

*V.I. VERNADSKY INSTITUTE OF GEOCHEMISTRY AND ANALYTICAL CHEMISTRY
RUSSIAN ACADEMY OF SCIENCES*

INSTITUTE OF MINERALOGY, URAL BRANCH RUSSIAN ACADEMY OF SCIENCES

34 International Conference

on

Magmatism of the Earth and Related Strategic Metal Deposits

4-9 August, 2017

Miass, Ural, Russia

PRELIMINARY PROGRAM

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04.08.2017

Registraion

Opening ceremony:

Welcome Speeches of

L.N. Kogarko

V.V. Maslennikov

V.N. Udachin

Resources of critical metals in magmatic complexes in various geodynamis settings

Puchkov V.N.

Plume complexes of the Urals and their metallogenic potential

Arndt N.

The Formation of Magmatic Ore Deposits

Ariskin A.A., Spiridonov

E.M., Nikolaev G.S.,

Danyushevsky L.V.,

Fiorentini M.L., Kislov E.V.,

Pshenitsyn I.V.

Sulphide controlled fractionation of PGE at post-cumulus crystallization of primitive olivine cumulate piles from the Yoko-Dovyren layered intrusion

Coffee break

Kadebskaya L., Plechov P.,

Rudnev A.

Latypov R.M., Chistyakova

S.Yu., Mukherjee R.

Stepanov S.Yu., Palamarchuk

R.S., Kuttyrev A.V.

Kepezhinskas N.P., Kamenov

G., Kepezhinskas P.K.,

Widom E., Foster D., Kuentz

D., Hennigh Q., Katella A.S.

Lunch

Kogarko L., Veselovskiy R.

Morphology and composition of ore-forming chromian spinels of the Levopayerskoe-I ore body (Polar Urals, Russia)

Towards a novel hypothesis for origin of massive chromitites in the Bushveld igneous complex

Evolution of the chromite-platinum mineralization of zonal clinopyroxenite-dunite massifs of the Middle Ural

Isotopic constraints on the sources and timing of noble metal mineralization in craton-scale paleo-placers: role of precambrian magmatism and plate tectonics

Geodynamic regime of the carbonatites (absolute paleotectonic reconstructions)

Vertical mass transport in continental lithosphere and magmatic metallogeny

The origin of nelsonite and Kiruna-type apatite-magnetite deposits

Adakites, high-Nb basalts and giant metal deposits in magmatic arcs

Coffee break

Alekseev V.I., Alekseev I.V.

Strategic metals in complexes of subalkaline rare-metal granites and metasomatites from the Russian sector of Asia-Pacific geodynamic zone

Latypov R.M., Chistyakova

S.Yu., Barnes S.J., Hunt E.J.

New insights into origin of platinum deposits in layered intrusions from the undercutting Merensky reef of the Bushveld complex

05.08.2017

Petrology, geochemistry and metallogeny of oceanic magmatism

Maslennikov V.V., Tretyakov
G.A., Melekestseva I.Yu.,
Maslennikova S.P., Lein
A.Yu., Large R.R.,
Danyushevsky L.V., D.
Ishiyama D., Tseluyko A.S.,
Revan K.M.

Kholodnov V.V., Fershtater
G.B., Shagalov E.S.,
Shardakova G.Yu., Kiseleva
D.V.

Kuksa K.A., Tabuns E.V.,
Bich A.S., Petrov A.Yu.,
Maksimov F.E.

Lee Jaeno

Coffee break

Shardakova G.Yu.,
Grabezhev A.I., Ronkin Yu.
L., Azovskova O.B.

Vrevsky A.B.

Ledneva G.V., Bazylev B.A.,
Kuzmin D.V., Kononkova
N.N.

