I.G. Tananaev. SYNTHESIS AND CELL PARAMETERS OF $NaCs(BF_4)_2$

3.15. N.I. Naumkina, V.V. Vlasov. X-RAY ANALYSIS OF BOG IRON ORES

3.16. A.M. Nikolaev, O.V. Frank-Kamenetskaya, M.A. Kuzmina. SIMULTANEOUS INCORPORATION OF STRONTIUM AND CARBONATE IONS IN APATITE-CaOH

3.17. V. Onufrienok, A. Sazonov. ISOTHERMAL CRYSTALLIZATION OF SZOMOLNOKITE FROM METASTABLE PYRRHOTITES

3.18. D.P. Romanov, A.K. Khripunov, A.A. Tkachenko, Ju.G. Baklagina, V.K. Lavrentyev, A.V. Severin, V.V. Klechkovskaja, N.A. Archarova. FORMATION OF THE DIFFERENT NANOTEXTURES IN COMPOSITES UNDER INTERACTIONS OF HYDROXYAPATITE AND BACTERIAL CELLULOSE

3.19. M.M. Sangadzhiev. TYPOMORPHISM OF PLAGIOCLASES FROM ROCKS IN VARIOUS REGIONS

3.20. T.N. Svetlyakova, A.E. Kokh, N.G. Kononova. SEARCH FOR NEW COMPOUNDS WITH A COMMON FORMULA OF $R\mathrm{Ba}M(\mathrm{BO_3})_2$ (R = REE; M = ALKALI METALS)

3.21. O.V. Sidorova, L.A. Aleshina. INFLUENCE OF GRINDING IN AIR AND CARBONE DIOXIDE ATMOSPHERES ON THE STRUCTURE OF Ca-Si CONTAINING MINERALS

3.22. N.V. Taratin, E.N. Kotelnikova, H. Lorenz, D. Binev, A.E. Glikin, A. Seidel-Morgenstern. SOLID SOLUTIONS OF L- AND L-ALLO DIASTEREOMERS OF THREONINE

3.23. S.S. Ugapyeva, N.V. Zayakina. X-RAY STUDY OF DIAMONDS FROM YAKUTIA DIAMONDIFEROUS PROVINCE

3.24. F.Kh. Urakaev, M.V. Fedorova, N.G. Kononova, K.A. Kokh, V.S. Shevchenko, A.E. Kokh. MECHANOCHEMICAL SYNTHESIS OF NEW YTTRIUM SCANDIUM BORATES

4. Spectroscopic Studies

4.1. P.A. Ardyshev, R.T. Zaynullina. QUANTITATIVE CHEMICAL–SPECTRAL ANALYSIS OF THE IMPURITIES IN QUARTZ FROM ARGAZINSKOE DEPOSITS (SOUTH URAL)

4.2. M.S. Babushkina, L.P. Nikitina, A.G. Goncharov, N.V. Borovkov. WATER AND CARBON IN ROCK-FORMING MINERAL STRUCTURES OF UPPER MANTLE PERIDOTITES AND PYROXENITES (BASALT XENOLITHS): SOLUBILITY CONDITIONS AND LIMITS

4.3. E.Yu. Borovikova, V.S. Kurazhkovskaya, D.A. Ksenofontov, Yu.K. Kabalov, E.A. Asabina, V.I. Pet'kov. THE STRUCTURES AND IR SPECTROSCOPIC CHARACTERISTICS OF β-TRIDYMITE–LIKE CAESIUM PHOSPHATES $Cs\mathit{Me}PO_4$, with *Me* – Mg, Mn, Co, Ni, Zn.

4.4. E.A. Dobretsova, E.Yu. Borovikova, V.S. Kurazhkovskaya, K.N. Boldyrev. VIBRATIONAL SPECTROSCOPY OF THE RARE-EARTH CHROMIUM BORATES - THE STRUCTURAL ANALOGS OF THE MINERAL HUNTITE

4.5. V.B. Dudnikova, E.V. Zharikov, V.S Urusov. THE INFLUENCE OF TRACE-COMPONENT TRAPPING BY INTRINSIC DEFECTS ON SPECTRAL-LUMINESCENT PROPERTIES OF FORSTERITE CRYSTALS

4.6. E.N. Fedorowa, V.P. Afanasiev, A.M. Logvinova, N.P. Pokhilenko, N.V. Sobolev. STUDY OF THE PLASTICALLY DEFORMED NATURAL DIAMONDS BY LAUE-SR AND INFRARED SPECTROSCOPY

4.7. M.A. Igumentseva. IR FOURIER SPECTROSCOPY OF WATER AND H-CONTAINING DEFECTS IN QUARTZ

4.8. T.N. Ivanova, O.N. Koroleva. RAMAN SPECTROSCOPY OF SODIUM SILICATES AND GERMANATES

4.9. M.A. Krylova, I.N. Nigmatov. MICRO RAMAN SPECTROSCOPY OF THE QUARTZ OF CENTRAL AND SOUTH URAL

4.10. F.P. Lesnov. ISOMORPHISM OF REE IN ZIRCONS AND CONDITION OF THEIR CRYSTALLIZATION

4.11. A.N. Mansurova, R.I. Gulyaeva, V.M. Chumarev, N.I. Selmenskih. PHASE FORMATION BY ALUMINOTHERMAL REDUCTION OF Mn NIOBATES AND TANTALATES

