



# **Ultramafic-mafic complexes in foldbelts and their mineral resources**

*IV international conference  
III workshop for early career scientists*

## **Program**

August 27-31, 2012, Ulan-Ude – Lake Baikal

## Organizers and sponsors

- Geological Institute SB RAS (GIN SB RAS)
- Russian Foundation for Basic Research
- IGCP Project #592 supported by UNESCO-IUGS
- Buryatian Division of the Russian Mineralogical Society

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**August 27** – leaving Ulan-Ude at 8 am, at Buryatia Hotel, arriving to Airport Baikal at 9 am 9:00 (waiting for flight S7-115 from Moscow), on-route excursion to the Oshurkovo Massif, check-in at the Tourist Center, registration, E.G. Konnikov's memorial banquet.

## August 28

### Plenary session

*Conviners: Eugene Kislov, Eugene Sklyarov*

- 9:00-9:30 - **Ariskin A.A., Konnikov E.G., Danyushevsky L.V., McNeill A., Nikolaev G.S., Kostitsyn Yu.A., Kislov E.V., Orsoev D.A.** The Dovyren Intrusive Complex: geochemistry, petrology, and the sulfide saturation history for parental magmas
- 9:30-10:00 - **Sklyarov E.V., Starikova A.E., Kanakin S.V., Lavrenchuk A.V.** Pyroxenites of the Tazheran massif (West Baikal Area): mineralogy and genesis
- 10:00-10:30 - **Glazunov O., Svirin G.** Geochemistry and platinum potential of Tete gabbro complex (Mozambican belt, South Africa)
- 10:30-11:00 - *Coffee-break*
- 11:00-11:30 - **Gongalskiy B.I.** U-Fe-Ti-V-PGE-Au-Ag-Cu deposits of the Udokan-Chiney region
- 11:30-12:00 - **Damdinov B.B.** Precious metal mineralization of the East Sayan ophiolitic complex
- 12:00-12:30 - **Kislov E.V.** Geological-genetic model of Rifean rift related mafic-ultramafic complexes with PGE-Ni-Cu mineralization
- 12:30-13:00 - *Discussion*
- 13:00-14:00 - *Lunch break*
- 14:00-14:30 - **Safonova I., Seltmann R., Min Sun.** New IGCP #592 Project: Continental construction in Central Asia
- 14:30-15:00 - **Lesnov F.P.** The polychronal zircons from rocks of the Berezovsky mafic-ultramafic massif (the East Sakhalin ophiolite association): results of detailed SHRIMP-II U-Pb studies
- 15:00-15:30 - **Simonov V.A., Prihod'ko V.S., Agafonov L.V., Kotlyarov A.V., Kovyazin S.V.** Fluid regime of magmatic systems, forming the Konder platinum-bearing concentric-zoning massif (Siberian Platform)
- 15:30-16:00 - *Coffee-break*
- 16:00-16:30 - **Tatarinov A.V., Yalovik L.I.** Noble metals ore-forming system of Rifey-Vend Kurba-Vitim greenstone belt (Western Transbaikalia)
- 16:30-17:00 - **Sharkov E.V., Chistyakov A.V.** Early Paleoproterozoic Monchegorsky mafic-ultramafic layered complex of the Kola Peninsula: geology, petrology and metallogeny
- 17:00-18:00 - *Discussion*
- 19:00 - *Dinner*

## August 29

### Geology and tectonic setting of ultramafic-mafic complexes and their mineralization

*Conviners: Alexander Tatarinov, Eugene Sharkov*

- 9:00-9:20 - **Bazylev B.A., Ledneva G.V., Ishiwatari A., Kuzmin D.** Petrology, geochemistry and geodynamic setting of the ultramafic-mafic complex of the Lukovyi Creek, the Vel'may terrane, Eastern Chukotka
- 9:20-9:40 - **Vishnevskiy A.V., Izokh A.E., Cherdantseva M.V., Polyakov G.V., Shelepaev R.A.** Early Devonian basalt-ultrabasalt magmatism of Tsagaan-Shuvuut ridge (North-West Mongolia)
- 9:40-10:00 - **Ganelin A.V., Sokolov S.D., Layer P., Simonov V.A.** The first isotopic dating of plutonic rocks of Aluchin ophiolites (Western Chukotka) and their geodynamic implications
- 10:00-10:20 - **Ledneva G.V., Bazylev B.A., Ishiwatari A., Kononkova N.N., Sokolov S.D., Tikhomorov P.L., Novikova M.A.** Permo-Triassic to Upper Triassic Anyui plutonic complex of Chukotka: geochemistry and petrology

10:20-10:50 - *Coffee-break*

10:50-11:10 - **Trunilina V.A., Roev S.P.** Ultrabasite-basite associations of northeast of Verkhoyansk-Kolyma folded region

11:10-11:30 - **Ulyasheva N.S.** Comparison of metabasites of the Harbey and Marunkeu Polar Urals complexes on a petrochemical composition

11:30-11:50 - **Khrustalev V.K.** Basit-ultrabasit complexes of Mongol-Altay system of Paleozoid and its minerageny

11:50-12:10 - **Yurkova R.M., Voronin B.I.** Petrology and geodynamics of pre island arc ophiolites basit-ultrabasit complexes

12:10-13:00 - *Discussion*

13:00-14:00 - *Lunch break*

## **Petrology, mineralogy, and geochemistry of ultramafic-mafic complexes and prospects for mineral resources**

*Conviners: Andrei Tsygankov, Alexander Mochalov*

14:00-14:20 - **Burmakina G.N., Tsygankov A.A.** Composition dikes in the granitoids of West Transbaikalia –mingling of contrast composition magma evidence

