

Curriculum Vitae

TAKASHI KATO, Professor, Ph. D. FRSC

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

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Education: B.S. The University of Tokyo, 1983
Ph.D. The University of Tokyo, 1988
Postdoc Cornell University (Prof. Jean M. J. Frechet), 1988-1989



Appointments and Recent Activities:

The President of the Society of Polymer Science, Japan (2018 – present)
The President of the Japanese Liquid Crystal Society (2016-2018)
Research Supervisor of PREST Research “Molecular Technology” (JST) (2012-2018)
Editor-in-chief, *Polymer Journal* (2012-2018), Advisory Board: *Advanced Materials*, *Chemical Science*, *Advanced Science*, *Journal of Materials Chemistry C*, *Small*, etc.
Xuetang Lecture, Tsinghua University, Department of Chemistry, 2018
Nanqiang Lecture, Xiamen University, 2018.

Recent Awards:

2017 The Chemical Society of Japan Award
2014 Fellow of the Royal Society of Chemistry (FRSC)
2012 The Japanese Liquid Crystal Society (JLCS) Awards
2010 The Award of the Society of the Polymer Science, Japan
2009 Molecular Science Forum Lecture Professorship, Institute of Chemistry,
Chinese Academy of Science
2005 The 1st JSPS Prize (JSPS: Japan Society for Promotion of Science)
2003 The 17th IBM Japan Science Award

Research Interests:

Design, Synthesis, Structural Control, and Functionalization of Self-Assembled Materials

Selected Recent Publications:

1. Kato T.; Uchida J. *et al.* “Functional Liquid Crystals towards the Next Generation of Materials” *Angew. Chem. Int. Ed.*, **2018** 57, 4355.
2. Nakayama M.; Kato T. *et al.* “Stimuli-Responsive Hydroxyapatite Liquid Crystal: Dynamic Control of Macroscopic Ordering and Magneto-Optical Functions” *Nat. Commun.*, **2018**, 9, 568.
3. Sakamoto T.; Kato T. *et al.* “Development of Nanostructured Water Treatment Membranes Based on Thermotropic Liquid Crystals: Molecular Design of Sub-Nanoporous Materials” *Adv. Sci.*, **2018** 5, 1700405.
4. Kato T.; Yoshio M.; Ichikawa T, *et al.* “Transport of Ions and Electrons in Nanostructured Liquid Crystals” *Nature Reviews Mater.*, **2017**, 2, 17001.
5. Uchida J.; Kato T. *et al.* “Self-Assembly of Giant Spherical Liquid-Crystalline Complexes and Formation of Nanostructured Polymer Gels Exhibiting Self-Healing Properties” *Angew. Chem. Int. Ed.*, **2017** 56, 14085.
6. Sagara Y.; Yamane S.; Mitani M.; Weder C.; Kato T. “Mechanoresponsive Luminescent Molecular Assemblies: An Emerging Class of Materials” *Adv. Mater.* **2016**, 28, 1073-1095
7. Soberats B.; Kato T. *et al.* “Ionic Switch Induced by a Rectangular-Hexagonal Phase Transition in Benzenammonium Columnar Liquid Crystals” *J. Am. Chem. Soc.*, **2015**, 137, 13212.
8. Sakuda J.; Kato T. *et al.* “Liquid-Crystalline Electrolytes for Lithium-Ion Batteries: Ordered Assemblies of a Mesogen-Containing Carbonate and a Lithium Salt” *Adv. Funct. Mater.*, **2015** 25, 1206.