

Curriculum Vitae



Name: Takashi KATO

Title: Professor

Affiliation: Department of Chemistry and Biotechnology, School of Engineering, The University of Tokyo

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Education: B.S. The University of Tokyo, 1983
Ph.D. The University of Tokyo, 1988
Postdoc Cornell University, 1988-1989

Current Appointments:

Professor, The University of Tokyo, Department of Chemistry and Biotechnology, School of Engineering (2000 - present)

Editor-in-chief, *Polymer Journal* (2012-present)

Research Supervisor of PREST Research “Molecular Technology” of Japan Science and Technology Agency (JST) (2012-present)

Project Leader of Grant-in-Aid for Scientific Research “Fusion Materials” on Innovative Areas of MEXT (2010-present)

Advisory and Editorial Boards: *Advanced Materials*, *Chemical Science*,

Journal of Materials Chemistry., *New Journal of Chemistry*, *Small*, *ChemPlusChem*

Recent Awards:

2012 The Paper Award of the Japanese Liquid Crystal Society

2010 The Fast Breaking Paper of Thomson Reuters

2010 The Award of the Society of the Polymer Science, Japan

2009 Molecular Science Forum Lecture Professorship of Institute of Chemistry, Chinese Academy of Science

2008 The Award of Japanese Liquid Crystal Society

2004 The First JSPS (Japan Society for the Promotion of Science) Prize

2003 The 17th IBM Japan Science Award

2001 The Wiley Polymer Science Award

2000 The Paper Award of the Japanese Liquid Crystal Society

1993 The Sakurada Memorial Award of the Society of Fiber Science and Technology Japan

1993 The Chemical Society of Japan Award for Young Chemists

Research Interests:

Design, Synthesis, Structural Control, and Functionalization of Self-Assembled Softmaterials and Hybrids

Selected Recent Representative Publications:

1. Henmi, M.; Nakatsuji, K.; Ichikawa, T.; Tomioka, T.; Sakamoto, T.; Yoshio, M.; Kato, T.; “Self-Organized Liquid-Crystalline Nanostructured Membranes for Water Treatment: Selective Permeation of Irons” *Adv.Mater.*, **2012**, *24*, 2238-2241.

2. Ichikawa, T.; Yoshio, M.; Hamasaki, A.; Taguchi, S.; Liu, F.; Zeng, X.; Ungar, G.; Ohno, H.; Kato, T. "Induction of Thermotropic Bicontinuous Cubic Phases for Liquid-Crystalline Ammonium and Phosphonium Salts" *J. Am. Chem. Soc.*, **2012**, *134*, 2634-2643.
3. Tanabe, K.; Suzuki, Y.; Hasegawa, M.; Kato, T. "Full-color Tunable Photoluminescent Ionic Liquid Crystals Based on Tripodal Pyridinium, Pyrimidinim, and Quinolinium Salts" *J. Am. Chem. Soc.*, **2012**, *134*, 5652-5661.
4. Ichikawa, T.; Yoshio, M.; Hamasaki, A.; Kagimoto, J.; Ohno, H.; Kato, T.; "3D Interconnected Ionic Nano-Channels Formed in Polymer Films: Self-Organization and Polymerization of Thermotropic Bicontinuous Cubic Liquid Crystals" *J. Am. Chem. Soc.*, **2011**, *133*, 2163-2169.
5. Yasuda, T.; Shimizu, T.; Zeng, X.; Ungar, G.; Kato, T. "Electro-Functional Octupolar p-Conjugated Columnar Liquid Crystals" *J. Am. Chem. Soc.*, **2011**, *133*, 13437-13444.
6. Sakamoto, T.; Nishimura, Y.; Nishimura, T.; Kato, T. "Photoimaging of Self-Organized CaCO₃/Polymer Hybrid Films by Formation of Regular Relief and Flat Surface Morphologies" *Angew. Chem. Int. Ed.*, **2011**, *50*, 5856-5859.
7. Sagara, Y.; Kato, T.; "Brightly Tri-colored Mechanochromic Luminescence from the Single Luminophore of a Liquid Crystal: Reversible Writing and Erasing of the Images" *Angew. Chem. Int. Ed.*, **2011**, *50*, 9128-9132.
8. Kato, T.; Sakamoto, T.; Nishimura, T.; "Macromolecular Templating for the Formation of Inorganic-Organic Hybrid Structures" *MRS Bulletin*, **2010**, *35*, 127-132.
9. Yazaki, S.; Funahashi, M.; Kagimoto, J.; Ohno, H.; Kato, T.; "Nanostructured Liquid Crystals Combining Ionic and Electronic Functions" *J. Am. Chem. Soc.*, **2010**, *132*, 7702-7708
10. Sagara, Y.; Kato, T.; "Mechanically Induced Luminescence Changes in Molecular Assemblies" *Nature Chem.*, **2009**, *1*, 605-610.