



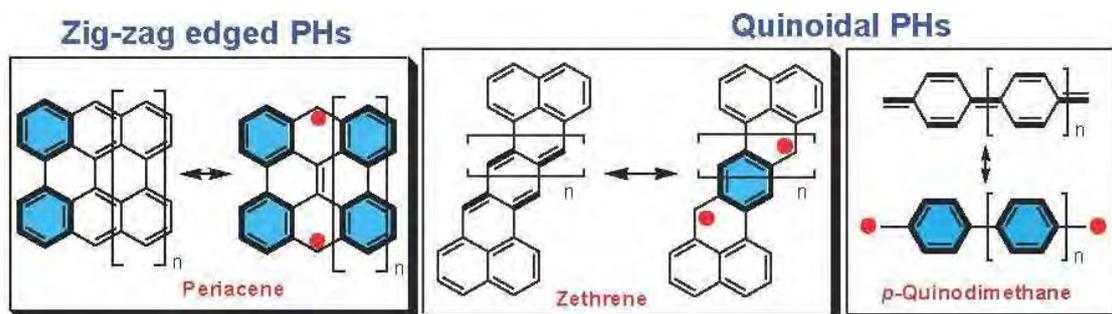
The Chinese University of Hong Kong
Department of Chemistry
Research Seminar Series

Speaker: Prof. Jishan Wu
Department of Chemistry
National University of Singapore &
Institute of Materials Research and Engineering, A*STAR

Title: Open-shell Polycyclic Hydrocarbons

<< Abstract >>

I will discuss three types of polycyclic hydrocarbons with an open-shell ground states: (a) zig-zag edged nanographenes such as periacenes;^[1] (b) Z-shaped quinoidal hydrocarbons such as zethrenes,^[2] and (c) extended *p*-quinodimethanes.^[3] The discussion will include their challenging synthesis, their characterizations of the ground-state structures and their unique optical, electronic and magnetic properties.^[4]



References

- [1] (a) Yao, J. *et al.*, *Chem. Eur. J.* **2009**, *15*, 9299; (b) Li, J. *et al.*, *Chem. Sci.* **2012**, *3*, 846.
 [2] (a) Sun, Z. *et al.*, *J. Am. Chem. Soc.* **2011**, *133*, 11896. (b) Li, Y. *et al.*, *J. Am. Chem. Soc.* **2012**, *134*, 14913.
 (c) Z. Sun *et al.*, *J. Am. Chem. Soc.* **2013**, *135*, 18299. (d) Zeng, W. *et al.*, *Chem. Eur. J.* **2013**, *19*, 16841.
 [3] (a) Zeng, Z. *et al.*, *J. Am. Chem. Soc.* **2012**, *134*, 14513. (b) Zeng, Z. *et al.*, *J. Am. Chem. Soc.* **2013**, *135*, 6363. (c) Zeng, Z. *et al.*, *Angew. Chem. Int. Ed.* **2013**, *52*, 8561.
 [4] See our recent review articles: (a) Sun, Z. *et al.*, *Chem. Soc. Rev.* **2012**, *41*, 7857. (b) Sun, Z. *et al.*, *Chem. Asian J.* **2013**, *8*, 2894.

Date: January 9, 2014 (Thursday)

Time: 4:00 p.m.

Venue: LG23, Science Centre

ALL ARE WELCOME

Contact Person:
Prof. Henry N.C. Wong

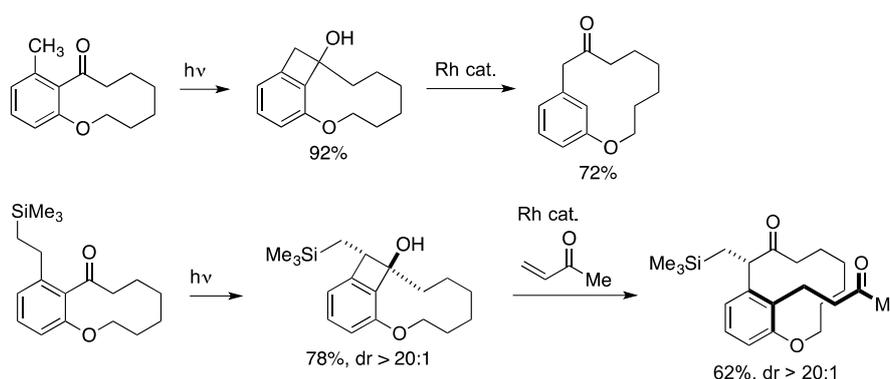


The Chinese University of Hong Kong
Department of Chemistry
Research Seminar Series

- Speaker:** Prof. Masahiro Murakami
 Department of Synthetic Chemistry and Biological Chemistry
 Kyoto University
- Title:** Stereospecific Transfer of Central Chirality to Planar Chirality in Ring Expansion from Orthocyclophanes to Metacyclophanes
- Date:** January 14, 2014 (Tuesday)
- Time:** 4:30 p.m.
- Venue:** L2, Science Centre

< Abstract >

Carbon – carbon (C – C) bonds constitute the major framework of organic molecules and carbon – hydrogen (C – H) bonds are abundant in their peripheries. Such nonpolar C – H bonds are thermodynamically stable and kinetically inert in general. Selective activation of those ubiquitous bonds offers a straightforward method to construct and functionalize organic skeletons. Herein is presented ring expansion from orthocyclophanes to metacyclophanes by means of sequential actions of light and a metal catalyst. Formally, non-strained C–H and C–C bonds are cleaved and exchanged without any atoms or groups eliminated. Of note is that the entire transformation is energetically uphill. The involvement of photocyclization renders it possible to drive the thermodynamically disfavored transformation forward. Furthermore, the present work has established stereospecificity in the transfer of central chirality on a tertiary carbon to planar chirality of the resulting substituted metacyclophane.



Masahiro Murakami was born in 1956 in Toyama, Japan. BS in 1979, MSc in 1981; PhD in 1984 (Prof. Mukaiyama), all from the University of Tokyo. Assistant at the University of Tokyo (1984-1987); Assistant at Kyoto University (1987 to 1993); Associate Professor at Kyoto University (1993-2001); Professor at Kyoto University (2002-present). Research field: Organic chemistry, Organometallic chemistry.
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The Chinese University of Hong Kong
Department of Chemistry
Research Seminar Series

Speaker: Prof. William R. Roush
The Scripps Research Institute
Jupiter, Florida
U.S.A.

Title: Synthesis of Chiral Allylboron and Enolborane
Reagents via Allene and Acrylamide
Hydroboration Reactions and Applications to
the Synthesis of Natural Products

Date: January 29, 2014 (Wednesday)

Time: 2:30 p.m.

Venue: Room 703
Mong Man Wai Building



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Contact Person:
Prof. Henry N.C. Wong