EDITORIAL

PJ ZEON Award for outstanding papers in *Polymer Journal* 2011

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The winners of the 2011 PJ ZEON Award have been announced by the Society of Polymer Science Japan (SPSJ). The SPSJ selects the three most outstanding papers published by young authors in *Polymer Journal* every year, as recommended by the selection committee and board of directors of the SPSJ. For 2011, the winners are:

Dr Koichi Kodama (Saitama University, Japan) for the contribution ‘Structural effects of polyethers and ionic liquids in their binary mixtures on lower critical solution temperature liquid-liquid phase separation’ Vol. 43, No. 3, 2011.

Dr Ken Kojio (Nagasaki University, Japan) for the contribution ‘Simultaneous small-angle X-ray scattering/wide-angle X-ray diffraction study of the microdomain structure of polyurethane elastomers during mechanical deformation’ Vol. 43, No. 8, 2011.

Dr Kazuo Tanaka (Kyoto University, Japan) for the contribution ‘Thermodynamic study of POSS-based ionic liquids with various numbers of ion pairs’ Vol. 43, No. 8, 2011.

The academic profiles of the winners can be found below this announcement.

Dr Kodama, Dr Kojio and Dr Tanaka received their award certificates and medals at the award ceremony held in conjunction with the SPSJ annual meeting in May 2012 in Yokohama. Each winner also received a cash prize of 300 000 yen and presented a talk based on their respective papers.

On behalf of the *Polymer Journal* and the editorial board of the journal, I wish to congratulate Dr Kodama, Dr Kojio and Dr Tanaka on this well-deserved honor in recognition of their excellent papers. I hope the award will provide encouragement to these young researchers and this will be one of many awards they will receive in their bright careers.

The Award is open to all *Polymer Journal* first authors who are under the age of 38 years at the time of paper submission. I hope this award will encourage submissions from eligible authors to *Polymer Journal*, and look forward to seeing many applications for the 2012 PJ ZEON Award. Those interested should go to the SPSJ website (<http://www.spsj.or.jp>) for further information. Finally, let me acknowledge our sincere appreciation to Zeon Corporation for their generous sponsorship of this Award.

Toshikazu Takata
Editor-in-Chief

ABOUT THE WINNERS

Koichi Kodama

Dr Kodama received his PhD degree from the University of Tokyo in 2007 under the supervision of Professor Kazuhiko Saigo. He worked at the Yokohama National University as a postdoctoral fellow with Professor Masayoshi Watanabe from 2007 to 2008. He then became an Assistant Professor at Saitama University, working with Professor Takuji Hirose. His current research interests include construction of new supramolecular architectures.

About the award article: The authors showed the lower critical solution temperature phase behavior of polyether/ionic liquid (IL) binary mixtures and investigated the structural effect of polyethers and the cations and anions in the ILs. For ILs containing the same anions, the polyethers were highly soluble in imidazolium- or pyridinium-based ILs. It was suggested that hydrogen-bonding interactions between oxygen atoms in the polyethers and the aromatic hydrogen atoms on the cations in the ILs had an important role in the lower critical solution temperature-type phase behavior. The miscibility of the polyether/IL mixtures was also changed by the Lewis basicity of the anions in the ILs and polarity (oxygen weight fraction) of the polyethers.

Ken Kojio

Ken Kojio has been an Associate Professor of Chemistry and Materials Science at the Graduate School of Engineering, Nagasaki University in Japan since 2004, following his work as an Assistant Professor in 2002. He received his BS (1995) and PhD (1999) working with Professor Tisato Kajiyama from the Materials Physics and Chemistry Department, Kyushu University, Japan. He was a post-doc researcher in Materials Science and Engineering at the University of Illinois, Urbana-Champaign with Professor Steve Granick (2000–2001) and also in Polymer Science and Engineering at the University of Massachusetts, Amherst with Professor Shaw Ling Hsu (2001–2002). He also worked as a visiting scientist at the University of California, Santa Barbara with Professor Edward J Kramer (2007). His research interests include development of polyelectrolyte for lithium-ion batteries, mechanical properties of thermoplastic elastomers and interfacial properties of polymer thin films.

About the award article: The authors have first provided a systematic analysis on a microdomain structure of polyurethane elastomers (PUEs) during the elongation process, using a simultaneous small-angle X-ray scattering/wide angle X-ray diffraction technique at the SPring-8 (Synchrotron Radiation Facility in Hyogo, Japan). To achieve this, they prepared four PUEs with two different curing temperatures and chemical crosslinking densities. These factors provided the different initial structure of PUEs. The authors revealed that the microdomain structure changes during the elongation process exhibited formation of a zigzag structure of cylindrical hard segment domains, nanofibril formation, a layer structure of hard segment domains perpendicular to the elongation direction, and so on, depending on the initial structure.

Kazuo Tanaka

Dr Kazuo Tanaka received his PhD degree in 2004 from Kyoto University, and worked in Stanford University, USA, Kyoto University, and RIKEN as a postdoctoral fellow. In 2007, he has moved to Kyoto University again, and in 2008 he was promoted to an Assistant Professor. His research projects especially focus on design of new functional materials relating biotechnology and nanotechnology based on the silica-polymer hybrid materials.

About the award article: The authors reported the POSS-based room temperature-IL that possesses the melting temperature $< 25^{\circ}\text{C}$. They found that the connection of ion pairs to POSS can significantly improve the thermal stability and decrease the melting temperatures of the ion pairs. Furthermore, only the modified POSS with the larger number of ion pairs can be a thermally stable room temperature-IL. Finally, by the series of thermodynamic and conformational analyses, they clarified that the star-shaped distribution of ion pairs originated from the cubic framework should be necessary to express the characteristic changes in thermal properties of ion pairs connected to POSS.