14:20-14:40 - **Kalmykov B.A., Trusov A.A.** Features of the internal structure of ultrabasite-mafic massifs within Schuchinsky synclinorium of airborne geophysical data

14:40-15:00 - **Kurganskaya E.V., Simonov V.A., Safonova I.Yu., Kovyazin S.V.** Mafic dykes of the Ust'-Sema Formation in the Katun' zone of Gorny Altai

15:00-15:20 - **Lesnov F.P., Chernychoy A.I., Koz'menko O.A., Nikolaeva I.V., Paleskii S.V.** On the relations of the platinum group elements and rare earth elements in ultramafic restites of the Shaman massif (Eastern Transbaikalia): the first data

15:20-15:50 - *Coffee-break*

15:50-16:10 - **Malyshev A.V.** Conditions of formation of Rifey basic-ultrabasic intrusions of West Transbaikalia

16:10-16:30 - **Mochalov A.G.** Model of evolution of genetic types of accumulation of platinum group minerals in gabbro-pyroxenite-dunite plutonic complexes of Koryak Highland (Russia)

16:30-16:50 - **Nikolaev G.S., Ariskin A.A., Barmina G.S.** Numerical modeling of chromian spinel – basaltic melt equilibrium at pressures up to 15 kbars: SPINMELT-2.0 and its petrological applications

16:50-17:10 - **Pesterev D.V.** Petrographic, mineralogic and petrochemic features of Halta-Udinskiy intrusion

17:10-17:30 - **Simonov V.A., Ivanov K.S., Stupakov S.I., Erokhin Yu.V., Kotlyarov A.V.** Ultrabasic rocks from the basement of Western-Siberian oil-and-gas sedimentary basin

17:30-18:30 - *Discussion*

19:00 – *Dinner*

## **August 30**

### **Formation of ore mineralization in ultramafic-mafic complexes and its relation to petrogenesis, mantle sources and fluids regimes**

*Conviners: Felix Lesnov, I.S. Chaschukhin*

9:00-9:20 - **Ariskin A.A., Danyushevsky L.V., McNeill A., Barmina G.S., Nikolaev G.S.** Sulfides in basalt magmas: mechanism of dissolution and modeling of immiscibility

9:20-9:40 - **Mel'nikov A.V., Savchenko I.F.** Basite-ultrabasite massifs of Dambyki ore area: noble metals mineralization and signs of deep hydrocarbons

9:40-10:00 - **Mochalov A.G., Dmitrenko G.G.** Rare earth elements as indicators of mantle petrogenesis and ore formation of Krasnogorskiy dunite-harzburgite massif (Koryak Highland)

10:00-10:20 – **Semenov V.Yu., Damdinov B.B., Kislov E.V.** Petrographical particularities of Huray-Zhalga PGE locality at metaophiolites, East Sayan

10:20-10:50 - *Coffee-break*

10:50-11:10 - **Simakin A.G., Zakrevskaya O.Yu.** Factors of magmatic sulfides formation in accretion zones

11:10-11:30 - **Fomin I.S., Nikolaev G.S., Ariskin A.A., Zharkova E.V.** Estimates of redox conditions and olivine-spinel systems closing temperatures for the Yoko-Dovyren layered intrusion rocks

11:30-11:50 - **Chashchukhin I.S., Votyakov S.L.** The dunite-harzburgite complexes of the Urals: petrochemistry, mineralogy, geochemistry, redox state, chromite-bearing

### **Ore deposits of ultramafic-mafic complexes: specific features of useful mineralization and methods of investigation**

11:50-12:10 - **Gur'yanov V.A., Prikhod'ko V.S., Gvozdev V.I., Perestoronin A.N., Petukhova L.L.** PGE-Cu-Ni mineralization of Kun-Man'yo complex of small intrusions (south-east of the Aldan-Stanovoi shield)

11:50-12:10 - **Dylykov Ch.V., Kislov E.V.** The prospects of small ultramafit bodies of North Baikal region for nickel-copper mineralization

12:10-12:30 - **Petukhova L.L., Prikhod'ko V.S., Gur'yanov V.A., Perestoronin A.N.** Peculiarities of distributions of Cu-Ni sulfides in the rocks of the Kun-Manie intrusive complex (south-east of the Aldan-Stanovoy shield)

12:10-13:00 - *Discussion*

13:00-14:00 - *Lunch break*

14:00-14:20 - **Khudyakova L.I., Voyloshnikov O.V., Kislov E.V.** Perspective technology of magnesium-silicate resources ultramafit-mafit complex reprocessing

14:20-14:40 - **Cherdantseva M.V., Vishnevskiy A.V., Izokh A.E.** Rocks composition peculiarities and Ni-Cu-PGE mineralization at gabbroic massifs of Tsagaan-Shivuut range, NW Mongolia

14:40-15:00 - **Yakubovich O.V., Shukolyukov Yu.A., Mochalov A.G., Kotov A.B.** New  $^{190}\text{Pt}$ - $^4\text{He}$  method of direct dating of native minerals of platinum

15:10-16:00 - *Discussion*

16:00-19:00 – *excursion to the Posol'skoye area*

19:00 – *banquet*

**August 31 – leaving for Ulan-Ude, sightseeing, excursion to Verkhnyaya Beryozovka, check-in at hotel «Buryatia».**

**September 1 – departure.**