Medical University in Sofia presented their recent scientific achievements on "Cerebral blood flow imaging: relation to blood rheology". Five sessions were organized: "Hemorheological disturbances in different pathologies", "New approaches for quantification of microrheological phenomena", "Cell interaction and adhesion", "Mechanical characteristics and modeling of tissues and systems" and a poster session.

The scientific program included also and a Young scientists' competition for the best scientific work. Students, PhD students and young researchers from Belarus, Bulgaria and Russia participated in it. After a comprehensive review and discussion E. Drozd from the Heat and Mass Transfer Institute of National Academy of Sciences of Belarus, Minsk, Belarus was nominated for her work on "Evaluation of the local elasticity modulus of biological cells on the basis of the shells theory" (E. Drozd, G.I. Mikhasev, S.A. Chizhik). Maria Lin and Marina Gafarova from Lomonosov Moscow State University, Moscow, Russia and PhD students A. Alexandrova and V. Kostova from the Institute of Mechanics to the Bulgarian Academy of Sciences were nominated with diplomas.

The participants delivered their presentations in the atmosphere of fruitful scientific discussion. They found the meeting convincing and rewarding and St Constantine and Elena resort provided excellent conditions for an extensive exchange of views and personal contacts. The participants relaxed during the excursion to the Botanical Garden in Balchik and enjoyed the Exhibition of thracian treasures in the Archaeological Museum and the Classical Music Concert "Music under the stars" – "Fortissimo Fest" in the Summer theater in Varna. The presented lectures and communications are prepared to be published in the next issues of J. Series on Biomechanics (Volume 27 (2012), Issue 1 – 2).

Nadia Antonova
Institute of Mechanics and Biomechanics, BAS
President of the Bulgarian Society of Biorheology
antonova@imbm.bas.bg

Third International Conference on Natural Polymers (ICNP 2012)

Mahatma Gandhi University, Kottayam, India
October 26 – 28, 2012

The Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala; India and Beijing University of Chemical Technology, China have jointly conducted the Third International Conference on Natural Polymers (ICNP 2012) at Mahatma Gandhi University, from October 26 – 28, 2012. Honourable Vice Chancellor of Mahatma Gandhi University Prof. Rajan Gurukkal inaugurated the three days Conference. About 220 delegates (both foreign and Indian) participated this conference and presented their research works. There were three plenary talks, 142 invited talks and 81 poster presentations.

The main goal of the Conference was to establish a strong collaboration between industry and academia and the conference has made a nice platform for efficient transfer of knowledge from research institutions to industry. This conference comprised of sessions like agro waste, natural fibers and its applications, biopolymers, bio-composites, rheology and processing of natural polymers, bio-fuel, biomedical applications, bio-nanocomposites, bio-plastics, characterization, chitosan polymers, composites, electro spinning, gels, medical applications, membranes, molecular imprinted polymers, nanocomposites, natural fibre, natural polymers/ biopolymers, plasma processing, polymer composites, polymer for environment, proteins, radiation processing and sensors.

The three days series of lectures commenced with the plenary talk of Dr. James Jacob, (Director, Rubber Research Institute of India) on the "Climate Change, Ecological Concerns and Natural Rubber Cultivation in India". There are various lectures on

© Appl. Rheol. 23 (2013) 58–60

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org

Figure 1:
Delegates of ICNP 2012.

recent advances, challenges in rheology and processing of natural polymers. Pushkala R. (Sri Sathya Sai Institute of Higher Learning, Anantapuri) delivered a lecture on the Influence of Chitosan Biopolymer fortification on rheological, nutraceutical and shelf life quality of indian flat bread. The results of the rheological analysis revealed the chitosan enriched flat breads to have higher farinograph water absorption, dough stability, mixing tolerance index and farinograph quality number than control. The extensograph and amylograph characteristics showed chitosan enriched samples to have higher resistance to extension and viscosity (hot break, cold break, set back and break down) respectively, compared to control.

On the first day of the conference, there was a brain storming discussion led by Prof. Sabu Thomas, in which all of the national and international delegates participated. The topic of discourse was 'India/EU/Rest of the World Joint Research Programme (Under EU FP7 Frame Work)' and 'DST India and Rest of the World Joint Collaboration'. This discussion brought together all the research-related initiatives under a common roof playing a crucial role in reaching the goals of growth, competitiveness and establishment of a strong scientific foundation.

