

**IMA**  
**Commission on Physics of Minerals (CPM)**  
**Annual report**  
**for the year 2006**

Report of CPM activity in 2006: 2006/11/15

**1. Commission of Physics of Minerals**

The current officers of the CPM (<http://www.sbg.ac.at/min/welcome.htm>) is Georg Amthauer ([georg.amthauer@sbg.ac.at](mailto:georg.amthauer@sbg.ac.at)) as a Chair, Eiji Ohtani ([ohtani@mail.tains.tohoku.ac.jp](mailto:ohtani@mail.tains.tohoku.ac.jp)) as Vice-Chairman and Daniel Neuville ([neuville@ipgp.jussieu.fr](mailto:neuville@ipgp.jussieu.fr)) as Secretary  
Besides the three Officers, the commission has 9 members.

**2. Overall objectives of the Com./WG**

The Commission on Physics of Minerals was established for the promotion of the application of modern solid state physics to minerals at low and high temperatures as well as at high pressures by workshop, conferences and publications.

**3. Chief accomplishments in 2006**

(1) CPM played following active roles in international and local meetings during 2005-2006. CPM organized and convened sessions in the following meetings:

1) At the AGU2005 fall meeting (San Francisco, Dec.5-9, 2005), a session on Molten Earth: Liquid in the Earth's Interior was organized by Agee and Stixrude, and Ohtani was made an invited talk on Melt Crystal density crossover in the Earth;

2) CPM organized also several sessions, High Pressure Earth Science and Physics and Chemistry of Earth's Minerals at the 2006 annual meeting of JPGU (Japan Geoscience Union) held on 14<sup>th</sup>–18<sup>th</sup>, May, 2006, Makuhari, Chiba).

3) CPM involved session planning of 2006IMA-Kobe meeting as a member of the organizing committee and program committee as follows: CPM submitted five proposed sessions on Mineral Physics for the IMA2006Kobe meeting (23<sup>th</sup>-28<sup>th</sup> July, 2006), and sponsored two mineral physics sessions; Mineralogy and dynamics of the mantle and core (Convened by Bass, Hirose, Ohtani, Rubie) and Structure and physical properties of melts and glasses (Convened Neuville) by Henderson, Kanzaki, Neuville) and is going to make an invited talk.

4) CPM also took an initiative by convening a session on perovskite and post-perovskite and mantle dynamics (E. Ohtani convened, and acted as a session) in 2006 Goldschmidt conference held in Melbourne (27<sup>th</sup> August-1<sup>st</sup> September, 2006).

5) MSA short course was held at Verbania on 1<sup>st</sup>-4<sup>th</sup>, October, 2006, Italy. This meeting was organized by Hans Keppler and Joe Smyth. Ohtani made an invited lecture from CPM on the effect of water on mantle phase transitions.

(2) Administration - Business Meeting: CPM made a business meeting at 2006IMA Kobe meeting, Kobe, Japan, and discussed the details of the sessions to be proposed for the IGC 2008 Oslo meeting. CPM submit three proposed sessions on High Pressure Mineral Physics (Convened by Ohtani), Glass and melt (convened by , and spectroscopy in the IGC Oslo meeting,

(3) Bulletins, News, and Website: Website of CPM is established in 2003 and continuously maintained for communication of the members.

Publication: A member of CPM (Ohtani) organized a GSA Monograph book "Advance in High Pressure Mineralogy" containing 13 review papers on high pressure mineral physics following the IMA session

held in 2004 IGC Florence meeting. The book is officially accepted as GSA monograph No. 421 on 13<sup>th</sup> August, and will be appeared in March-April, 2007.

#### **4. Workplan for 2007**

Website: Website will be renewed and report updated new information of the forthcoming related meetings to be held in the world.

Publication and Books - Special publication: Advance in High Pressure Mineralogy (edited by E. Ohtani) was accepted for publication as GSA monograph volume No. 421, and will be distributed in March or April, 2007.

For the forthcoming meetings,

- 1) 2006AGU fall meeting 11-15<sup>th</sup> Dec. 2006 at San Francisco: MR13A: Composition and Dynamics of Earth's Mantle: Current Frontiers and Grand Challenges in Elasticity, Phase Transitions, and Rheology Studies (Oral) is organized by Lin, Ohtani, Prewitt, Bass, Karato,
- 2) Amorphous materials: properties, structure and durability, Convenor: Daniel Neuville (Paris; [neuville@ipgp.jussieu.fr](mailto:neuville@ipgp.jussieu.fr)). Co-convenors: Grant Henderson (Toronto; [henders@geology.utoronto.ca](mailto:henders@geology.utoronto.ca)), Donald Dingwell (Munich; [dingwell@uni-muenchen.de](mailto:dingwell@uni-muenchen.de)) in Frontiers in Mineral Sciences, Cambridge, 26-28, June, 2007, Mineralogical Society meeting
- 3) 2007 HPMP5-7 (7<sup>th</sup> High Pressure Mineral Physics meeting) is organized by Andrault, Brown, Ohtani (Chair), Rubie, and Wang on 8<sup>th</sup>-12<sup>th</sup>, May, at Matsushima, Japan.
- 4) 2007 JPGU (Japan Geoscience union) annual meeting will be held at Makuhari, Chiba, Japan on 19-24<sup>th</sup>, May, 2007. CPM organizes two sessions on High Pressure Earth Science and Physics and Chemistry of Earth's Minerals in this JPGU meeting.

#### **5 List of Officers and National Representatives**

The current officers of the CPM (<http://www.sbg.ac.at/min/welcome.htm>) is Georg Amthauer ([georg.amthauer@sbg.ac.at](mailto:georg.amthauer@sbg.ac.at)) as a Chair, Eiji Ohtani as Vice-Chairman ([ohtani@mail.tains.tohoku.ac.jp](mailto:ohtani@mail.tains.tohoku.ac.jp)) and Daniel Neuville as Secretary ([neuville@ipgp.jussieu.fr](mailto:neuville@ipgp.jussieu.fr)). Besides the three Officers, the commission has 9 members.

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