

**Title**      **A Journey toward Transformative Molecules:  
Breakthrough in Arene-Assembling Chemistry**

**Speaker**    Prof. Kenichiro Itami  
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**Date & Time** Friday, July 19, 2013 4:00 p.m.  
**Place**            I<sup>2</sup>CNER Hall, Ito campus, Kyushu University

**Abstract**

The ultimate goal of our research group is to develop “transformative molecules”, innovative functional molecules that make a marked change in the form and nature of science and technology, and ultimately society. With such goal in mind, the work of our group has centered on catalyst-enabling synthetic chemistry with broad directions. The main emphasis of current activity is on the development of new molecular catalysts to solve challenging synthetic problems for realizing super-efficient chemical synthesis and for producing as-yet unexplored molecules of significant interest in various fields.

Organic molecules having aryl-aryl bonds (arene-assembled molecules) represent privileged structural motifs in a number of transformative molecules that have been discovered or developed to date. Our recent endeavors exploring advanced arene-assembling chemistry have led to (i) new catalysts for direct C-H arylation of arenes (ideal arene assembly), (ii) rapid synthesis of pharmaceuticals, bioactive natural products, and organic materials (useful arene assembly), (iii) controlled synthesis of aromatic carbon nanorings and carbon nanotubes (circular arene assembly), and (iv) bottom-up synthesis of nanographenes (planar arene assembly).

Keywords: Catalysis, C-H activation, pharmaceuticals, natural products, nanocarbons, materials

**About the Speaker**

**CAREER**

1996~1998	Ph.D., Kyoto University (with Prof. Yoshihiko Ito)
1996~1998	JSPS Research Fellowship for Young Scientists
1997~1998	Exchange Student, Uppsala University, Sweden (with Prof. Jan-E. Bäckvall)
1998~2005	Assistant Professor, Kyoto University (with Prof. Jun-ichi Yoshida)
2005~2008	Associate Professor, Nagoya University (with Prof. Ryoji Noyori)
2008~present	Full Professor, Department of Chemistry, Nagoya University
2012~present	Director, Institute of Transformative Bio-Molecules (ITbM), Nagoya University

**AWARDS & HONORS**

2013	Novartis Chemistry Lectureship Award
2013	Mukaiyama Award
2012	Fellow of the Royal Society of Chemistry, UK
2012	German Innovation Award “Gottfried Wagener Prize 2012”
2012	Novartis-MIT Lectureship Award, MIT, USA

Specialties: Chemistry, Synthetic Chemistry, Catalysis, Pharmaceutical Science, Nanocarbon Chemistry  
Publication Records: 160 papers, h-index 38

**Host: Professor Atsushi Takahara**

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<http://i2cner.kyushu-u.ac.jp/>

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