

Neutron scattering sig Report 2006

In this years election ballot a change of wording to the SIG constitution was approved. The activities of the SIG are now controlled by an Executive Committee of three elected members: Chair, chair-elect and past-chair. The term of office for each officer begins at the start of the calendar year immediately following election. Chair-elect succeeds chair, succeeds past-chair. In 2007 Ian Swainson will be Chair and Paul Langan past-Chair with a Chair-elect being selected by the next ballot.

On Saturday 22nd of July, the day before the Hawaii workshop, the neutron SIG sponsored a workshop “Methods in neutron protein crystallography” attended by about 50 participants and organized by Paul Adams and Paul Langan. An aim of this workshop was to make prospective users fully aware of methods, techniques and facilities for carrying out neutron protein crystallography studies. Another aim was to bring the community up to date on advances in software development for refining neutron structures made through the NIH NIGMS funded consortium based at Los Alamos National Laboratory and Lawrence Berkeley National Laboratory to develop “Computational tools for neutron protein crystallography” and to consult on future directions. The workshop was structured around short lectures on methodology in the morning, presented by Benno Schoenborn, Leighton Coates, Nobuo Niimura and Flora Meilleur, and then tutorials on software in the afternoon presented by Marat Mustyakimov, Pavel Afonine, Paul Adams and Paul Langan. Discussion at this workshop was lively and stimulating and there were calls for this workshop to be repeated.

The neutron SIG also cosponsored a transaction symposium “The future of neutron crystallography: smaller crystals larger (macro) molecules” with the Small Molecule SIG and the Biomac SIG. Organized by Tom Koetzle, Bob Bau, Alberto Podjarny and Paul Langan the transaction symposium included eleven scientific presentation from leaders in the field. An aim of the symposium was to highlight new scientific directions and opportunities with neutron crystallography at new sources and beam-lines. In a departure from ACA tradition, it was decided that the proceedings will consist of electronic copies of lecture presentations and notes rather than manuscripts. Lectures were presented by Bob Bau, Art Schultz, Nobuo Niimura, Lee Brammer, Leighton Coates, Wolfram Saenger, Alberto Podjarny, Gerry Bunick, Chris Dealwis, Dean Myles and David Langs. Two sessions were also sponsored or cosponsored by the neutron SIG: “Time-dependant investigations” chaired by Xunli Wang and “Neutron and X-ray facilities around the pacific rim” chaired by Peter Stephens.

Members of the neutron SIG organized and took part in a number of national and international conferences, workshops and schools that promoted the use of neutron scattering. The neutron SIG is happy to note that there have been significant achievements throughout the world in developing next generation neutron sources and beam-lines for those sources. In particular the SIG is pleased to note the first production of neutrons at the SNS at Oak Ridge National Laboratory and the award of a license to run the refurbished reactor at ANSTO

Ideas for next years ACA meeting in Salt Lake City were obtained by canvassing neutron SIG members before the meeting in Hawaii by email and then at the SIG meeting in Hawaii on Sunday 23rd of July. This SIG meeting was held together with the Powder SIG. Christina Hoffman, Paula Piccoli and Leif Hanson were nominated from the floor for the position of Chair-elect. Ideas for sessions for next year’s included “Neutron Macromolecular crystallography”, “ultra high neutron and X-ray small angle scattering” and “short-range disorder and diffuse scattering”.

Paul Langan, July 24, 2006.