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REPORT FROM POLYCHAR 19, KATHMANDU, MARCH 20-24, 2011

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The 19th World Forum for Advanced Materials – POLYCHAR 19 – was held in Kathmandu starting on March 20th with the Short Course on Polymer Characterization in the morning and the inauguration ceremony in the afternoon. The event was organized by Prof. Rameshwar Adhikari and his team from the Tribhuvan University in Kathmandu and by the Nepal Polymer Institute in the Park Village Resort Hotel on the outskirts of Kathmandu. True to its name, the Forum had participation from 46 countries.

The conference had IUPAC sponsorship - a contribution of the chemists in Nepal to the International Year of Chemistry 2011. Further sponsors included the Tribhuvan University, the Nepal Academy of Science and Technology, the LECAP Laboratory of Prof. Jean-Marc Saiter at the University of Rouen, the Third World Academy of Sciences and Technology, the Nepal Tourism Board, the Park Village Hotel & Resort, the University Grants Commission of Nepal, International Centre for Theoretical Physics. Alexander von Humboldt Foundation, the Polymer Standards Service of Germany, and the Gulf Air of Bahrein.

The opening of the conference with the traditional Nepalese inauguration ceremony took place in the Open Theatre of the Park Village Resort Hotel; it was chaired by the Vice-Chancellor Madhab Prasad Sharma of Tribhuvan University. The ceremony received high public attention because of a welcome address by the Right Honourable Prime Minister of Nepal, Mr. Jhala Nath Khanal. The Opening Ceremony was closed by the welcome address of the IUPAC representative from the IUPAC Polymer Division Michael Hess. The conference was broadcast and publicized by several national Nepali media including Himalayan Television, Kantipur Television, Nepal Television, radio stations and Nepali national daily and weekly newspapers.

The name POLYCHAR stands for polymer characterization and dates back to the days when the it was an annual event at the University of North Texas in Denton. Over the years it has widened its perspective to the whole range of modern materials. In the year 2004 POLYCHAR was for the first time organized outside of

Texas, namely in Guimarães (the original capital of Portugal), followed by Singapore 2005, Nara 2006 (Japan), Buzios 2007 (Brasil), Lucknow 2008 (India), Rouen 2009 (France) and Siegen 2010 (Germany). POLYCHAR tries to be close to its participants, each year in a different sector of the globe, so that in particular young scientists and students have a chance to participate and meet with their peers and well-known scientists to exchange experience, discuss results, make contacts, create scientific networks and present their results to the scientific community.

The Scientific Program covered a broad range of Materials Science and Engineering with Sessions focussing on: Predictive Methods and Simulations; Nano-and Smart Materials; Electrical and Dielectrical Properties; Surfaces, Interfaces and Tribology; Mechanical Properties and Performance; Rheology and Processing; Structure-Properties Relationships; Materials Synthesis and Characterization; Biomaterials; and Materials for Energy and Recycling. In total there were 137 oral contributions and 117 posters with 382 registered participants from 46 countries. The Scientific Program proceeded by the Short Course on Polymer Characterization, a traditional one-day tutorial held by distinguishes specialists in their respective fields. Chaired by Valerio Causin (University of Padua) and Sven Henning (Fraunhofer Institute for Materials Mechanics, Halle) the following topics were covered: Polymer Tribology (Witold Brostow, University of North Texas), Polymer Characterization by Scattering Techniques (Jean-Michel Guenet, Institute Charles Dynamic-Mechanical Sadron, Strasbourg), and Calorimetric Analysis of Polymers (Michael Hess, University of Siegen), Fundamentals of Polymer Rheology (Helmuth Münstedt, University of Erlangen-Nuremberg), Chromatographic Characterization of Polymers (Dusan Berek, Slovak Academy of Sciences, Bratislava), Electron Microscopy of Polymers (Goerg Michler, Martin Luther University, Halle), Mechanical Properties and Deformation Micromechanisms in Polymers (Christopher J. Plummer, École Polytechnique Fédérale de Lausanne), Trends in Chemistry of Nanocomposites (Anatolii D. Pomogailo, Russian

Academy of Sciences, Moscow), and New Routes to Green Composite Materials (Jean-Marc Saiter, University of Rouen). The Course participants were provided with free handouts of the teaching materials while the lecturers were available for discussions throughout the whole duration of the following conference.

At the end of each POLYCHAR conference several awards are distributed during the closing ceremony. The participants thanked the Prize Committee which for the last four years has been chaired by Goerg H. Michler, Martin Luther University, Halle. As of POLYCHAR 20, the new Chair of the Prize Committee is Jean-Jacques Pireaux, University of Namur.

In conjunction with the 19th Forum several new Members of the POLYCHAR Scientific Committee were elected: Chan Chin Han (MARA University of Technology), Selangor Valerio Cousin (University of Padua), Sven Henning (Fraunhofer Institute for Materials Mechanics, Halle), Sanja Lucic Blagojevic (University of Zagreb), Stanislav Patlazhan (Semenov Institute of Chemical Physics, Chernogolovka), Holger Schoenherr (University of Siegen), Andrew Whittaker (University of Queensland).

POLYCHAR 20 is scheduled for March 26-30, 2012 in Dubrovnik, a beautiful ancient town situated on the southern part of the Croatian Adriatic coast - included in UNESCO's World Heritage List.

The scope of POLYCHAR 20 will follow the tradition, ranging from theoretical and fundamental aspects to recent advances and novel developments in

synthesis, processing, manufacturing and characterization of materials including the prediction of service performance. As in 2011, new 'green' materials and materials for energy and recycling will feature prominently.

The Course on Polymer Characterization will be held on March 26th, 2012, with the following topics: Polymer Tribology and its Relation to Mechanics (Witold Brostow, University of North Texas); Dynamic Mechanical and Thermophysical Analysis (Michael Hess, University of Siegen), Polymer Molecular Dynamics around Glass Transition (Jean Marc Saiter, University of Rouen); Modern Microscopic Techniques (Holger Schönherr, University of Siegen), NMR and Diffusion (Andrew K. Whittaker, University of Queensland), Positron Annhilation of Polymers (Frans Maurer, Lund University), Assessing Properties of Polymers by Experimental Techniques (Ulf W. Gedde, Royal Institute of Technology. Stockholm), Diffractometry to Study Polymers (Ivan Smit, Rudjer Boskovic Institute, Zagreb).

POLYCHAR 20 World Forum on Advanced Materials is expected also to significantly enhance activities of scientists and engineers in developing countries and countries with economics in transition as listed by the Development Assistance Committee (DAC). IUPAC is again among the sponsors.

For sample abstract and instruction on registration, program and further information please visit the POLYCHAR 20 conference website: www.polychar20-croatia.com.