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Curriculum Vitae

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Assistant Professor

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Relevant Data

Date of Birth:	December 21, 1977
Place of Birth:	Osaka, Japan
Gender:	Male
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Education

2001. 3 Bachelor of Engineering, Osaka Prefecture University

2003. 3 Master of Engineering, Osaka Prefecture University

2006. 3 Doctor of Engineering, Tokyo Institute of Technology (Prof. T. Takata)

Employment Experience

2006. 4 ~ 2007. 12 Researcher
Yashima Super-Structured Helix Project, Exploratory Research for Advanced Technology (ERATO), Japan Science and Technology Agency (JST), Japan

2008. 1 ~ 2009. 3 Research Assistant Professor
Institute for Materials Chemistry and Engineering, Kyushu University, Japan

2009. 4 ~ Assistant Professor
Graduate School of Engineering, Osaka Prefecture University, Japan

Award

2006. 3	Student Presentation Award in The 86th Annual Meeting of The Chemical Society of Japan (The Chemical Society of Japan)
2011. 11	The Prize for Paper (Japan Society of Colour Material)
2012. 7	Osaka Prefecture University Presidential Award (Osaka Prefecture University)

Grant

2010 ~ 2011	A Grant-in-Aid for Young Scientist (B) (22750180) from the Ministry of Education, Culture, Sports, Science and Technology of Japan
2010	Inamori Foundation
2011 ~ 2012	Adaptable and Seamless Technology Transfer Program through Target-driven R&D, Japan Science and Technology Agency.
2012~ 2014	A Grant-in-Aid for Challenging Exploratory Research (24655183) from the Ministry of Education, Culture, Sports, Science and Technology of Japan

Memberships

The Chemical Society of Japan

The Society of Polymer Science, Japan

The Society of Synthetic Organic Chemistry of Japan

American Chemical Society

Publication List

Original Papers (Representative)

1. **Maeda, T.**; Arikawa, S.; Nakao, H.; Yagi, S.; Nakazumi H. Linearly π-extended squaraine dyes enable the spectral response of dye-sensitized solar cells in the NIR region over 800 nm, *New J. Chem.,* **2013,** *37*, 701–708.
2. **Maeda, T.**; Mineta, S.; Fujiwara, H.; Nakao, H.; Yagi, S.; Nakazumi, H. Conformational effect of symmetrical squaraine dyes on the performance of dye-sensitized solar cells, *J. Mater. Chem. A,* **2013**, *1*, 1303–1309.
3. Nakao, H.; **Maeda, T.**; Nakazumi, H. Near-infrared-absorbing π-Extended Squarylium-based Dyes with Dicyanovinylene Substitution for Dye-sensitized Solar Cell Applications, *Chem. Lett.,* **2013**, *42*, 25–27.
4. Saito, S.; **Maeda, T.**; Nakazumi, H.; Colyer, C. L. An Application of Polymer-Enhanced Capillary Transient Isotachophoresis with an Emissive Boronic Acid Functionalized Squarylium Dye as an On-Capillary Labeling Agent for Gram-positive Bacteria, *Anal. Sci.*, **2013**, *29*, 157–159.
5. **Maeda, T.**; Tsukamoto, T.; Seto, A.; Yagi, S.; Nakazumi, H. Synthesis and Characterization of Squaraine-based Conjugated Polymers with Phenylene Linkers for Bulk Heterojunction Solar Cells, *Macromol. Chem. Phys.,* **2012**, *213*, 2590–2597.

6. Lin, X.; Rochett, S.; Massie, T. L.; Turner, G. B.; **Maeda, T.**; Nakazumi H.; Colyer C. L. Asymmetric Mono- and Bis-squarylium Dyes as Pre-column and On-column Labels for Protein Analysis by Capillary Electrophoresis with Laser-induced Fluorescence Detection, *J. Anal. Bioanal. Techniques,* **2012**, *S9*. (doi:10.4172/2155-9872.S9-001)

7. Saito, S.; Massie, T. L.; **Maeda, T.**; Nakazumi, H.; Colyer, C. L. A Long-Wavelength Fluorescent Squarylium Cyanine Dyes Possessing Bromonic Acid for Sensing Monosaccharides and Glycoproteines with Enhancement in Aqueous Solution. *Sensors*, **2012**, *12*, 5420–5431.

8. Saito, S.; Massie, T. L.; **Maeda, T.**; Nakazumi, H.; Colyer, C. L. On-Column Labeling of Gram-Positive Bacteria with a Boronic Acid Functionalized Squarylium Cyanine Dye for Analysis by Polymer-Enhanced Capillary Transient Isotachophoresis. *Anal. Chem*., **2012**, *84,* 2452-2458.

9. **Maeda, T.**; Hamamura, Y.; Miyanaga, K.; Shima, N.; Yagi, S.; Nakazumi, H. Near-infrared Absorbing Squarylium Dyes with Linearly Extended π-Conjugated Structure for Dye-sensitized Solar Cell Applications. *Org. Lett.,* **2011**, *13,* 5994-5997.

10. **Maeda, T.**; Shima, N.; Tsukamoto, T.; Yagi, S.; Nakazumi H. Unsymmetrical Squarylium Dyes with π-Extended Heterocyclic Components and Their Application to Organic Dye-sensitized Solar Cells. *Synth. Met.,* **2011**, *161,* 2481-2487.