Lunch

Trace elements in chimneys as indicators of host rock composition and maturity of seawater/rock hydrothermal interaction versus magmatic-hydrothermal contribution to VMS deposits

Riphean Magmatism Preceding the Disclosure of Ural Paleoocean and the Ore Genesis of Bashkir Meganticlinorium as a Reflection of Rifting Process Geodynamics

Metalliferous sediments of the hydrothermal field Pobeda-1, Mid-Atlantic ridge: key to the geochemical and temporal evolution of the venting system

A preliminary survey on the ore deposits in the Oyon mineralized district, Central Peru

Variations of U–Pb zircon ages of granitoids from the copper porphyry deposits of the Urals, Russia

Geochemical, isotopic and petrologic signatures and the intracratonic geodynamic nature of the calc-alkaline volcanic association (Neoproterozoic Kolmozero-Voron'ya Greenstone Belt, Fennoscandian Shield)

Layered dunite-troctolite-gabbro series of the Gankuvayam ophiolite (Kuyul terrane, Koryak highland, Russia): crustal plutonic sequence of an ancient back-arc spreading center

Special Section: Tethyan Magmatism and Metallogeny

W. Lianxun, M. Changqian,
M.A.S. Mushaal,
A.I.M. Mohammed

Von Quadt A., Gallhofer, D.,
Georgiev, S., Peytcheva I.
Peytcheva I., Loretz M., Von
Quadt A., Georgiev, S.,
Kounov, A., Gerdjikov, I.,
Guillong M.

Ermolaeva V.N., Chukanov
N.V., Jančev S., Van K.V.

Coffee break

Georgiev S., Peytcheva I.,
von Quadt A., Grozdev V.,
Marchev P., Serafimovski T.
Klimentyeva D.N., Heinrich
C.A., Von Quadt A.
Varlamov D.A., Ermolaeva
V.N., Jančev S., Chukanov
N.V.

Petrogenesis and Significance of the Jebel Dumbier Alkaline-Carbonatite Complex from North Margin of Nuba Mountains, Sudan

Timing of magmatism and mineralization in South Eastern Europe (Western Branch of the Tethyan Belt)

Time scales of ore deposits: constraints from U-Pb zircon dating, thermochronology and Sr isotope geochemistry of the porphyry-Cu-(Mo-Au) system in Elatsite, Bulgaria

Endogenic oxide parageneses with chalcophile elements in the orogenic zone related to the "Mixed Series" of the Pelagonian massif, Republic of Macedonia

Cenozoic magmatic activity of distinct magmatic areas of SW Bulgaria, Fyr of Macedonia and Northern Greece and its relation to the mineralisation

Conditions of epithermal vein and massive sulfide orebody formation at Bor (Serbia)

Pyrochlore-superficial minerals from a nonsulfide endogeneous association of Pb-Zn-Sb-As minerals in the Pelagonian massif, Macedonia