On the second day Prof. Suresh Valiyaveettil, Singapore delivered the Plenary Lecture on the topic "Functionalization and Use of Biopolymers for Environmental Applications". Valiyaveettil developed a low cost and readily available renewable adsorbent materials is an interesting challenge for material scientists and biodegradable membranes for environmental applications to bind different pollutants. Dr. S. K. Saha (University of North Bengal) delivered a lecture on complex fluidity developed in entangled and H-bonded polymer like aggregates of charged amphiphiles and studies on the morphological transitions induced by pH, temperature and shear. The flexible and elongated aggregates of viscoelastic gels under dilute conditions show complex and unusual rheological phenomena, which include strong thermoreversible viscoelasticity and shear-induced structure formation. The conference also discussed the topics such as transport properties of different types of membranes, synthesis and characterization of gels, properties and possibilities fully biodegradable 'green' composite, design and fabrication of a polymeric biosensor, understanding basic self-assembly mechanism and characteristics of protein aggregates for nanomaterial applications, bio-fuel, characterization and synthesis of nanocomposites and its medical applications.

On the third day the Plenary Lecture was delivered by Prof. Oded Shoseyov (Israel) "Nano Bio Inspired Composite Materials For The Future". They developed a novel composite material of resilin and nano-crystalline cellulose (resilin-NCC) that displays remarkable mechanical properties combining strength and elasticity. Prem Ranjan (Laboratory of Advanced Research in Polymeric Materials (LARPM), Bhubaneswar, India) presented a paper on rheological, mechanical and thermal degradation studies of different epoxy nanocomposites. The researcher checked the time-dependent rheological behavior of epoxy resin systems filled with different types of fillers such as fumed silica, unfunctionalised carbon nanotube and functionalized carbon nanotube has been investigated. Test results revealed that fumed silica and CNT improved the thixotropic behavior of epoxy systems. The conference also discussed on the topic such as agro waste, natural fibers, natural polymers, biopolymers, bioplastics, bionanocomposites and its medical applications, waste water purification and its utilization.

The conference provided an international forum for scientific discovery, professional networking, research collaboration, interdisciplinary education, and dissemination of our most recent scientific advances. Young researchers got an opportunity to present their works in 10-minutes before an international jury. The jury members awarded prizes to the best presentations in the

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org

field and 3 poster award was given for the best poster presentation. 76 researchers participated in the poster presentation. Delegates indicated that the conference had given them an opportunity to meet reputed scientists from many countries of the world to exchange ideas and share research experiences on recent advancements in natural polymers and biomaterials. The delegates came forward to give their valuable comments, to introduce more number of plenary lectures in the next conference. All the distinguished guests thanked the organizers for their hospitality, grant cultural session and the wonderful boat trip through Vembanad Lake. The conference ended on a good note.

Sabu Thomas, Nandakumar Kalarikkal, Jithin Joy
jithinjoyjrf@gmail.com

Geesthacht Polymer Days: Rheology and Mechanics of Polymer Materials

Geesthacht, Germany
November 13 – 14, 2012

In order to present the foundations and applications of rheological and mechanical testing methods, the Institute of Polymer Research of the Helmholtz-Zentrum Geesthacht in cooperation with Anton Paar Germany GmbH and the Department of Polymer Engineering of the University of Bayreuth organized a two-days workshop for all users who benefit from the analysis of viscoelastic properties of materials. The workshop took place at the Helmholtz-Zentrum Geesthacht on November 13 and 14, 2012. The idea of the workshop was to present lectures on test methods and experimental phenomena of polymer materials. The seminar was addressed to scientists, engineers and technicians who apply rheological and mechanical testing methods in their daily life. Around 40 participants from academia and industry joined the Geesthacht Polymer Days which were organized for the first time.

After a welcome, Volker Abetz (Institute of Polymer Research, Helmholtz-Zentrum Geesthacht) gave an introduction into the research activities of the Institute of Polymer Research. The development of polymer membranes covering synthesis, characterization and pilot plants is the principal research activity of the institute. Then Alexander Kutter (Anton Paar Germany GmbH) presented the fundamentals of shear rheology. In his illustrative lecture, A. Kutter discussed the different measurement modes in oscillation and rotation, experimental techniques and different sources of error in rheological testing. Andreas Eich (SI Analytics) showed how shear oscillations in the linear viscoelastic range can be applied in order to analyze molecular characteristics of polymers. He chose poly(isobutylene) as an example. Beside shear deformation, the rheology of complex fluids in elongation is highly important in applications. Therefore the lecture of Ulrich A. Handge (Institute of Polymer Research, Helmholtz-Zentrum Geesthacht) was devoted to experimental techniques of extensional rheometry of polymer melts and solutions. He discussed a variety of apparatus which are used for the determination of the extensional viscosity and presented experimental results.

After the lunch break, Georg H. Michler (Martin-Luther University Halle-Wittenberg) gave a very illustrative introduction into the morphological properties of polymer materials. The microstructure of polymer materials strongly influences the mechanical and rheological properties of these materials. Electron and atomic force microscopy investigations are very suitable methods in order to analyze the structure of polymer materials in the sub-micron range. The measurement of the viscosity of low viscous polymer solutions is another important task which occurs in daily laboratory life. Andreas Eich discussed in another lecture different techniques in order to measure the viscosity of

© Appl. Rheol. 23 (2013) 60–61

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
http://www.appliedrheology.org