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Education

2010 B. S. in Chemistry (Tohoku University)

2011 July - 2011 September: Scholarship from Fellowship of International Quality Network – Medicinal Chemistry (IQN-MC), University of Regensburg, Germany (Prof. O. Reiser)

2012 M. S. in Chemistry (Tohoku University)

2014 Ph. D. in Chemistry (Tohoku University)

Academic Experience

2012-2014: JSPS Research Fellowship for Young Scientists (DC1)

2014-2016: Assistant Professor, WPI-AIMR, Tohoku University

2016-2018: Project Assistant Professor, Department of Chemistry, The University of Tokyo

2014-2020: Researcher, ERATO Isobe Degenerate π-Integration Project, JST

2018-Present: Assistant Professor, Department of Chemistry, The University of Tokyo

Awards and Honors

2009: Ogino Hiroshi-Kazuko Award (Department of Chemistry, Tohoku University)

2013: Otsu Academy Award Fellow (No. 51)

2018: The Fullerenes, Nanotubes and Graphene Research Society's Young Scientist Poster Award

2019: CSJ Presentation Award at the 99th CSJ Annual Meeting

2020: The 16th Osawa Award of The Fullerene, Nanotubes and Graphene Research Society

List of Publications

1. Regulated single-axis rotations of a carbonaceous guest in a van der Waals complex with an entropy cost, Matsuno, T.; Nakai, Y.; Maniwa, Y.; Someya, M.; Sato, S.; Isobe, H. *Chem. Asian J.* **2020**, *15* (2), 273-278.
2. Retarded solid-state rotations of an oval-shaped guest in a deformed cylinder with CH-π arrays, Matsuno, T.; Fukunaga, K.; Sato, S.; Isobe, H. *Angew. Chem. Int. Ed.* **2019**, *58* (35), 12170-12174.
3. Narrowing segments of helical carbon nanotubes with curved aromatic panels, Kogashi, K.; Matsuno, T.; Sato, S.; Isobe, H. *Angew. Chem. Int. Ed.* **2019**, *58* (22), 7385-7389.
4. Unbiased rotational motions of an ellipsoidal guest in a tight yet pliable host, Sun, Z.; Mio, T; Okada, T.; Matsuno, T.; Sato, S.; Kono, H.; Isobe, H. *Angew. Chem. Int. Ed.* **2019**, *58* (7), 2040-2044.
5. Concyclic CH-π arrays for single-axis rotations of a bowl in a tube, Matsuno, T.; Fujita, M.; Fukunaga, K.; Sato S.; Isobe, H. *Nature Commun.* **2018**, *9*, 3779.
6. Ratchet-free solid-state inertial rotation of a guest ball in a tight tubular host, Matsuno, T.; Nakai, Y.; Sato, S.; Maniwa, Y.; Isobe, H. *Nature Commun.* **2018**, *9*, 1907.
7. Enhanced yet inverted effects of π-extension in self-assembly of curved π-systems with helicity, Matsuno, T.; Kogashi, K.; Sato, S.; Isobe, H. *Org. Lett.* **2017**, *19* (23), 6456-6459.
8. Assembly, thermodynamics and structures of a two-wheeled composite of a dumbbell-shaped molecule and cylindrical molecules with different edges, Matsuno, T.; Kamata, S.; Sato, S.; Yokoyama, A.; Sarkar, P.; Isobe, H. *Angew. Chem. Int. Ed.* **2017**, *56* (47), 15020-15024.
9. Pentagon-embedded cycloarylene molecules with cylindrical shapes, Hitosugi, S.; Sato, S.; Matsuno, T.; Koretsune, T.; Arita, R.; Isobe, H. *Angew. Chem. Int. Ed.* **2017**, *56* (31), 9106-9110.
10. Self-sorting of two hydrocarbon receptors with one carbonaceous ligand, Matsuno, T.; Sato, S.; Yokoyama, A.; Kamata, S.; Isobe, H. *Angew. Chem. Int. Ed.* **2016**, *55* (49), 15339-15343.
11. Synthesis and dynamic structures of a hybrid nanohoop molecule composed of anthanthrenylene and phenylene panels, Sarkar, P.; Sato, S.; Kamata, S.; Matsuno, T.; Isobe, H. *Chem. Lett.* **2015**, *44* (11), 1581-1583.
12. Modulation of energy conversion processes in carbonaceous molecular bearings, Hitosugi, S.; Ohkubo, K.; Kawashima, Y.; Matsuno, T.; Kamata, S.; Nakamura, K.; Kono, H.; Sato, S.; Fukuzumi, S.; Isobe, H. *Chem. Asian J.* **2015**, *10* (11), 2404-2410.
13. Molecular recognition in curved π-systems: Effects of π-lengthening of tubular molecules on thermodynamics and structures, Matsuno, T.; Iizuka, R.; Sato, S.; Isobe, H. *Chem. Sci.* **2015**, *6* (2), 909-916.

14. Geometric measures of finite carbon nanotube molecules: A proposal for length index and filling indexes, Matsuno, T.; Naito, H.; Hitosugi, S.; Sato, S.; Kotani, M.; Isobe, H. *Pure Appl. Chem.* **2014**, *86* (4), 489-495.
15. Bottom-up synthesis and structures of π-lengthened tubular macrocycles, Matsuno, T.; Kamata, S.; Hitosugi, S.; Isobe, H. *Chem. Sci.* **2013**, *4* (8), 3179-3183.
16. $Cu(dap)_2Cl$ as efficient visible-light-driven photoredox catalyst in carbon-carbon bond-forming reactions, Pirtsch, M.; Paria, S.; Matsuno, T.; Isobe, H.; Reiser, O. *Chem. Eur. J.* **2012**, *18* (24), 7336-7340.
17. 2,11-Dibromo-5,8-dibutyl[4]helicene, Isobe, H.; Matsuno, T.; Hitosugi, S.; Nakanishi, W. *Acta Crystallogr., Sect. E: Struct. Rep. Online* **2012**, *E68* (4), o1239.
18. Iridium-catalyzed direct borylation of phenacenes, Hitosugi, S.; Nakamura, Y.; Matsuno, T.; Nakanishi, W.; Isobe, H. *Tetrahedron Lett.* **2012**, *53* (9), 1180-1182.
19. Illusory molecular expression of "Penrose stairs" by an aromatic hydrocarbon, Nakanishi, W.; Matsuno, T.; Ichikawa, J.; Isobe, H. *Angew. Chem. Int. Ed.* **2011**, *50* (27), 6048-6051.
20. Concise synthesis of halogenated chrysenes ([4]phenacenes) that favor π-stack packing in single crystals, Isobe, H.; Hitosugi, S.; Matsuno, T.; Iwamoto, T.; Ichikawa, J. *Org. Lett.* **2009**, *11* (17), 4026-4028.

Books and Reviews

1. Stereoisomerism and structures of rigid cylindrical cycloarylenes, Sun, Z.; Matsuno, T.; Isobe, H. *Bull. Chem. Soc. Jpn.* **2018**, *published online* (doi: 10.1246/bcsj.20180051).
2. Curved-π Receptors, Matsuno, T.; Sato, S.; Isobe, H. *Comprehensive Supramolecular Chemistry II.* Atwood, J. Ed., Elsevier, Oxford, 2017, Vol. 3, pp. 311-328.