Special Section: High-Pressure Mineralogy: Theory and Experiment

- Eiji Ohtani* Physical properties of iron-light element alloys and composition of the Earth's core
- Kagi H., Fujimoto C., Takahashi S., Shinozaki A., Nishida T. and Mimura K.* Pressure-induced reactions in organic compounds
- Bobrov A.V., Tamarova A.P., Sirotkina E.A., Bindi L., Pushcharovsky D.Yu., Irifune T.* Minerals of sodium in the earth's transition zone and lower mantle: evidence from experiments and natural data
- Inoue T., Kakizawa S., Noda, M., Takakuwa, Y.* Importance of various Al substitution mechanism into bridgmanite under high pressure
- Coffee break**
- Sirotkina E.A., Bobrov A.V., Bindi L., Irifune T.* Titanium-bearing phases in the MgO–SiO₂–TiO₂±Al₂O₃ system at 10–24 Gpa and 1600°C): phase relations, structural features and solid solutions.
- Kakizawa S., Inoue T., Nakano H., Sakamoto N., Yurimoto H.* Determination of stability region and substitution mechanism of Al-bearing superhydrous phase B
- Shatskiy A.F., Podborodnikov I.V., Arefev A.V., Litasov K.D.* Clinopyroxene–Mg-carbonate reactions at 6 Gpa: implications for partial melting of carbonated lherzolite
- Chertkova N.V., Ohfuji H., Nomura R., Irifune T.* Behavior of C-O-H fluid in mantle processes: experimental study using diamond anvil cell
- Yamane R., Komatsu K., Kagi H.* A new high pressure cell for accurate dielectric measurements
- Lunch**
- Kaminsky Felix V., Wirth Richard* Nitrides and carbonitrides from the lower mantle and their importance in the search for Earth's 'lost' nitrogen
- Ohfuji H., Asano N., Kagi H.* Understanding the origin of carbonado, an enigmatic polycrystalline diamond, through analysis of primary nano-inclusions
- Zedgenizov D.A., Ragozin A.L., Logvinova A.M., Yurimoto H., Sakamoto N., Kuroda M.* Trace element chemistry of peridotitic garnets in Siberian diamonds
- Reutsky V.N.* High pressure and high temperature carbon isotope fractionation in Fe–C system and its geochemical consequence
- Takayama Y., Ohfuji H.* Mineralogical characteristic of micro-inclusions in olivine in pallasite
- Coffee break**
- Bataleva Y.V., Palyanov Y.N., Borzdov Y.M.* Sulfide mineralization of silicate mantle by reduced S-bearing metasomatic fluids and melts
- Tamarova A.P., Bobrov A.V., Sirotkina E.A., Bindi L., Irifune T.* Phase associations and partitioning of minor elements upon partial melting of model pyrolite under the conditions of the transition zone and lower mantle of the earth
- Bendeliani A.A., Sirotkina E.A., Bobrov A.V.* Phase relations and formation of cr-rich phases upon melting of model pyrolite at 2.5–7.0 gpa and 1400–1900°C
- Kolesnichenko M.V., Zedgenizov D.A., Shchukina E.V., Litasov K.D.* Evidence for mantle hydration by phlogopite metasomatism beneath Arkhangelsk diamondiferous province

06.08.

Mantle sources and processes controlling genesis of ore-producing magmas

- Ryabchikov I.D.* Physical chemical conditions characterizing mantle sources of kimberlites and alkaline-ultramafic magmas
- Pokhilenko N.P., Agashev A.M., Pokhilenko L.N., Vavilov M.A.* Kimberlites and carbonatites of the Snap Lake dyke system, Slave craton, Canada: unique type of primary association of ultra-deep origin
- Lebedeva N.M., Kargin A.V., Sazonova L.V., Nosova A. A., Kostitsyn Yu. A.* Cpx-Phl xenoliths from the V. Grib kimberlite (Arkhangelsk diamond province, Russia): isotopic characteristics and geochemical composition of Cpx and Phl
- Coffee break**
- Pokhilenko L.N.* Spinelide from the xenoliths of megacrystalline peridotites of Udachnaya kimberlite pipe (Yakutia)
- Vernikovskaya A.E., Romanova I.V., Matushkin N.Yu.* Neoproterozoic carbonatite-bearing complex of the Yenisei ridge: origin of magmatism in the south-western active continental margin of the Siberian craton
- Cvetković Vladica, Šarić Kristina, Prelević Dejan* Serbo-Macedonian Magmatic and Metallogenic Belt revisited: four examples of the link between magma mixing and mineralization processes

Lunch

Geochemistry, petrology and ore-potential of alkaline and related mafic and granitic magmatism

- Arzamastsev A.A., Veselovskiy R.V.* Devonian alkaline magmatism of the northeastern fennoscandian shield: precursory and subsequent events
- Rass I.T., Petrenko D.B.* Zirconium and niobium enrichment in the kovdor carbonatite-phoscorite complex
- Solovova I.P., Yudovskaya M., Zinovyeva N., Borisovski S., Girmis A.* Structural, mineralogical and chemical features of metasomatism in ultrabasic rocks of the Uitkomst complex, South Africa: evidence from inclusions
- Kozlov E.N., Fomina E.N., Mytsa D.D., Kirkin V.V.* Rare-earth carbonatites of the Vuori-Yarvi (Kola region): first results of the study
- Sorokina E.S., Nishanbaev T.P., Nikandrov S.N.* Genetic nature of blue sapphires in syenite pegmatites from ilmen mountains, South Urals of Russia: evidence from empa, la-icp-ms, and Raman spectroscopy
- Coffee break**
- Pushkarev E., Kamenetsky V., Gottman I.* Ankaramite – the primary melt for the Ural-Alaskan-type intrusions and the source of platinum group minerals
- Kh Mohon Singh* Petrographic Evidence of Magma Mixing in Kyrdem Granitoids, Northeast India, Meghalaya
- Wołkowicz S., Krzemińska E., Wołkowicz K., Jackowicz E., Czupryt Z.J.* Geochronology of Catanda carbonatitic intrusion and surrounding granites (Angola) – preliminary studies
- Zaitsev V.A.* Kontay intrusion (Polar Siberia) petrology, geochemistry, age and geotectonic significance
- Varlamov D.A., Udoratina O.V., Burakov N.N.* Unusual monazites and Ce segregation process during alkaline metasomatism of acid substrates (Kosyu ore field, Middle Timan)

