

Buxing Han

Date of birth:	July 20, 1957
Position:	Professor of Physical Chemistry at the Institute of Chemistry, Chinese Academy of Sciences, Beijing (China)
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Education:	1978–1982 BSc, Hebei University of Science and Technology, Shijiazhuang (China) 1982–1985 MSc with Professor Dingxiang Tang at the Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun (China) 1985–1988 PhD with Professor Riheng Hu and Professor Haike Yan at the Institute of Chemistry, Chinese Academy of Sciences, Beijing 1989–1991 Postdoc with Professor Ding-Yu Peng at the Department of Chemical Engineering, University of Saskatchewan, Saskatoon (Canada)
Awards since 2000:	2001 Young Scientist Award of the Chinese Academy of Sciences; 2004 and 2006 Excellent Supervisor Awards of the Chinese Academy of Sciences; 2007 Fellow of the Royal Society of Chemistry
Current research interests:	Chemical thermodynamics of green solvent systems and applications of green solvents in green chemistry, including the phase behavior and intermolecular interactions in complex supercritical fluids (SCFs), ionic liquids (ILs), supercritical (SC) CO ₂ /IL systems; chemical reactions in SC CO ₂ , ILs, and CO ₂ /ILs, and special attention is paid to enhancing the efficiency of chemical reactions using the unusual properties of green solvents; physicochemical properties and applications of green microemulsions related to SC CO ₂ and ILs.
Hobbies:	Playing table tennis



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The author presented on this page has recently published his **10th article** since 2000 in *Angewandte Chemie*:
“Metal–Organic Framework Nanospheres with Well-Ordered Mesopores Synthesized in an Ionic Liquid/CO₂/Surfactant System”: Y. Zhao, J. Zhang, B. Han, J. Song, J. Li, Q. Wang, *Angew. Chem.* **2011**, 123, 662–665; *Angew. Chem. Int. Ed.* **2011**, 50, 636–639.

If I were not scientist, I would be ... an architect.

When I wake up I ... have a big breakfast and think about what I will be doing during the day.

I am waiting for the day when someone will discover ... medicines that can cure cancer.

The three qualities that make a good scientist are ... creativity, intelligence, perseverance.

Chemistry is fun because ... it creates new and useful compounds and materials.

The best advice I have ever been given is ... to do original work because the time for a researcher is very limited.

My favorite food is ... dumplings.

The biggest challenge facing chemists is ... to produce all valuable chemicals and materials that we need without waste and pollution, especially using renewable materials.

My 5 top papers:

1. “Selective Phenol Hydrogenation to Cyclohexanone Over a Dual Supported Pd–Lewis Acid Catalyst”: H. Z. Liu, T. Jiang, B. X. Han, S. G. Liang, Y. X. Zhou, *Science* **2009**, 326, 1250–1252. (In this work, we developed a highly efficient and clean route to prepare cyclohexanone.)
2. “Hydrogenation of Carbon Dioxide is Promoted by a Task-Specific Ionic Liquid”: Z. F. Zhang, Y. Xie, W. J. Li, S. Q. Hu, J. L. Song, T. Jiang, B. X. Han, *Angew. