

Report of CPM activity in 2007: 200711/17

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) as a Chair, Eiji Ohtani (ohtani@mail.tains.tohoku.ac.jp) as Vice-Chairman and Daniel Neuville (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 2007

(1) CPM played following active roles in international and local meetings during 2006-2007. CPM organized and convened sessions in the following meetings:

1) 2006AGU fall meeting 11-15th 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) Preparation of the special issue (in Physics of the Earth and Planetary Interior, Elsevier) of the session MR13A is now in progress: Managing editor, Jung Fu Lin; Editors, S. Karato, J. Bass, E. Ohtani, and C. Prewitt.

3) Amorphous materials: properties, structure and durability, Convenor: Daniel Neuville (Paris; neuville@ipgp.jussieu.fr). Co-convenors: Grant Henderson (Toronto; henders@geology.utoronto.ca), Donald Dingwell (Munich; dingwell@uni-muenchen.de) in Frontiers in Mineral Sciences, Cambridge, 26-28, June, 2007, Mineralogical Society meeting.

4) 2007 HPMPS-7 (7th High Pressure Mineral Physics meeting) was organized by Andrault, Brown, Ohtani (Chair), Rubie, and Wang on 8th-12th, May, at Matsushima, Japan. E. Ohtani acted as a chair of the local organizing committee. The meeting was successful with 40 oral presentations and 80 poster presentations with 150 participants. Preparation of the special issue in PEPI (Elsevier) is now in progress: E. Ohtani as a Managing editor, Denis Andrault, Paul Asimow, Lars Stixrude, and Y. Wang as editors.

4) 2007 JPGU (Japan Geoscience union) annual meeting was held at Makuhari, Chiba, Japan on 19-24th, May, 2007. CPM organizes two sessions on High Pressure Earth Science and Physics and Chemistry of Earth's Minerals in this JPGU meeting.

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

Publication: A member of CPM (E.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 was officially accepted as GSA monograph No. 421 and published in September, 2007.

4. Workplan for 2008

Administration - Business Meeting: CPM will make a business meeting at 2008IGC Oslo meeting, Oslo, Norway, and will discuss the details of the sessions to be proposed for the IMA 2010 meeting.

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

Publication and Books – We are currently working for two PEPI (Elsevier) special issues: Current Frontiers and Grand Challenges in Elasticity, Phase Transitions, and Rheology Studies (Editors; Lin, Bass, Karato, Ohtani, and Prewitt), and High Pressure Mineral Physics Seminar-7 volume (Editors, Ohtani, Andrault, Asimow, Stixrude, and Wang). The special issues will be published in PEPI in 2008.

Meetings:

- 1) 2008 EGU meeting in Vienna: A following session is organized by E. Ohtani, N. Borfan-Casanova, Monika Koch-Muller organize a following session: GMP03 of European Geoscience Union 2008 (April 13-18, 2008 in Vienna), Water in solids of the Earth's crust and mantle: from the storage capacities to its influence on physical properties Conveners: E. Othani, N. Bolfana-Casanova, M. Koch-Muller
- 2) 2008 IGC Oslo meeting: CPM organize following four sessions in 2008 IGC Oslo meeting:
MPM-05 Kinetics and dynamics in mineral processes *Jannick Ingrin et al. (IMA-CMP)*
MPM-06 Melts and glasses in mineralogy and petrology *Daniel Neuville et al. (IMA-CMP)*
MPM-07 Mineral spectroscopy *Georg Amthauer et al. (IMA-CMP)*
MPM-08 Neutrons and synchrotron radiation in mineralogy and material science *Susan Schorr et al. (IMA-CMP)*
MPM-09 Properties and dynamics of mantle and core *Eiji Ohtani et al. (IMA-CMP)*
- 3) 2008 JPGU (Japan Geoscience union) annual meeting will be held at Makuhari, Chiba, Japan on 19-24th, May, 2008. CPM organizes two sessions on High Pressure Earth Science and Physics and Chemistry of Earth's Minerals in this JPGU meeting.
- 4) 2008 Goldschmidt conference in Vancouver: *Henderson G. S. (granth@geology.utoronto.ca), Neuville D.R. (neuville@ipgp.jussieu.fr), and Eiji Ohtani (ohtani@mail.tains.tohoku.ac.jp)* organize a session "Diffraction and absorption spectroscopies at high temperatures and pressures", which is sponsored by *IMA-CPM*.

5 List of Officers and National Representatives

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