07.08

Novel approaches to Earth Understanding

<i>Fedik I., Peres P., Choi S.-Y., Fernandes F., Renaud L.</i>	CAMECA IMS 1300-HR ³ : the new generation ion microprobe
<i>Metodiev Stefan, Kouzmanov Kalin, Peytcheva Irena, Dimitrova Dimitrina, Stefanova Elitsa</i>	A combined SEM, QEMSCAN AND LA-ICP-MS study of ore and alteration minerals from a new intrusion-related gold system in the Trun region , W Bulgaria
<i>Borisov A.A.</i>	Ferric/ferrous ratio in silicate melts: What we know and what we don't know about it
<i>Krasnova N.I., Petrov T.G., Ruban V.P.</i>	Systematization of garnet group minerals on chemical composition using the RHA-method

External session in the Ilmen State Reserve

Round Table: Local elemental analysis methods in geochemistry

Conveners: Fedik I.V., Moret M.P.

08.08

External sessions:

Borisovskiy granite pluton and granite pegmatites.

Medvedevskoe deposit: basic magmatic titanomagnetite (Ti-Mt) ores in stratificated gabbroids and skarn

09.08

External session - Ilmeny-Vishnevogorsky alkaline complex

Round table: Genesis of strategic metal deposits and ore potential of alkaline magmatism – scientific perspectives

Poster Sections

- Alexey N. Kruk, Alexander G. Sokol, Yury N. Palyanov* Composition of a carbonatic melt in equilibrium with peridotite at 5.5–6.3 Gpa and 1350°C.
- Baibatsha A.B.* The role of the paleozoic superplume in the formation of the geological structures of Kazakhstan with large metal deposits
- Bazylev B.A., Ledneva G.V., Bychkova Ya.V.* Assessment of a trapped melt composition in dunite by rock geochemistry: a methodic and examples
- Belenitskaya G.A.* Geological preconditions, manifestations and signs of participation of natural salts in alkaline magmatism
- Bogina M.M., Sharkov E.V., Chistyakov A.V., Khvostikov, V.A., Zlobin V.L* Reef sopcha ore layer in the Monchegorsk pluton (Kola peninsula): geological, mineralogical, geochemical, and isotope-geochemical data
- Chebotarev D. A., Doroshkevich A. G., Sharygin V. V.* Evolution and formation conditions for pyrochlore-supergroup minerals of Chuktukon carbonatite massif, Chadobets upland (Krasnoyarsk territory, Russia)
- Davydova V.O., Shcherbakov V.D., Plechov P.Yu., Perepelov A.B.* Mechanism of copper enrichment of mafic enclaves at arc setting: insight from sulfide mineralogy of Bezymianny volcano (Kamchatka)
- Debapriya Adhikary, Rajesh Kumar Sahoo, K.K.Behara* New finding alkaline lamprophyre dykes cluster in the western margin of the proterozoic pakhhal basin in and around Khammam, Telangana, india: evidence of alkaline magmatism
- Filina M.I., Kogarko L.N., Kononkova N.N.* Compositional evolution in Amphibole of the Niva intrusion and dyke peralkaline nepheline syenite (Kola Peninsula, Russia)
- Isakova Aleksandra T., Sekisova Victoria S.* The results of melt inclusion study in minerals of leucite melanephelinites of pleistocene volcanoes (Udokan volcanic field)
- Kargin A.V., Nosova A.A., Sazonova L.V., Yutkina E.V., Golubeva Yu.Yu., Lebedeva N.M., Dokuchaev A.Y., Kondrashov I.A.* Spatial zoning of kimberlites and related rocks of the Arkhangelsk diamond province (Arkhangelsk, Russia) as the reflection of the magmogenenerating zone evolution
- Konyshev A.A.* Li-F granites associated with a-type granites, South Karelia: some geochemical features, physical-chemical conditions of formation
- Kopylova A.G.* Native iron from basites and its geochemistry
- Kovalskaya T.N., Kotelnikov A.R., Varlamov D.A.* Rock-forming minerals of Tiksheozersky massif (North Karelia, Russia)
- Ledneva G.V., Bazylev B.A., Kuzmin D.V., Kononkova N.N.* Layered dunite-troctolite-gabbro series of the Gankuvayam ophiolite (Kuyul terrane, Koryak highland, Russia): crustal plutonic sequence of an ancient back-arc spreading center
- Liu C., Deng J.J., Luo Z.H., Xu L.Q., Zhang Y., Li N., Duan P.X., Dai M., Qin J.H.* Mesozoic post-batholith porphyry cu-mo-pb-zn-ag(w) metallogenesis following uplift of large granitic batholith in da Hinggan mountains, Northeast China
- Logvinova A.M., Wirth R., Skomorokhova A.V., Sobolev N.V.* Features of NI-rich sulfide melt inclusions in Yakutian diamonds

- Martirosyan N. S., Shatskiy A., Litasov K. D., Chanyshv A. D.* CaCO₃ and MgCO₃ interaction with metallic iron: implication for the stability of carbonates in the deep mantle
- Mei W., Ma C.Q.* Tectonic evolution and metallogeny of West Asia
- Muravyeva N.S., Belytsky B.V., Senin V.G., Ivanov A.V.* Virunga leucite basanites: mantle metasomatism or crustal contamination?
- Nedosekova I.L., Belyatsky B.V., Lepekhina E.N., Antonov A.V., Plyatsok L.V., Sergeev S.* Pyrochlore U-Pb-SHRIMP-dating of the Ilmeny-Vishnevogorsky alkaline-carbonatite complex, Urals, Russia
- Nikolenko A.M., Doroshkevich A.G.* Features of mineral composition of apatite-magnetite rocks, Mushugai-Khuduk complex (Mongolia)
- Nikolenko E.I., Lobov K.V., Sharygin I.S., Rezvukhin D.I.* Sulfide-bearing assemblages in mantle-derived garnets from chompolo lamprophyres (Central Aldan)
Ocelli in the early triassic Chadobets ultramafic lamprophyre (SW Siberian craton): evidence of late stage evolution of the lamprophyre fluid – melt system
- Nosova A.A., Sazonova L.V.*
- Öztürk H., Hanilci N., Cansu Z., Altuncu S., Kurşun İ.* Geology and geochemistry of rare earth element source rocks in Turkey
- Palamarchuk R.S., Stepanov S. Yu., Khanin D.A.* Platinum mineralization of Iovsky massif, Northern Urals
- Plotinskaya O.Y., Baksheev I.A., Minervina E.A., Grabezhev A.I., Yapaskurt V.O.* Trace element geochemistry of scheelite from the Zhaltyrkol porphyry Cu occurrence, South Urals, Kazakhstan
- Rehanul Haq Siddiqui* Magmatic and metallogenic evolution of the Chagai-Raskoh arc, Balochistan, Pakistan
- Rodionov N.V., Lepekhina E.V., Antonov A.V., Belyatsky B.V., Arzamastsev A.A., Sergeev S.A.* U-Pb SHRIMP-II dating of titanite and pyrochlore in Lovozero and Lhibiny alkaline rocks and ores
- Safonov O.G., Butvina V.G.* Modal metasomatism of mantle peridotites: natural examples experimental constraints and phase equilibria modeling
- Selyutina N.E., Sazonova L.V., Nosova A.A., Kargin A.V.* Garnet megacrysts from the grib kimberlite pipe (arkhangelsk diamond province, russia): evidence of late modal metasomatism
- Shardakova G.Yu., Grabezhev A.I., Ronkin Yu. L., Azovskova O.B.* Variations of U–Pb zircon ages of granitoids from the copper porphyry deposits of the Urals, Russia
- Sharkov E.V., Chistyakov A.V., Bogina M.M., Shchiptsov V.V., Frolov P.V.* Geochemistry of the Mid-Paleoproterozoic Elet’ozero titaniferous syenite-gabbro intrusive complex, Northern Karelia, Russia
- Sharpenok L.N., Kukharenko E.A., Kostin A.E., Stepanov S. Yu.* Ore-bearing breccias as a manifestation of magmatogenic-fluidogenic-ore systems of the Earth
- Sharygin V.V.* Tainiolite from Chuktukon carbonatite massif, Chadobets upland, Russia

- Sheremet Ye. M., Kryvdik S. G., Agarkova N. G., Strekozov S. N.* Predicting discovery of new rare-earth deposits of the anadol deposit type in the Azov region
- Shniukova Kateryna* Onshore-offshore Mesozoic to Paleogene magmatism of the Southern Crimea
- Smirnova M.D., Sazonova L.V., Nosova A.A., Kargin A.V.* Three types of Clinopyroxenes from aillikite, Ilbokicheskoe and Chadobets uplifts, SW Siberia.
- Sotnikova I.A., Vladykin N.V.* Evolution of mica composition in rocks of the Akit alkaline massif (Northern Cisbaikalia)
- Srinivas M., Phanip.R.C.* Petrogenesis of a newly discovered kimberlite pipe in association with carbonatite at Khaderpet, Wajrakarur field, India
- Srinivas M., Rajendra Prasad K., Sreenu K.* Ultramafic, Alkaline and Carbonatitic suite of Rocks from Pakkanadu-Mulakkadu, Northern Tamil Nadu, India
- Srinivas M., Ningam N.* The petrochemical studies on the granites of Narsapur, Medak District, Telangana State, India
- Udoratina O. V., Varlamov D. A., Andreichev V. L.* Rare metal-rare earth mineralization of the Northern Timan (Malyj Kameshek massif)
- Wolkowicz S., Jackowicz E., Wolkowicz K.* On altered carbonatities from Catanda, Angola
- Yutkina E.V., Nosova A.A., Sazonova L.V., Laptsevich A.G., Kuzmenkova O.F., Volkova G.D., Sysoev I.V.* Sources and geochemical zoning of the devonian magmatism in the Pripyat-Dnieper-Donets rift zone
- Zaheenullah, Muhammad Tahir Shah, Nimatullah Khattak, Hafizullah Abba Ahmed* Morphological and geochemical studies of heavy minerals in the Siwalik sandstone of Karak anticline, Khyber Pakhtunkhwa Pakistan
- Zdrokov E.V., Bataleva Y.V., Palyanov Y.N., Borzdov Y.M. Zozulya D.R., Kudryashov N.M., Lyalina L.M., Stepenshchikov D.G.* Experimental studies of phase formation in the olivine – magnesite – sulfur and olivine – magnesite – pyrite systems at high P, T – parameters
Late archean rare-element pegmatites from Keivy-Kolmozero zone, kola peninsula, and dating (ID-TIMS, EMP) of pegmatitic zircon, microlite, monazite and thorite
- Rezvukhin D.I., Nikolenko E.I., Sharygin I.S., Malkovets V.G.* Oxide mineral inclusions in Cr-pyropes from the Aldanskaya lamprophyre dyke, Yakutia
- Borodina U.O., Goryainov S.V., Rashchenko S.V., Likhacheva A.Yu., Korsacov A.V., Golovin A.V.* High-pressure Raman study of shortite $\text{Ca}_2\text{Na}_2(\text{CO}_3)_3$