DAE-BRNS SYMPOSIUM AND WORKSHOP ON “THERMAL ANALYSIS” (THERMANS-2004)

The DAE-BRNS Fourteenth National Symposium and Workshop on “Thermal Analysis” (THERMANS-2004), organised by the Indian Thermal Analysis Society, Mumbai, and sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy, was held at the Applied Physics Department, Faculty of Technology and Engineering, M.S. University of Baroda, Baroda, during January 20-24, 2004. Dr Anil Kakodkar, Chairman, Atomic Energy Commission & Secretary, Department of Atomic Energy, Government of India, inaugurated the Symposium and Dr (Ms) Mrinalini Devi Puar, Chancellor, M.S. University of Baroda, presided over the inaugural function. Prof. S.M. Joshi, Dean, Faculty of Technology and Engineering, M.S. University of Baroda, welcomed the delegates and other invitees. Dr K.D. Singh Mudher, Fuel Chemistry Division, BARC and Convener of the Symposium and Workshop, highlighted the focal theme of the symposium.

The Role of Thermal Analysis in Materials Research related to Nuclear and other High Technology Areas*. Dr V. Venugopal, Chairman, National Organizing Committee and Associate Director, Radiochemistry and Isotope Group, BARC, in his opening remarks, paid rich tributes to the founder members of the Indian Thermal Analysis Society (ITAS) and spoke about the significant contributions made by ITAS and the various units of DAE to the development of the science of Thermal Analysis in India. He made a special mention about the applications of Thermal Analysis in the development of various fuels for the nuclear reactors, especially the Thoria-based fuels, the carbides, the nitrides and the metallic fuels. Dr Anil Kakodkar, in his inaugural speech, complimented the efforts of BRNS and the Indian Thermal Analysis Society for holding such symposia and workshops which are very useful to the scientific community at large. He was happy to note that THERMANS-2004 symposium coincided with the 50th glorious year of service of the Department of Atomic Energy to the nation and that it is one of the many symposia being organised to commemorate the Golden Jubilee Year of DAE. He also mentioned about the interactions between the University Grants Commission, Inter University Consortium and the Department of Atomic Energy which enable the University students and researchers to participate in the DAE research projects by mutual collaborations. He remarked that collaborative research gets nourished by symposia such as THERMANS 2004 which are held in universities like M.S. University of Baroda.

Dr (Ms) Mrunalini Devi, in her presidential address, recounted the contribution of Maharaja Sayajirao Gaikwad to promote science for the benefit of common man and noted that symposia like THERMANS
2004 are the stepping stones to achieve the bigger vision of our President, Dr Abdul Kalam, i.e., to make our nation a developed one by the year 2020. Dr (Ms) Shyamala Bharadwaj, Hon. Secretary, ITAS, announced the names of the winners of the Awards for the year 2004. The Netzsch-ITAS Award for outstanding contributions in the field of thermal analysis and the TA Instruments and ITAS Young Scientist Award were presented, during the inaugural function, to Dr Gurdip Singh of Chemistry Department, DDU Gorakhpur University and Dr. R. Mishra, Applied Chemistry Division, BARC, respectively. Mr Amol Naik of Institute of Science, Mumbai was the winner of ‘Dr M.D. Karkhanavala Memorial Essay Competition 2004’. Dr Arun Pratap, Applied Physics Department, Faculty of Technology and Engineering, M.S. University of Baroda, proposed the vote of thanks.

The symposium was conducted over the first three days and covered papers on “Fuel Systems”, “Glass, Ceramics and Catalysts”, “Instrumentation”, “Solid State Kinetics”, “Polymers, “Biomaterials”, “Inorganic Chemistry” etc. A total of 162 delegates attended the Symposium. Nine invited lectures on the various topics of the symposium were presented by experts in the field. Best papers presented in both oral and poster sessions were awarded. A special session devoted to presentations by students was also organized and the best papers presented in the session were awarded separately. A preprint volume incorporating the papers accepted for presentation and the invited lectures was brought out and distributed to the delegates at the time of registration. A total of 109 papers were accepted for presentation in both oral and poster sessions.

A panel discussion was conducted at the end of the symposium and the panelists were Dr V. Venugopal, Associate Director, Radiochemistry & Isotope Group, BARC, Dr S.K. Handoo, General Manager, R & D, National Council for Cement and Building Materials, Ballabgarh, Dr P.V. Ravindran, Analytical Chemistry Division, BARC, and Prof. N.S. Saxena, Department of Physics, University of Rajasthan. The panelists recommended advanced research in the field of nanotechnology, biomaterials and catalysts as well as improvement in instrumentations. The panelists appreciated the efforts of the organisers to attract young talent for participation in such symposia.

A two-day workshop on the “Role of Thermal Analysis in Research and Industry” held after the symposium during January 23-24, 2004, was attended by 62 participants from different parts of the country. Nine invited lectures on ‘Thermoanalytical techniques an overview’, ‘Kinetic equations in thermal analysis’, ‘Processing of functional ceramics by thermal techniques’, ‘Calorimetric techniques’, ‘Vapour pressure measurements’, ‘High temperature-XRD’, ‘Applications of Differential Scanning Calorimetry in Food Industry’, ‘Thermal conductivity of solids: modes of heat conduction and methods of measurement’ and ‘Application of thermal analysis in catalysis’ were delivered during the workshop by eminent scientists in the respective fields. Experimental demonstrations were also arranged during the workshop. The texts of the invited lectures were brought out in printed form and distributed to the delegates of the workshop. A feedback session was conducted at the end of the workshop. The participants appreciated the programme and wanted to have similar interactions more frequently.