C.-H. Cheng

# Chien-Hong Cheng


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| **Date of birth**: | March 11, 1949 |
| **Position**: | Professor and Senior Vice President, National Tsing Hua University |
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| **Education**: | 1971 BS, Department of Chemistry, National Tsing Hua University<br>1978 PhD with Richard Eisenberg, Department of Chemistry, University of Rochester<br>1979 Postdoctoral research with Richard Eisenberg, University of Rochester |
| **Awards**: | **2001** Chemical Society (Taiwan) Award; **2002** Ministry of Education Science Award; **2009** Fellow of the Royal Society of Chemistry |
| **Current research Interests**: | Transition-metal-catalyzed cyclization reactions involving C–H activation; organic reactions catalyzed by first-row transition metals; 2π-component coupling reactions; synthesis of organic and organometallic electroluminescent materials and fabrication of electroluminescent devices |
| **Hobbies** : | Tennis, badminton, walking |


*The author presented on this page has recently published his **10th article** in Angewandte Chemie in the last 10 years:*
"Rhodium(III)-Catalyzed Oxidative C–H Coupling of *N*-Methoxybenzamides with Aryl Boronic Acids: One-Pot Synthesis of Phenanthridinones": J. Karthikeyan, R. Haridharan, C.-H. Cheng, *Angew. Chem.* **2012**, *124*, 12509–12513; *Angew. Chem. Int. Ed.* **2012**, *51*, 12343–12347.

## My biggest motivation is … curiosity.

**G**uaranteed to make me smile is … when my predictions come true.

**M**y greatest achievement has been … to help the chemistry department to design and construct its main building.

**T**he most exciting thing about my research is … the discovery of new catalytic reactions together with my students.

**I** would have liked to have discovered … organic light-emitting devices.

**W**hen I'm frustrated, I … play tennis with friends.

**M**y favorite author is … Jane Austen (Pride and Prejudice).

**M**y favorite food is … Japanese food.

**T**he most significant scientific advance of the last 100 years has been … DNA replication.

**I**f I won the lottery, I would … be happy!

**M**y favorite place on earth is … Taiwan.

**M**y best investment was … on my kids' education.

**I**f I were not a scientist, I would be … an engineer.

### My 5 top papers

1. "Facile Aryl–Aryl Exchange Between the Palladium Center and Phosphine Ligands in Palladium(II) Complexes": K.-C. Kong, C.-H. Cheng, *J. Am. Chem. Soc.* **1991**, *113*, 6313–6315. (A small proportion of the products from palladium-catalyzed reactions contains aryl groups from the aryl phosphine ligands.)
2. "Cobalt-Catalyzed Highly Regio- and Stereoselective Intermolecular Reductive Coupling of Alkynes with Conjugated Alkenes": C.-C. Wang, P.-S. Lin, C.-H. Cheng, *J. Am. Chem. Soc.* **2002**, *124*, 9696–9697. (The first reported intermolecular coupling of a carbon–carbon triple bond and double bond.)
3. "New Iridium Complexes as Highly Efficient Orange–Red Emitters in Organic Light-Emitting Diodes": J. P. Duan, P. P. Sun, C.-H. Cheng, *Adv. Mater.* **2003**, *15*, 224–228. (OLED devices based on the title complex as an emitter can also give high device efficiency with long lifetimes.)
4. "Synthesis of Phenanthridinones from *N*-Methoxybenzamides and Arenes by Palladium-Catalyzed Multiple C–H Activation Steps at Room Temperature": J. Karthikeyan, C.-H. Cheng, *Angew. Chem.* **2011**, *123*, 10054–10057; *Angew. Chem. Int. Ed.* **2011**, *50*, 9880–9883. (This cyclization proceeds with exceedingly high regioselectivity on both substrates.)
5. "One-Pot Synthesis of Isoquinolinium Salts by Rhodium-Catalyzed C–H Bond Activation: Application to the Total Synthesis of Oxychelerythrine": J. Jayakumar, K. Parthasarathy, C.-H. Cheng, *Angew. Chem.* **2012**, *124*, 201–204; *Angew. Chem. Int. Ed.* **2012**, *51*, 197–200. (This reaction can be readily applied to the synthesis of many natural products.)

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