11. **Maeda, T.**; Nakao, H.; Kito, H.; Ichinose, H.; Yagi, S.; Nakazumi, H. Far-red Absorbing Squarylium Dyes with Terminally Connected Electron-accepting Units for Organic Dye-sensitized Solar Cells. *Dyes Pigms.,* **2011**, *90*, 275–283.

12. Otsuka, H.; Nagano, S.; Kobashi, Y.; **Maeda, T.**; Takahara, A. A Dynamic Covalent Polymer Driven by Disulfide Methathesis under Photoirradiation. *Chem. Commun.,* **2009**, 1150–1152.

13. Otsuka, H.; Muta, H.; Sakada, M; **Maeda, T.**; Takahara, A. Scrambling Reaction between Polymers Prepared by Step–growth and Chain–growth Polymerizations: Macromolecular Cross-metathesis between 1,4-Polybutadiene and Olefin-containing Polyester. *Chem. Commun.,* **2009**, 1073–1075.

14. Amamoto, Y.; **Maeda, T.**; Kikuchi, K.; Otsuka, H.; Takahara, A. Rational Approach to Star-like Nanogels with Different Arm Length: Formation by Dynamic Covalent Exchange and Their Imaging, *Chem. Commun.,* **2009**, 689–691.

15. **Maeda, T.**; Furusho, Y.; Sakurai, S.-i.; Kumaki, J.; Okoshi, K.; Yashima, E. Double-Stranded Helical Polymers Consisting of Complementary Homopolymers, *J. Am. Chem. Soc.,* **2008**, *130*, 7938–7945.

16. Furusho, Y.; Tanaka, Y.; **Maeda, T.**; Ikeda, M.; Yashima, E. Photoresponsive Double-Stranded Helices Composed of Complementary Strands, *Chem. Commun*., **2007**, 3174–3176.

17. Seto, R.; **Maeda, T.**; Konishi, G.-i.; Takata, T. Synthesis and Structure of Optically Active Polyesters Containing C_2-Chiral Spirobifluorene Moieties in the Main Chain, *Polym. J.,* **2007**, *39*, 1351–1359.

18. Liu, R.; **Maeda, T.**; Kihara, N.; Harada, A.; Takata, T. Solvent-Free Synthesis of Pseudopolyrotaxane and Polyrotaxane, *J. Polym. Sci., Part A: Polym. Chem*., **2007**, *45*, 1571–1574.

19. Ikari, Y.; Seto, R.; **Maeda, T.**; Takata, T. Synthesis and Properties of Optically Active Polycarbonates Having C_2 Chiral Spirobifluorene Skeleton in the Main Chain, *Kobunshi Ronbunshu,* **2006**, *63*, 512–518.

20. **Maeda, T.**; Furusho, Y.; Shiro, M.; Takata, T. Self-Assembly of Multinuclear Complexes with Enantiomerically Pure Chiral Binaphthoxy Imine Ligands, *Chirality,* **2006**, *18*, 691–697.

21. **Maeda, T.**; Takeuchi, T.; Furusho, Y.; Takata, T. Design and Synthesis of Chiral Poly(Binaphthyl Salen Zinc Complex) and Application of the Asymmetric Field Based on Its Helical Conformation to a Catalytic Asymmetric Reaction, *J. Polym. Sci., Part A: Polym. Chem*., **2004**, *42*, 4693–4703.

22. **Maeda, T.**; Furusho, Y.; Takata, T. Synthesis and Structure of Poly(Binaphthyl Salen Manganese Complex) and Its Application to Asymmetric Epoxidation, *Chirality,* **2002**, *14*, 587–590.

23. Furusho, Y.; **Maeda, T.**; Takeuchi, T.; Takata, T. A Rational Design of Helix: Absolute Helix Synthesis by Binaphtyl-Salen Fusion, *Chem. Lett*., **2001**, 1020–1021.

Reviews

Maeda, T.; Otsuka, H.; Takahara, A. Dynamic Covalent Polymers: Reorganizable Polymers with Dynamic Covalent Bonds, *Prog. Polym. Sci.,* **2009**, *34*, 581–604.

Books

1. **Maeda, T.**; Takata, T.; C_2 Chiral Biaryl Unit-based Helical Polymers and Their Application to Asymmetric Catalysis. Itsuno, S. editor. Polymeric Chiral Catalyst Design and Chiral Polymer Synthesis, John Wiley & Sons Inc, **2011**, 267–292.
2. **Maeda, T.**; Otsuka, H.; Takahara, A. Dynamic Combinatorial Methods in Materials Science. In: Miller BL, editor. Dynamic Combinatorial Chemistry in Drug Discovery, Bioorganic Chemistry, and Materials Science, John Wiley & Sons Inc, **2009**, 229–260.
3. Otsuka H.; Amamoto, Y.; Matsuda, Y.; **Maeda, T.**; Takahara, A. Synthesis and Reaction of Well-defined Copolymers with Thermally Exchangeable Dynamic Covalent Bonds in the Side Chains. In: Matyjaszewski, K. editor. Controlled/Living Radical Polymerization: Progress in RAFT, DT, NMR & OMRP, American Chemical Society, **2009**, 319–329.