Polymer Journal (2018) 50:407–409
https://doi.org/10.1038/s41428-018-0048-4

EDITORIAL

PJ ZEON Award for outstanding papers in *Polymer Journal* 2017

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Received: 11 March 2018 / Accepted: 12 March 2018 / Published online: 5 June 2018

The three winners of the 2017 PJ ZEON Award have been announced by the Society of Polymer Science Japan (SPSJ) as follows:

Shohei Ida (The University of Shiga Prefecture, Hikone, Japan) for the contribution '*End-crosslinking of Controlled Telechelic Poly(N-isopropylacrylamide) toward a Homogeneous Gel Network with Photo-induced Self-healing*', Vol. 49, No. 2, 2017.

Junpei Kuwabara (The University of Tsukuba, Tsukuba, Japan) for the contribution '*Direct Arylation Polycondensation for the Synthesis of Bithiazole-based Conjugated Polymers and Their Physical Properties*', Vol. 49, No. 1, 2017.

Kazuyuki Takata (The Kansai University, Suita, Japan) for the contribution '*Analysis of the Sol-to-gel Transition Behavior of Temperature-responsive Injectable Polymer Systems by Fluorescence Resonance Energy Transfer*', Vol. 49, No. 9, 2017.

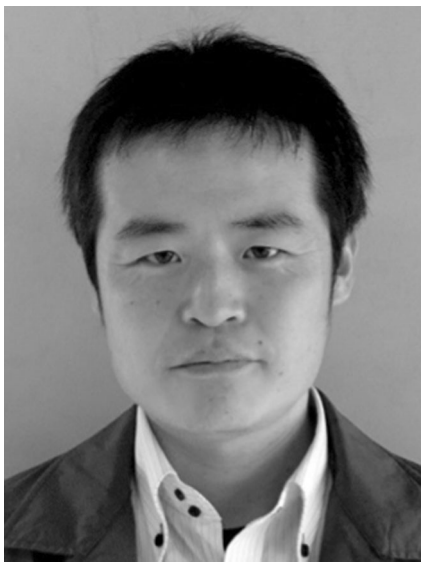
Ida, Kuwabara, and Takata received their award certificates and medals at an award ceremony held in conjunction with the SPSJ annual meeting in May 2018 in Nagoya. Each winner also received a cash prize of 300,000 JP yen and gave an invited talk based on their respective papers.

On behalf of the editors and editorial board of *Polymer Journal*, I wish to congratulate Ida, Kuwabara, and Takata on this honor in recognition of their excellent papers [1–3]. I hope the award will provide encouragement to these young researchers for their bright future careers. Academic profiles of the winners can be found below this announcement.

The PJ ZEON Award started since 2005 as the successor of The PJ Paper Award, which started since 1992.

This PJ ZEON Award is open to all of the first author of papers published in *Polymer Journal* [4] who is under 38 years of age. We are looking forward to receiving your submissions papers and many applications for the 2018 PJ ZEON Award. Each year the SPSJ selects up to three most outstanding papers published by young authors in *Polymer Journal*, as recommended by the selection committee and board of directors of the SPSJ. Those who are interested should go to the SPSJ website (http://main.spsj.or.jp//c5/pj/pj.htm) for further information. Finally, we express our sincere appreciation to the Zeon Corporation for their generous sponsorship of this award.

ABOUT THE WINNERS



Shohei Ida received his PhD degree in 2011 under the direction of Prof. Mitsuo Sawamoto at KyotoUniversity. Then, he moved to the University of Shiga Prefecture as an Assistant Professor. His research interests focus on the structural regulation of polymer gels by utilizing controlled polymerization technique and monomer sequence regulation for development of advanced stimuli-responsive materials.

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About the award article: The authors reported end-crosslinking of controlled telechelicpoly(N-isopropylacrylamide) (PNIPAAm) toward the construction of homogeneous gel network having self-healing property. To this end, the authors focused on reversible addition-fragmentation chain transfer (RAFT) polymerization mechanism using symmetrical trithiocarbonate (TTC)compound as a RAFT agent. Telechelic PNIPAAms were prepared by RAFT polymerization andsubsequent transformation of both terminal into activated esters. The obtained prepolymers were employed for the reaction with three-branched amine crosslinker, and the gelation boundary in relation to molecular weight and feed concentration of the prepolymer was systematically investigated.Importantly, the obtained gels showed UV-induced self-healing property by the function of TTC groups derived from RAFT agent.

Junpei Kuwabara received his Ph.D. from Tokyo Institute of Technology (2006) under thesupervision of Professor K. Osakada and Professor D. Takeuchi. He was a postdoctoral fellow(2006-2007) at Northwestern University under the auspices of Professor Chad A. Mirkin. In 2007, he joined the Graduate School of Pure and Applied Sciences, University of Tsukuba as anassistant professor, and was promoted to Lecturer in 2012. His reserch interests include polymer synthesis, organic optoelectronic materials, and supramolecular chemistry.

About the award article: The authors reported direct arylation polycondensation for synthesisof bithiazole-based conjugated polymers. The investigation on the reaction conditions revealed that the reaction with Pd(PCy3)2 as a precatalyst and N,N-diethylpropanamide as the reaction solvent afforded the target crystalline polymers with high molecular weights. These polymers tend to aggregate even in the diluted solution. The control of aggregation characteristics was a key factor for increasing the power conversion efficiency in the organic photovoltaic devices.This study expanded the application range of direct arylation polycondensation for preparation of crystalline polymer materials.

Kazuyuki Takata received his Master degree in 2006 from Kobe Pharmaceutical University, and works in Shionogi & Co., Ltd. In 2018, he received his PhD degree from Kansai University under the supervision of Professor Yuichi Ohya. He researched gelation mechanism of biodegradable temperature-responsive injectable hydrogels and their utility as drug releasing devices. He has researched injection formulation such as liquid, suspension, emulsion, liposome and microsphere, and designed manufacturing process at the company.

About the award article: The authors reported polymer chain transfer behavior between polymer micelles by the fluorescence resonance energy transfer (FRET) method during their temperature-responsive sol-to-gel transition to reveal its role on in the transition. The authors synthesized a triblock copolymer (tri-PCG) of poly (-cacaprolactone-co-glycolide) (PCGA) and poly(ethylene glycol) (PEG) attaching naphthalene or dansyl groups at both termini, tri-PCG-nap and tri-PCG-dan, as the FRET donors and acceptors, respectively. The investigation on FRET behavior of the mixture of tri-PCG-nap/tri-PCG micelles and tri-PCG-dan/tri-PCG micelles was revealed that the polymer chain transfer between micelles was accelerated by temperature increase, but began in advance gelation. The phenomenon was suppressed for the samples prepared by freeze-dried/dispersion method to retain their sol state at r.t. longer compared to the samples prepared usual dissolution.

References

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