

## Bungo Ochiai

Department of Chemistry and Chemical Engineering, Faculty of Engineering,  
Yamagata University, Japan

E-mail: ochiai@yz.yamagata-u.ac.jp, Tel & Fax: +81-238-26-3092  
Jonan 4-3-16, Yonezawa, Yamagata, 992-8510 Japan

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### Work Experiences

- 2020.4-2022.3 **Vice-Dean** (student-support, international exchange), Faculty of Engineering, Yamagata University
- 2015.9-2017.3 **Vice-Dean** (education), Faculty of Engineering, Yamagata University
- 2013.4-present **Professor**, Department of Chemistry and Chemical Engineering, Faculty of Engineering, Yamagata University
- 2008.2-2013.3 **Associate professor**, Department of Chemistry and Chemical Engineering, Faculty of Engineering, Yamagata University
- 2003.4-2008.1 **Assistant professor**, Department of Polymer Science and Engineering, Faculty of Engineering, Yamagata University
- 2001.5-2003.3 **Researcher**, SC Biosciences Inc.
- 1998.4-2001.3 **Research Fellow** (DC1), Japan Society of Promotion of Science
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- 2012.4-2014.3 **Visiting Associate Professor**, Molecular Engineering Institute, Kinki University

### Education

#### **Doctor of Engineering** 2001 March

Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology

*Development of Novel Polymerization Methods for Conjugated Enynes*  
*Supervisors: Prof. Takeshi Endo and Prof. Ikuyoshi Tomita*

#### **Master of Engineering** 1998 March

Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology

#### **Bachelor of Engineering** 1996 March

Faculty of Engineering, Tokyo Institute of Technology

### Publications (selected)

#### **Original Papers** (133 until 2022 Feb.)

- 1) Transparent and photochromic material prepared by copolymerization of bismuth(III) methacrylate  
Ochiai, B.; Kikuta, K.; Matsumura, Y.; Horikoshi, H.; Furukawa, K.;

- Miyamoto, Y.; Nishimura, Y. *ACS Appl. Polym. Mater.* **2021**, *3*, 4419-4423. DOI: [10.1021/acscapm.1c00710](https://doi.org/10.1021/acscapm.1c00710)
- 2) Selective capture of Pd<sup>2+</sup> by LCST graft chain and metal adsorbing stem chain  
Ochiai, B.; Tsuda, K. *J. Polym. Sci., Part A: Polym. Chem.* **2019**, *57*, 2383-2386.
  - 3) Cyclopolymerization of a bisacrylate through selective formation of 19-membered ring. Ochiai, B.; Shiomi, T.; Yoshita, H. *Polym. J.* **2016**, *48*, 859-862. doi:10.1038/pj.2016.45.
  - 4) Fabrication of Polymer-Ag Honeycomb Hybrid Film by Metal Complexation Induced Phase Separation at the Air/Water Interface. Mir, S. H.; Ochiai, B. *Macromol. Mater. Eng.* **2016**, *301*, 1026-1031. DOI: 10.1002/mame.201600035.
  - 5) Development of Hierarchical Polymer@Pd Nanowire-Network: Synthesis and Application as Highly Active Recyclable Catalyst and Printable Conductive Ink. Mir, S. H.; Ochiai, B. *ChemistryOpen* **2016**, *5*, 213-218. DOI: 10.1002/open.201600009.
  - 6) Facile synthesis of glycidates via oxidation of acrylates with aqueous solution of NaOCl in the presence of ammonium salts. Ochiai, B.; Hirano, T. *Heterocycles* **2014**, *88*, 487-493.
  - 7) Organic-sulfur-zinc hybrid nanoparticle for optical applications synthesized via polycondensation of trithiol and Zn(OAc)<sub>2</sub>. Ochiai, B.; Konta, H. *Nanoscale Res. Lett.* **2013**, *8*, 373.
  - 8) Branched cationic polyurethane prepared by polyaddition of chloromethylated five-membered cyclic carbonate and diethylenetriamine in molten salts. Ochiai, B.; Koda, K.; Endo, T. *J. Polym. Sci., Part A: Polym. Chem.* **2012**, *50*, 47-51.
  - 9) One-pot synthesis of graft copolymer by combination of free radical polymerization and polyaddition. Ochiai, B.; Kato, Y.; Endo, T. *Macromolecules*, **2009**, *42*, 8001-8002.
  - 10) Polyaddition of bifunctional cyclic carbonate with diamine in ionic liquids: *in situ* ion composite formation and simple separation of ionic liquid. Ochiai, B.; Satoh, Y.; Endo, T. *J. Polym. Sci., Part A: Polym. Chem.* **2009**,

47, 4629-4635.

- 11) Synthesis of rare-metal absorbing polymer by three-component polyaddition through combination of chemo-selective nucleophilic and radical additions. Ochiai, B.; Ogihara, T.; Mashiko, M.; Endo, T. *J. Am. Chem. Soc.* **2009**, *131*, 1636-1637.
- 12) Fixing carbon dioxide concurrently with radical polymerization for utilizing carbon dioxide by low-energy cost. Ochiai, B.; Hatano, Y.; Endo, T. *Macromolecules* **2008**, *41*, 9937-9939.
- 13) Controlled cyclopolymerization through quantitative 19-membered ring formation. Ochiai, B.; Ootani, Y.; Endo, T. *J. Am. Chem. Soc.* **2008**, *130*, 10832-10833.
- 14) Selective gas-solid phase fixation of carbon dioxide into oxirane-containing polymers: synthesis of polymer bearing cyclic carbonate group. Ochiai, B.; Iwamoto, T.; Endo, T. *Green Chem.* **2006**, *8*, 138-140.

#### **Review** (14 until 2022 Feb.)

- 1) Synthesis of polymers from carbon dioxide and carbon disulfide. (Japanese) Ochiai, B. *Kobunshi Ronbunshu* **2006**, *63*, 519-528.
- 2) Carbon Dioxide and Carbon Disulfide as Resources for Functional Polymers. Ochiai, B.; Endo, T. *Prog. Polym. Sci.* **2005**, *30*, 183-215.

#### **Awards**

- ✓ Young Scientists' Prize of The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology; 2012 Apr 9
- ✓ Young Scientist Award, Japan Thermosetting Plastic Industry Association; 2006 Oct 13
- ✓ Award for Encouragement of Research in Polymer Science, the Society of Polymer Science, Japan; 2004 May 23

### Other professional activities

2016-2021	Chair, The International Conference of Smart Systems Engineering (SmaSys 2016-2021)
2015	Chair Organizer, Interactive Joint Workshop for Design between Aalto IDBM and Yamagata University
2015	Local Organizing Committee, The 11th International Conference on Advanced Polymers via Macromolecular Engineering (APME 2015)
2014	Organizing Committee, Annual Meeting of the Tohoku Branch of the Chemical Society of Japan

### Other information

- Language: Japanese (native language), English (good)
- Memberships: Chemical Society of Japan, Society of Polymer Science Japan, American Chemical Society