



SIG No: 4

Reported Period: 2011-2012

Report Date: 20.05.2012

Reported by: Holger KLEIN

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1. Introduction. (50 words max.)

The aim of this SIG is to raise the awareness and acceptance of Electron Crystallography (EC) to rank comparable to X-ray crystallography. This requires concerted effort of groups and researchers in this field and external support. Our purpose is realization of full potential of electron optical methods in structural research.

2. SIG web site:

SIG 4 url: <http://sig4.ecanews.org/>

3. Number of ECA individual members registered with the SIG according to

(<http://www.xray.cz/eca/im-payment.htm>)

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4. Existence of a SIG mailing list Yes / No

Address of the mailing list:

Number of members in the SIG mailing list :

5. Approximate total number of researchers involved in the SIG (please indicate the basis for the estimate)

36 researchers have participated in SIG meetings

6. List of MS organized by the SIG at the last ECM

MS 24 Quantitative electron crystallography

MS 25 Modern electron diffraction – exploring structures and properties

7. Prizes sponsored/coordinated

ECM 27: Poster prize for young researcher in electron crystallography

EMC2012: 2 poster prizes for young researchers in electron crystallography

8. Past Activities other than Microsymposia at ECM

Title: Crystallography in Croatia, 1 day meeting, 25th January 2012.

Number of Participants: 65

Level of involvement of SIG in the activity is given in “Short Description”

ECA Individual Members registered with the SIG involved in the organizing committee : Prof. emeritus Stanko Popović, Prof Antun Tonejc

ECA Individual Members registered with the SIG involved as lecturers :

Prof. Anđelka Tonejc, Prof. Stanko Popović (We are involved in Electron Crystallography in Materials science as well as Electron microscopy investigation in Materials Science)

Sponsored by ECA? No



Report of SIG 4 (cont.)

Sponsors/Organizers: Croatian Academy of Science and Art, Croatian Crystallographic Association, Faculty of Science University of Zagreb.

Short Description: The Croatian crystallographers reported their scientific activity during more than 20 years. The Crystallography is used in investigation in physics, chemistry, geology, mineralogy.

The reported titles of investigation involve: structure determination by electron and XRD diffraction, TEM, HRTEM with SEM, EDS and Raman spectroscopy. The investigation of new advanced materials were reported as well.

Title: Electron Crystallography School

Number of Participants: 23

Level of involvement of SIG in the activity:

ECA Individual Members registered with the SIG involved in the organizing committee

ECA Individual Members registered with the SIG involved as lecturers

endorsed (SIG logo on the web page/leaflets)

Sponsored by ECA?

Yes/ No

Short Description: (50 words max.)

Electron Crystallography School at RWTH in Aachen, Germany, for two days (April 23+24, 2012) with 23 participants, all from RWTH or Julich. The lecturers were Thomas Weirich, Sven Hovmöller and Stavros Nicolopoulos.

9. Future/Programmed Activities.

Title: Electron Crystallography School – new methods and applications

Number of Participants:

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG involved in the organizing committee

ECA Individual members registered with the SIG involved as lecturers

endorsed (SIG logo on the web page/leaflets)

Sponsored by ECA?

Yes/ No

Other Sponsors/Organizers: IUCr

Short Description: (25 words max.)

Analysis of high-resolution transmission electron microscopy (HRTEM) images and quantitative analysis of electron diffraction (ED) patterns.

Title: applications of precession electron diffraction

Number of Participants:

Level of involvement of SIG in the activity:

ECA Individual members registered with the SIG involved in the organizing committee

ECA Individual members registered with the SIG involved as lecturers

endorsed (SIG logo on the web page/leaflets)

Sponsored by ECA?

Yes/ No



Report of SIG 4 (cont.)

Other Sponsors/Organizers: EMS, IUCr, NanoMegas, University of Manchester, Cambridge University

Short Description: (25 words max.)

Theory and application of precession electron diffraction to a wide range of crystallographic research areas and first hand experience of using the technique.

10. Other matters. (50 words max.)

11. Brief annual activity report (100 words max.)

In the relatively young field of electron crystallography one of the main activities of SIG4 is teaching. In order to promote electron crystallography as science for structure determination we organize each year several national or international schools (cf. more detailed descriptions above). We participated actively in the organisation of microsymbosia at the IUCr Conference 2011 in Madrid, Spain. We also took an active part in the program committee of ECM27 in Bergen, Norway, where the intensified interest of the crystallographic community in electron crystallography will be reflected in the increased number of microsymbosia related to our SIG.

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

Holger KLEIN, holger.klein@grenoble.cnrs.fr, chair

Lousia MESHI, lmeshi.lm@gmail.com, co-chair

Andrew STUART, stewart@uni-mainz.de, webmaster