

WGIM at the IGC, Florence 2004)
The summarized report of session G-15.11

1- **SESSION:** G-15.11 Mineral Inclusion (34)

2- **Chairpersons:** Li Zhaolin (Zhongshan (Sun Yat-sen) University, China), Sergey Smirnov (Institute of Mineralogy and Petrography SB RAS Novosibirsk, Russia)

3- **Session description:** Received 27 abstracts from Australia, Brazil, Canada, China, France, Japan, Portugal, Russia, Spain, and United States. After thorough review, 14 were selected for oral presentation and 13 for poster presentation.

4- **Number of abstracts actually presented:** 27(14oral, 13 poster)

5- **Overview of oral presentations:** 10 of the 14 authors orally presented at the session. The topics widely covered four aspects: magma fluid, metamorphic fluid, mineralization fluid and synthetic fluid and emphasized on magma fluid and mineralization fluid.

Magma fluid - Study on fluid and melt inclusions of porphyry copper deposit and alkaline rock Nb, Tb deposit demonstrated magmatic origin of ore deposits
Mineralization fluid –the discovery and study on fluid and melt inclusions in turbidite hosted gold deposit, ductile shear zone gold deposit, diamond, and pegmatite cassiterite to understand the characters of ore deposit, mineralization material resource and ore deposit origin.

Synthetic fluid – At various temperature and pressure condition, fluid inclusion can be synthesized using quartz.

6- **Overview of poster presentations:**

4 of the 13 abstracts were displayed. Topics were concentrated on melt inclusions in magma rocks. Application of infrared microscope on study of inclusions in opacity minerals was also introduced.

7- **General comments:**

The qualities of the submitted abstracts are fairly high. Most of them are the recent researches conducted by scholars from different countries. The audiences of the session were always about 40 to 50 people. 1 to 2 question(s) were brought to each speaker followed by discussions.

New progress on mineral inclusion research include:

* The discovery of melt inclusions in porphyry copper deposits and carbonatite complex and the new theory of magmatic origin of porphyry copper deposit and carbonatite complex related NbTa ore deposit

* The discovery of immiscibility metamorphic fluid and magmatic fluid

through studies on inclusions in metamorphic rocks and alkaline ultrabasic rocks

* the character of low salinity in fluid in turbidite hosted gold deposit were reported from mineralization fluid study

* Melt and fluid-melt inclusions were discovered in ductile shear zone gold deposit for the first time. A new theory of Mineralization associated with metamorphic anatexis multi stage silicate melts and fluid processes was presented* New development on synthetic fluid inclusions and inclusion in diamond.

All these achievements are significant in promoting mineral inclusion research and resolve the mechanism and origin of mineralization and ore deposit origins.

8- Announcements:

During the 32nd IGC, WGMI of IMA held two business meetings. It was decided on the meeting that oral presented abstracts will be published as a special issue of Russian Geology and Geophysics. WGMI is working on this issue with related parties.