

Report on Discussion Meeting on Hydrogen Storage and Generation

BESU, 12-13 January, 2012

The problem of generation and storage of Hydrogen in an efficient and cost-effective fashion have triggered worldwide R&D efforts. In India, there are several research groups working on various experimental as well as theoretical-cum-computational aspects of hydrogen economy. For production of hydrogen, different routes such as photocatalytic, photo electro-chemical, biological and nuclear routes are being pursued. Similarly for hydrogen storage, complex metal hydrides, chemical hydrides, graphitic materials and various kinds of functionalized nanomaterials have been reported as candidate materials for hydrogen storage. Vigorous efforts are going to optimize their storage efficiencies, desorption kinetics and thermodynamics that are essential criteria for realistic applications.

Several active groups in India felt the need to come together and consolidate their expertise and efforts on hydrogen as a renewable energy solution, and MRSI has been considered to provide the ideal forum for discussing the latest developments in this multidisciplinary area starting from basic research to engineering design. Accordingly, MRSI Kolkata Chapter and the MRSI Subject Group on Computational Materials Science jointly organized the Discussion Meeting on Hydrogen Storage and Generation. There were about about 50 registered participants, including students, researchers and faculties, from NCL Pune, IIT Kharagpur, IISER Kolkata, Presidency College Kolkata, VECC Kolkata, SINP Kolkata, BESU, IACS, and other institutes (see Appendix for a complete list). This included 15 invited speakers from different institutes in the country covering different aspects of hydrogen storage as well as generation.

After a brief welcome address by Prof. N.R. Bandyopadhyay, the introductory address was delivered by Prof. G.P. Das “On the Occasion”. Director of VECC, Dr. R.K. Bhandari, who was invited as chief guest inaugurated the Meeting, while the Vice Chancellor of BESU Prof. Ajoy Kr. Ray was the Guest-of-Honor. This was followed by the 6 technical sessions covering both fundamental and technological aspects of hydrogen generation and storage. In the concluding session, there was comprehensive panel discussion coordinated by Prof. G.P. Das, along with Prof. Balaji Jagirdar of IISc and Dr. Sahab Dass of Dayalbag Educational Institute. The effort to organize the 3rd Asian Symposium on Hydrogen Storage in India in 1913 was also heartily welcomed by the participants. It is unanimously agreed upon by all the participants that the hydrogen community will meet after 3 months or so, to report the new developments in this emerging field. The time and venue for the next meeting will be intimated in due course of time.

The Meeting ended with a Vote of Thanks by Dr. P. Sujatha Devi, Secretary of MRSI Kolkata Chapter who put on record our deep appreciation for providing financial support from BRNS, SINP, BESU, IACS and CGCRI for organizing this meeting was duly acknowledged.

(N.R. Bandyopadhyay)
Chairman

(G.P. Das)
Convener