

C10 - The Structure and Dynamics of Condensed Matter

Report submitted by Yasuhiko Fujii, Chair

1. C10 Young Scientist Prize

2014 Dr. Clarina R. de la Cruz,

Lead Instrument Scientist, Neutron Sciences Directorate

Oak Ridge National Laboratory, U.S.A.

“For her outstanding achievements in the field of strongly correlated electron systems, specifically in multiferroic materials and unconventional superconductors.”

Dr. Cruz received her undergraduate and Master's degrees in National Institute of Physics, University of the Philippines, Philippine in 1996-2003 and Ph.D in Department of Physics, University of Houston, U.S.A. and became a Post-Doctoral Fellow in Neutron Sciences Directorate, Oak Ridge National Laboratory and Department of Physics and Astronomy, University of Tennessee, U.S.A in 2007-2009. She has been a Lead Instrument Scientist at the present position since 2010.

Venue for the Award Ceremony & Prize Lecture

C10 has sponsored some International Conferences such as M2S and ICSOS, but there is no major premier conference where most of C10 members can attend and hold a face-to-face Commission Meeting like other Commissions. C10 has covered a wide range of condensed matter physics so that a research field of every year's YSP winner is not predictable. Therefore, it is not practical to fix the venue for the annual Award Ceremony and Prize Lecture for C10 YSP at any biennial or triennial international conference.

On the other hand, the American Physical Society has its Division of Condensed Matter Physics (DCMP) which covers most of C10's research fields. Therefore, the annual *APS March Meeting* where some of C10 members usually attend will be a very good opportunity for C10 to cooperate DCMP organizers to celebrate a C10 YSP winner.

By taking such an opportunity, we may encourage C10 members to hold the 1st Commission Meeting at the next APS March Meeting (Denver, Mar. 3-7, 2014).

2. C10-Sponsored Conferences

(2013) No conferences nominated.

(2014) The 11th International Conference on the Structure of Surfaces (ICSOS-11, University of Warwick, UK, July 21-25, 2014) nominated for IUPAP endorsement.

(2015) The 11th International Conference on Materials and Mechanisms of Superconductivity (M 2 S 2015 , Geneva, Switzerland) to be nominated for IUPAP endorsement.

3. The Issue on “Soft Matter Physics”

- 1) The original assignment given at the IUPAP General Assembly (London, Nov. 2011) German delegates' claim: There is a substantial overlap between the Commissions C5, C8, C9 and C10 all covering aspects of condensed matter physics. It is proposed to dedicate C10 specifically to the emerging field of soft matter physics. The name could be either “Commission on Soft Matter” or “Commission on the Structure and Dynamics of Condensed and Soft Matter”.
- 2) C10's interim report to the last C&CC (Rio)
- 3) C10 has recognized the emerging soft matter physics as an important research field but has opposed such a proposal as C10 will be dedicated to soft matter because C10 has

covered important research fields, which are NOT covered by any other Commissions. C10 members, most, if not all, of whom are solid state physicists, currently favour (partial) inclusion of soft matter physics in C10 by a possible modification of its title and mandate. (3) More intensive discussion with soft matter physicists and other related Commissions such as

- 4) (Statistical Physics) , C6 (Biological Physics) and C8 (Semiconductors) will be conducted although a final report is expected at this C&CC (Geneva)

4. IYCr2014 (International Year of Crystallography in 2014)

The General Assembly of the United Nations adopted a text by which it established 2014 as the International Year of Crystallography on July 3, 2012. Introducing the text, the representative of Morocco said that it decided to proclaim the Year considering that crystallography was ever-present in modern life in drug development, nanotechnology, biotechnology and the development of new materials, and that 2014 marked the centenary of the science.

The Assembly, through the text, invited the United Nations Educational, Scientific and Cultural Organization (UNESCO) to facilitate implementation of the Year and encouraged all Member States, the United Nations system and all other actors to promote awareness of the Year and of the importance of crystallography. Morocco's representative said it was hoped that the Year would have a significant educational component, particularly in developing countries where the science was least developed.

C10's mission is closely related to crystallography so that C10 will cooperate with the International Union of Crystallography (IUCr) on possible projects for IYCr2014. Currently one of C10 members, Prof. Claude Lecomte (France), has served as Vice President of IUCr.