

NSC 43B and National Workshop on CADD – Report

National Conference on Crystallography (NSC 43B) and National Workshop on Computer Aided Drug Designing (CADD) is held at Department of Physics, Sardar Patel University, Vallabh Vidynagar, Gujarat during 1st September to 3rd September, 2014; and the Organising Committee and the Department is grateful to the National Crystallography Committee for giving this opportunity.

General Assembly of the United Nations has decided to celebrate the year 2014 as an *International Year of Crystallography* (IYCr2014), and as a part of this celebration, the Department had organized one day seminar on Condensed Matter Physics (CMP-2014) along with the Short Term Training School on X-ray Diffraction Techniques during 3rd March to 8th March, 2014. The NSC 43B and National Workshop on CADD is the second event of this celebration.

In the Inaugural function of NSC 43B and National Workshop on CADD, the dignitaries have unveiled the abstract book. Prof. Krishan Lal (Former Director, NPL, New Delhi and renowned scientist) has given an inaugural address describing the historical evolution of traditional X-ray crystallography in to the various branches of the science, and also the current status of the research field. Senior Prof. Vinay Kumar of Solid State Physics Division, B.A.R.C. has delivered a keynote address “Structural studies of phycobilisome proteins”; mostly emphasising a need to understand ‘correct’ crystal structure and sequence in amino acid chain to identify the protein as a drug. The highly refined structures can only be able to explain the true bio-chemical reactions at the active receptor group. The topic touches various aspects of the interdisciplinary subjects. The honourable vice chancellor, Prof. Harish Padh, of the University has preceded the function and given the presidential remarks. He congratulated the organisers and underlined the importance of multidisciplinary approach to the research problem. He conveyed the best wishes to the participants.

There are five plenary lectures given by eminent scientists across the India ranging from powder diffraction technique to single X-ray diffraction of micro- to macro-molecular units with various refinement techniques in connection to drug synthesizing and immuno-genetic engineering, etc. The full range of topics connected to basic and current state-of-art *crystallography* as justified the theme and aim of the conference.

The plenary talks are accompanied by fourteen invited talks by experts in various discipline of crystal physics–High pressure crystallography to thin film morphology to

ion beam implantation to structural engineering. These topics are of current interest to national and international materials science research community. These plenary lectures and invited talks were stimulating to the participants and provided a path-way for further investigations.

Participants from the various parts the country and Gujarat state have turned up for the conference. In total 103 delegates have registered for the same.

Though the conference mainly focuses on crystallographic aspects of various branches of science, it was not only limited to it. Topics like crystal growth and characterizations, surfaces and interfaces of bulk and thin films, nanomaterials, bulk properties of solid and liquid condensed phases of materials are also included apart from small- and macro-molecular crystallography. The organizers received more than 135 research papers of which 120 were selected for the presentation: 80 for oral presentation and 40 for poster presentations. Considering the overwhelming response, the organizers have kept three (03) parallel sessions for oral presentations. In which 42 participants have presented their work orally with most fruitful comments/suggestions made by other participants and session chair, while 32 delegates have presented their posters. These presentations were evaluated by the judges based on the content of the work and presentation. 06 prizes for oral presentations and 02 prizes for poster presentations were announced. As the encouragement to young researcher, the Indian Crystallography Association (ICA) has also declared the prizes.

On 2nd September, Annual General Body meeting (AGM) of ICA was held at the Department. Inherent to the Indian tradition, cultural program was arranged on the second day evening. All participants, renowned scientist from various institutes and local organizers in august presence of honourable Vice Chancellor of the University fully enjoyed the program. The program turned out to be the real refreshment to all.

The conference concluded on September 3rd 2014, on post lunch session. Felicitation of retired and former associated Professors, and valedictory function is followed by prize distribution to the best presentation. Various participants have given their feedback to the organizers. The organizers take heartfelt note of all funding agencies, financial assistance given by different people, institutes, industries, etc., and expressed their sincere thanks to all of them. They acknowledge to all who directly or indirectly helped the organizer and the Department.