

Conference Call

Acrylate: System Modelling and Application in Stereolithography;

Franz Lanyi, University Erlangen-Nuremberg Institute of Polymer Materials, Germany: *Novel Chart For Representation of Material Performance and Reliability;*

Taylor Stockdale, UNL, Mechanical and Materials Engineering Department, USA: *Manufacturing of Polyimide Fibre-Reinforced Nanocomposites*



The Bruce Hartmann Prize for Young Scientists went to: **Brett Fors**, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, USA: *Deterministic Control of Polymer Molecular Weight Distribution*

The Jürgen Springer Prize for Young Scientists went to: **Carolina Gonçalves**, Faculty of Engineering, University of Porto, Portugal: *Xanthan Gum and Chitosan as Natural Adhesives for Cork*



Three Carl Klason Student Awards went to:

Yoga Salim, Department of Chemistry, Faculty of Applied Sciences, Universiti Malaya, Kuala Lumpur, Malaysia: *Thermal Degradation in the Melt Reaction between Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) and Epoxidized Natural Rubber;*

Kaspars Maleckis, UNL Mechanical and Materials Engineering Department, USA: *Ultrahigh-Performance Nanofibres from DNA and Proteins;*

Hao Liu, Department of Polymer Science, University of Akron, USA: *Two-Dimensional Nano-Crystals of Molecular Janus Particles*

Diplomas of Distinction went to:

Taria Jamil, Polymer Engineering Department, University of Akron, USA: *Mechanism of Molecular Interaction of Superplasticizer Oligomers with Hydrated Cement Phases;*

Xue Li, Chemistry University of Alberta, Canada: *Polymer-Based Materials for Building Artificial Muscles and Three Dimensional Structures by Self-Rolling;*

Yaping Ding, University Erlangen-Nuremberg Institute of Polymer Materials, Germany: *Electrospun PHB/PCL/Fumed Silica Fibrous Structure for Bone Tissue Engineering;*

Wenglong Li, UNL Mechanical and Materials Engineering Department, USA: *Characterization of the influence of depth in photo curing of acrylate: a method based on rapid-scan FTIR during laser curing on an ATR;*

Simon Schönherr, Graphene-Based Nanotechnology, University Siegen, Germany: *Investigation of Electronic Properties of a Graphene Field Effect Transistor*

Limited funds were granted by IUPAC for the support of graduate students and young scientists from underprivileged countries. However, due to high expectations by the applicants and visa problems, it was only possible to support one young scientist in the end:

Bishnu Prasad Neupane, School of Health and Allied Sciences, Pokhara University, Nepal: *Conversion of Waste Paper into Bioplastics—Poly(lactic acid)*

Mehrdad Neghaban, his colleagues, and collaborators at the University of Nebraska, Lincoln, deserve our thanks for their effective organization of the Course and the Conference. Good organization is a necessary condition for a creative and comfortable atmosphere, which was appreciated by the participants in Lincoln.

POLYCHAR 24 is scheduled for Poznan, Poland, end of April/early May 2016, POLYCHAR 25 is planned in Kuala Lumpur, Malaysia, 2017.

Science Assessments and Research Integrity: Reconcilable or Antagonistic?

At the recent **4th World Conference on Research Integrity** (31 May–3 June 2015, Rio de Janeiro, Brazil, www.wcri2015.org), attended by around 500 participants from more than 50 countries on five continents, the ICSU Committee on Freedom and Responsibility in the conduct of Science (CFRS) organised a symposium on “Research assessment and quality in science.”

Speakers with different perspectives, from higher education to government and policy, with a national context and including young scientists, explored the implications of science assessments [1]. The goal of the symposium was to generate discussion on how to shape assessments to facilitate scientific work of high integrity for the benefit of society. This reflected a context that **Lex Bouter**, Professor of Methodology and Integrity at the Free University of Amsterdam in the Netherlands, characterised in his keynote as “hyper-competition” for positions, funding, and resources as a

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result of an exponential rise in the number of scientists in recent times.

In the CFRS symposium, **Ellen Hazelkorn**, Director of Research and Enterprise at the Dublin Institute of Technology in Ireland, who has been involved in the review of higher education systems around the world, pointed out that rankings have become the *de facto* indicators of global scientific competitiveness since the early 2000s. Reinforced by the global financial crisis and a resulting call for increased public accountability, quantitative rankings have “emerged as a game changer” in higher education landscapes and in university reward structures by influencing government policies and resource allocation. Dr. Hazelkorn stressed the importance of combining indicator-based quantitative data with qualitative information, to recognise differences between research disciplines and to ensure that assessment processes were appropriate and fit-for-purpose.

Speaking from his perspective as lead coordinator for OECD’s Global Science Forum, **Carthage Smith** emphasised that science evaluations and metrics were important tools for the organisation’s mission to measure and promote economic development. By assessing the relation between government spending on higher education and scientific output in terms of numbers of publications, PhDs awarded, and patents filed, OECD provided governments with comparative information on the efficiency of science systems. Although agreeing that this benchmarking did determine scientific behaviour “to some extent,” Dr. Smith noted that countries and science systems require these data to set their own priorities.

As someone working in a science system in an emerging economy, **Robert McLaughlin**, from the Office of Research Integrity at the University of Cape Town in South Africa, noted the challenges of aspiring to improve a university’s or science system’s rank worldwide while addressing local needs and supporting research integrity principles. Dr. McLaughlin noted that “the role of science in society is broadly discussed in South Africa,” reflecting the challenge for the higher education system to balance an ambition to meet expectations and build capacity at the national level with an aspiration for international recognition.

Representing the Global Young Academy, **Tatiana Martins**, Professor at the Federal University of Goiás in Brazil, argued that increased pressure on young scientists to build a career posed threats to research integrity in academia. As a countermeasure, she suggested including research integrity as a criterion to be measured in assessments, helping to change the reward



From left to right: Ellen Hazelkorn, Carthage Smith, Robert McLaughlin, Merry Bullock, Tatiana Duque Martins, Roger Pfister, and Leiv K. Sydnes

system. Beyond this, Dr. Martins expressed concern that the present assessment and reward systems were further aggravating the brain drain by contributing to international competition for the best scientists.

The ICSU Committee on Freedom and Responsibility in Science [2], chaired by Leiv Sydnes, is developing a discussion paper that explores the issues highlighted in this invited Symposium [3].

Comments on the discussion paper are welcome, and can be shared by writing to the Committee’s Secretariat, Roger Pfister at roger.pfister@icsu.org.

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www.icsu.org/news-centre/news/top-news/science-assessments-and-research-integrity-reconcilable-or-antagonistic

Notes

1. www.icsu.org/freedom-responsibility/research-integrity/science-assessments-and-research-integrity
2. www.icsu.org/freedom-responsibility
3. www.icsu.org/freedom-responsibility/research-integrity/pdf-images/CFRS_Discussion_Paper_Science_assessment_and_research_integrity.pdf