

SIG12

Reported Period: 2018-2019

Report Date: 10/07/2019

Reported by: Manuel Hinterstein, Jerome Rouquette, Claire Colin

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1. Introduction. (50 words max.)

The main activities of the SIG team have been to prepare the ECM32 in Vienna. The SIG12 representative to the program committee is Andrzej Grzechnik.

2. SIG web site:

SIG12: <http://ecanews.org/mwp/groups/sig-12-crystallography-of-functional-materials/>

3. Number of ECA individual members registered with the SIG

SIG12 Materials Science 119 (as of 10/07/2019)

4. Existence of a SIG mailing list: yes

SIG12 communicates with its members via the ECA webpages <http://ecanews.org/mwp/groups/sig-12-crystallography-of-functional-materials/>

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

119 members registered on <http://ecanews.org/mwp/groups/sig-12-crystallography-of-functional-materials/>

6. Keynote speaker suggested by SIG12 for the ECM32 in Vienna

Francoise Damay
Unusual magnetic orderings from the interplay of triangular topology and magnetic anisotropy

7. List of MS organized by the SIG at the ECM32 in Vienna

SIG12 proposed and was the principal organizer of the following microsypmosia :

1. Structural characterisation of functional materials

SIG12 co-organized the following microsypmosia proposed by other SIGs:

1. Complex metallic alloys: periodic and non periodic
2. Materials for energy storage and conversion
3. Minerals and Materials under extreme conditions
4. Quantum materials

8. Prizes sponsored/coordinated

STOE regularly sponsors a poster prize in the field of the crystallography of functional materials at the ECMs (Warwick, Rovinj, Basel, Oviedo and Vienna).

9. Past Activities other than Microsymposia at ECM

SIG12 members participated in the organization of the following conferences :

1. 2nd “International Conference on Applied Crystallography” in Chicago (USA, October 16-18, 2017).
2. 3rd Edition of International Conference on Advanced Spectroscopy, Crystallography and Applications in Modern Chemistry in London (UK, June 4-5, 2018)

Manuel Hinterstein and Helmut ehrenberg participated in authoring the new Volume H of the International Tables for Crystallography with chapter 2.8. “Powder diffraction in external electric and magnetic field”.

9. Future/Programmed Activities.

Currently, the SIG12 representative, Andrzej Grzechnik, participates in the organization of the ECM32 in Vienna as a member of the program committee.

10. Other matters. (50 words max.)

Members of SIG 12 are also involved in the design and use of experimental stations and new sample environments at large scale facilities (Petra-III in Hamburg, FRM-II in Munich and ESRF and ILL in Grenoble) to open new possibilities for the structural investigation of functional materials under *in situ* and *in operando* conditions.

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

SIG officers are involved in the organization of conferences and workshops related to materials crystallography at material science and diffraction-related meetings. They participate in review and advisory committees in various European large-scale facilities.

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

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