



Z. Hou

The author presented on this page has recently published his **10th article** since 2000 in *Angewandte Chemie*: “Copper-Catalyzed Direct Carboxylation of C–H Bonds with Carbon Dioxide”: L. Zhang, J. Cheng, T. Ohishi, Z. Hou, *Angew. Chem.* **2010**, 122, 8670–8673; *Angew. Chem. Int. Ed.* **2010**, 49, 8852–8855.

Zhaomin Hou

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Position:	Director of the Organometallic Chemistry Laboratory, Advanced Science Institute, RIKEN (Japan)
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Education:	1978–1982 BS in Chemistry, China University of Petroleum, Shandong (China) 1984–1989 MS and PhD with Prof. Yuzo Fujiwara and Prof. Hiroshi Taniguchi, Kyushu University (Japan) 1989–1991 Postdoc with Prof. Hiroshi Yamazaki, RIKEN (Japan) 1991–1993 Postdoc with Prof. Douglas Stephan, University of Windsor (Canada)
Awards:	2007 JSPS Prize; 2007 Chemical Society of Japan Award for Creative Work; 2007 Mitsui Chemicals Catalysis Science Award; 2008 The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology of Japan: Prizes for Science and Technology; 2009 Rare Earth Society of Japan Award
Current research interests:	Development of new generations of single-site catalysts for precision polymerization and copolymerization to create novel functional materials; development of efficient, selective synthetic reactions for fine chemical synthesis; activation and functionalization of less reactive chemical bonds and small molecules; synthesis and reactivity of metal hydride clusters; synthesis of novel organic electroluminescent (EL) materials
Hobbies:	Watching movies, hiking, and running

When I wake up I ... do some simple stretching exercises for a little while before having breakfast.

A good work day begins with ... a “good morning”.

The biggest problem that scientists face is ... how to convince politicians of the importance of curiosity-driven research.

The biggest challenge facing scientists is ... to solve problems related to sustainable energy and resources.

Chemistry is fun because ... it allows you to imagine changes at the molecular level and see the outcome in the real world.

The secret of being a successful scientist is ... to be persistent and optimistic.

My favorite food is ... Sushi and Sukiyaki.

My 5 top papers:

1. “The First Structurally Characterized Metal Ketyl Complex: $\text{Sm}(\text{ketyl})(\text{OAr})_2(\text{THF})_2$ and Its Reversible Coupling to a Disamarium(III) Pinacolate”: Z. Hou, T. Miyano, H. Yamazaki, Y. Wakatsuki, *J. Am. Chem. Soc.* **1995**, 117, 4421–4422. (The discovery was made from a “decomposed” reaction of a very reactive radical species, and has later led to the successful isolation of a series of structurally well-defined metal ketyl radical complexes.)
2. “Scandium Half-Metallocene-Catalyzed Syndiospecific Styrene Polymerization and Styrene–Ethylene Copolymerization: Unprecedented Incorporation of Syndiotactic Styrene–Styrene Sequences in Styrene–Ethylene Copolymers”: Y. Luo, J. Baldamus, Z. Hou, *J. Am. Chem. Soc.* **2004**, 126, 13910–13911. (Cationic rare earth alkyls can serve as unique single-site polymerization catalysts.)
3. “Catalytic Addition of Terminal Alkynes to Carbodiimides by Half-Sandwich Rare Earth Metal Complexes”: W.-X. Zhang, M. Nishiura, Z. Hou, *J. Am. Chem. Soc.* **2005**, 127, 16788–16789. (I was surprised that a chelating amidinate metal species, which was thought to be very stable, was easily protonated and displaced from the metal ion by a terminal alkyne.)
4. “Hydrogenation of Carbon Monoxide by Tetranuclear Rare Earth Metal Polyhydrido Complexes. Selective Formation of Ethylene and Isolation of Well-Defined Polyoxo Rare Earth Metal Clusters”: T. Shima, Z. Hou, *J. Am. Chem. Soc.* **2006**, 128, 8124–8125. (Unprecedented insights into the deoxygenative/reductive coupling of CO to ethylene, involving C–O triple bond cleavage and C–H bond and C–C double bond formation.)
5. “Isoprene Polymerization with Yttrium Amidinate Catalysts: Switching the Regio- and Stereoselectivity by Addition of AlMe_3 ”: L. Zhang, M. Nishiura, M. Yuki, Y. Luo, Z. Hou, *Angew. Chem.* **2008**, 120, 2682–2685; *Angew. Chem. Int. Ed.* **2008**, 47, 2642–2645. (The addition of a small amount of AlMe_3 dramatically changed the regio- and stereoselectivity of the polymerization reaction from 3,4-isospecific to 1,4-*cis* selective.)

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