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SIG11:

Reported Period: 2008-2009

Report Date: 01.08.2009

Reported by: Leonid Dubrovinsky, Alfonso San Miguel, Julien Haines

1. Introduction.

For the reported period SIG11 concentrated its activity on organizing conferences and workshops. Special attention was paid to participation of young scientists in the schools and workshops. SIG11 is also actively taking part in discussions regarding the new initiative of the European high-pressure community in organising "Partnership for Extreme Conditions Science - PECS" at the ILL-ESRF site in Grenoble. The goal of PECS is to facilitate and develop beamline experiments at both ILL and ESRF that could bring great benefits for the high-pressure crystallography community.

2. Past Activities.

Title: Fifth International Alloy Conference (IAC-5), Cliff-Hotel Ruegen, Siedlung am Wald 22a, Germany, September 11 to 14, 2008

Sponsors/Organizers: Organized together with Psi-k and EuroMinSci. Organizers: L. Dubrovinsky, N. Dubrovinskaia and I. Abrikosov.

Short Description: The International Alloy Conferences promote commonality in the study, experimental or theoretical, of materials properties across the spectrum of materials types and conditions. Structural aspects of high-pressure behavior of alloys were in focus of most presentations.

Title: 46th European High Pressure Research Group Conference, Valencia, Spain, from 7th until 12th September 2008.

Sponsors/Organizers: Organized by the Univ. of Valencia and Univ of La Laguna (Spain). A. San Miguel and other SIG members are part of Scientific Advisory Commity.

Short Description: The 46th EHPRG was a large scope conference, in line with the rapid increase of high pressure activities in all areas of Physics, Chemistry, Food Science, Geosciences, Material Research and Biosciences. Several sessions were dedicated to subjects closely related to high-pressure crystallography.

Title: "High-Pressure Crystallography Course - ERICE 2009", 4-14.06.2009

Sponsors/Organizers: Organized by E. Boldyreva and P. Dera with support of different organization and groups (including UICr, Psi-k, Compress). SIG11 officers and members were among lecturers and participants. SIG11 also support organizers applications for funds.

Short Description: Among more then 120 participants, about 60 were young PhD students and post-docs which got from first-hands wide overview of methodology and latest results in the field of high-pressure crystallography.

Title: School "Diamond Anvil Cell Technique", 9-12.03.2009, Bayreuth, Germany

Sponsors/Organizers: C. Braun and L. Dubrovinsky, German High-Pressure Priority Program SPP1236, Bavarian Geoinstitute, Munchen University, German Crystallographic Society, SIG11.

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Short Description: The purpose of the workshop was to initiate and expand the basic knowledge of high-pressure experiments with the multi-anvil technique at different temperature ranges, and its application in science and technology. Apart participants from Germany, PhD students from Italy, France, and Russia were present.

Title: ECM25, 16-21.08.2009, Istanbul, Turkey

Sponsors/Organizers: ECA; SIG11 organized three sessions.

3. Future/Programmed Activities.

Title: 47th European High Pressure Research Group Conference, Paris, France, 6.09-11.08.2009.

Sponsors/Organizers: Organized by Prof. A. Polian and Paris University. SIG11 officers and members are part of Scientific Advisory Committee and active participants.

Short Description: The 47th EHPRG will be a large scope conference, in line with the rapid increase of high pressure activities in Europe in all areas of physics, chemistry, geosciences, materials synthesis and biosciences. Several sessions will dedicate to subjects closely related to high-pressure crystallography.

Title: ECM26, 29.08-02.09.2010, Darmstadt, Germany

Sponsors/Organizers: ECA; SIG11 plan to organize sessions on

- high-pressure single-crystal diffraction;
- structural consequences of pressure-induced spin transitions;
- high-pressure crystallography at elevated temperatures;
- structure and properties of functional materials at extreme conditions

Title: Workshop on "Methods of high-pressure single-crystal diffraction: From data collection to full structure determination", Darmstadt, Germany, August, .2010.

Sponsors/Organizers: Prof. R. Miletich-Pawliczek, SIG11, German High-Pressure Priority Program SPP1236

Short Description: The aim of the workshop is to teach participants how to perform single-crystal high-pressure X-ray diffraction measurements and to complete the data reduction and analysis to obtain the highest-quality data. The workshop will be tutorial in nature, and include both lectures and hands-on tutorials.

Title: Workshop "Structural studies in Laser Heated Diamond Anvil Cells", March 2010, Bayreuth, Germany

Sponsors/Organizers: L. Dubrovinsky, German High-Pressure Priority Program SPP1236, Bavarian Geoinstitute, SIG11.

Short Description: The purpose of the workshop is to initiate and expand the basic knowledge of high-pressure experiments with laser-heated diamond anvil cells and methodology of study of structure and properties of materials at high-P,T conditions.

4. Other matters.

SIG11 is actively participating in discussions regarding organising "Partnership for Extreme Conditions Science - PECS" on the ILL-ESRF site in Grenoble. The goal of PECS is to facilitate and develop beamline experiments at the both ILL and ESRF and it could greatly benefit of European high-pressure crystallography community.

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5. Five year 'overview', brief activity report (2005-2009)

6. Estimated number of active members:

About 100 members.

7. List SIG officers, name and e-mail, and specify their main function in the SIG:

Chair:

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Supplementary Materials.

NOTE: DO NOT FORGET TO SEND THE UPDATED LIST OF YOUR SIG OFFICERS

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