4.12. Y. Pan, R. Mashkovtsev, D. Huang, M. Mao, A. Shatskiy. MECHANISMS OF Cr AND H INCORPORATION IN STISHOVITE DETERMINED BY SINGLE-CRYSTAL EPR SPECTROSCOPY AND DFT CALCULATIONS

4.13. O.P. Matveeva, E.A. Vasilyev, A.V. Kozlov, V.A. Petrovskiy. IR ABSORPTION AND PHOTOLUMINESCENCE OF BRAZILIAN DIAMONDS

4.14. M.A. Nazarova, L.P. Vergasova, S.K. Filatov. USING IR SPECTRA FOR IDENTIFICATION OF ALUNITES

4.15. I.V. Nikolaenko, A.A. Pelts, G.P. Shveikin. FORMATION OF DIFFERENT CARBIDES FROM THE LEUCOXENE CONCENTRATE UNDER DIFFERENT REDUCTION CONDITIONS

4.16. L.A. Sheludyakova, S.I. Kozhemyachenko. VIBRATIONAL SPECTROSCOPY – BASED ANALYSIS OF ORE DEPOSIT FROM EAST KAZAKHSTAN

4.17. M.V. Shtenberg, S.A. Repina. INFRARED SPECTROSCOPY OF WATER IN PRIMARY-CRYSTALLIZED AND GRANULATED QUARTZ FROM THE URALS

4.18. A.P. Solonenko, M.V. Filchenko, O.A. Golovanova. IR-SPECTROSCOPIC STUDY OF NONSTOICHIOMETRIC HYDROXYLAPATITE AND IT'S MIXTURES WITH BRUSHITE AFTER DISSOLUTION IN MEDIA OF DIFFERENT COMPOSITION

4.19. O.S. Yakovenko, M.L. Zorina, V.V. Semenova, M.V.Charykova. THE SPECTROSCOPIC CHARACTERISTICS OF THE ISOMORPHOUS SERIES OF SELENITES Co AND Ni ($Ni_xCo_{(1-x)}SeO_3 \cdot 2H_2O$)

4.20. D. Zamyatin, Yu. Shchapova, S. Votyakov. ATOMIC STRUCTURE AND X-RAY EMISSION SPECTRA OF RADIATION DAMAGED ZIRCON

5. High-Temperature and High-Pressure Diffraction Studies

5.1. R.S. Bubnova, V.A. Firsova, O.L. Belousova, M.G. Krzhizhanovskaya, S.K. Filatov. THERMAL EXPANSION OF STRONTIUM BORATES

5.2. E.A. Chyiko, T.F. Semenova. CRYSTAL CHEMISTRY STUDIES OF Al-Li MICAS IN A WIDE TEMPERATURE RANGE

5.3. E.S. Derkacheva, M.G. Krzhizhanovskaya, R.S. Bubnova, L.A. Gorelova, L.G. Galafuntik, S.K. Filatov. PHASE FORMATION OF Cs,Ba-BOROSILICATES

5.4. A.S. Korzinova, R.S. Bubnova, M.G. Krzhizhanovskaya, V.F. Popova, S.K. Filatov, S.V. Krivovichev. CRYSTAL STRUCTURE AND THERMAL BEHAVIOR OF $LuAlO_3$

5.5. L.P. Kozeeva, M.Yu. Kameneva, A.N. Lavrov, N.V. Podberezskaya. $LnBaCo_4O_{7+\delta}$ (Ln=Y, Lu): STRUCTURAL FEATURES AND OXYGEN ADSORPTION

5.6. D.A. Ksenofontov, Yu.K. Kabalov. CRYSTAL STRUCTURE AND THERMAL STABILITY OF GEARKSUTITE

5.7. K.V. Martynov, A.M. Kovalsky, M.S. Grigoriev, Kotelnikov, I.G. Tananaev. STRUCTURES OF THE CRYSTALLINE Na-(Al, Fe) ORTHOPHOSPHATE PHASES FORMED BY DEVITRIFICATION OF THE GLASS UNDER ELEVATED TEMPERATURE

5.8. S.V. Rashchenko, Yu.V. Seryotkin, V.V. Bakakin. HYDRATION OF Ca,Na,K-LAUMONTITE

5.9. E.N. Siidra, A.S. Korzinova, S.K. Filatov, R.S. Bubnova, M.G. Krzhizhanovskaya. THERMAL BEHAVIOR OF $REBO_3$ (*RE* = Nd, Lu) ORTHOBORATES

5.10. S.N. Volkov, R.S. Bubnova, A.P. Shablinskii, M.G. Krzhizhanovskaya, V.L. Ugolkov, S.K. Filatov. NOVEL BORATE $BaBi_2B_2O_7$ AND $(Sr,Ba)Bi_2B_2O_7$ SOLID SOLUTIONS

6. Nano-Minerals and Methods of Their Studies

6.1. P.S. Dubinin, I.S. Yakimov, Y.I. Yakimov, L.A. Solovyov, O.E. Piksina, A.N. Zaloga. DEVELOPMENT OF THE COMPLEX METHODS AND SOFTWARE FOR POWDERED XRD STRUCTURED-PHASE ANALYSIS

6.2. L.V. Liskovaya, R.V. Eremeev, E.V. Artemova. KIMBERLITEES AND THEIR HOST ROCKS IN YAKUTIYA AS OBJECT FOR STUDY OF NANO-MINERALS

6.3. T.V. Sudakova, S.P. Gabuda, A.K. Petrov, S.D. Litvinov. INVESTIGATION OF APATITES SYNTHESIZED FOR USING IN MEDICAL NANOCOMPOSITE