

SIG4

Reported Period: 2009-2010

Report Date: 22/04/2010

Reported by: Dr. Louisa Meshi

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1. Introduction.

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:

SIG4 <http://sig4.ecanews.org/>

SIG4 has an active homepage www.gfe.rwth-aachen.de/sig4/

3. Number of ECA individual members registered with the SIG according to (<http://www.xray.cz/eca/im-payment.htm>)

SIG4 Electron Crystallography 28

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)

12 active members (researchers) that organize schools and other activities at regular basis and 28 total members (researchers) that appear in our records (attend the SIG4 meetings etc').

6. List of MS organized by the SIG at the last ECM – at ECM 25

MS: "Quantitative Electron Crystallography", chairs: Prof. J.P. Morniroli, Prof. S. Hovmöller and

Keynote Lecture: **Jan Pieter Abrahams** 'Macromolecular Electron Crystallography', chair: Prof. S. Hovmöller

7. Prizes sponsored/coordinated

We have launched a prize for remarkable research in the field of electron crystallography to the best student/postdoc lecture/poster. This prize is sponsored by "Calidris" and "Nanomegas" companies.

The prize was rewarded twice:

2009 ECM25 conference in Istanbul, best poster on electron crystallography subject, given to Entico Mugnaioli, (Univ Mainz, Germany).

2009 Israel Society for Microscopy annual meeting, the prize was given to Maya Kedem (Technion, Israel) for her research in the electron crystallography area.

We intend to continue and reward this prize at conferences where electron crystallography is widely presented.

8. Past Activities other than Microsymposia at ECM

Title: Electron Crystallography school

Number of Participants: 40

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: organizers Prof. Xiaodong Zou and Prof. Sven Hovmoller

Short Description: (50 words max.)

A 4-day school on Electron Crystallography was organized in KAUST, Saudi Arabia on January 17-20, 2010. 40 students attended the school were all from KAUST.

Title: Workshop on Electron Crystallography in Materials Science

Number of Participants: 20

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: organizers Prof. Peter Moeck, Dr. Stavros Nicolopoulos and Prof. Sven Hovmoller

Short Description: (50 words max.)

The workshop was organized during the Materials Research Society (MRS) spring meeting in San Francisco, April 2009

Title: School on Electron Precession (August, 2009)

Number of Participants: 27

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: organizer Prof. J.P. Morniroli (scientific director)

Short Description: (50 words max.)

Schools homepage: http://lspes.univ-lille1.fr/formation_electron_precession. Scope of the school is structure determination using electron crystallography methods.

Title: Summer School on Diffraction-based Structure Analysis in the TEM (September, 2009)

Number of Participants: 26

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: organizer Prof. J. L. Labar

Short Description: (50 words max.)

The school is joined to the Applied Crystallography Conference. School's homepage:

<http://crystallography.us.edu/>

9. Future/Programmed Activities.

Title: Electron Crystallography school: New methods to explore structure and properties of the nano world (June 2011, Erice, Italy)

Number of Participants: approx. 30-50

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) (*intend to*)

Sponsored by ECA?

OYes/ O No – *sponsored partially by IUCr*

Other Sponsors/Organizers: organizer Prof. A. Avilov, Dr. U. Kolb and Dr. L. Meshi

Short Description: (25 words max.)

The course intends to review the structure solution using electron crystallography methods as well as novel applications. Web page: <http://www.crystalalice.org/erice2011/2011ec.htm>

Title: ECM 26 (Germany August 2010)

1 keynote lecture and 1 MS

10. Other matters.

Special issue of Zeitschrift fuer Kristallographie Crystalline Materials Volume 225, Issue 2-3, 2010, with the theme Electron Precession was published.

11. Brief annual activity report

This year we have proposed 2 MS and 1 keynote lecture for ECM 25 and for ECM 26, each time 1 MS and 1 keynote lecture was chosen and our members chaired and spoke at these sessions. One of the main activities of SIG4 is teaching in order to promote electron crystallography as science for structure determination; this is why we organize each year as many schools as possible and, as can be seen from this report, the number of participants is quite high.

Our SIG provides each year detailed activity report. Please see information at the

http://www.ecanews.org/sig_activity.php

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

Chair: Dr. Louisa Meshi, BGU (Israel), louisa@bgu.ac.il

Secretary: Dr. Ute Kolb, Mainz (Germany), kolb@uni-mainz.de

Dr. Thomas Weirich, email: t.weirich@gmx.de - past chairman

Supplementary Materials.

None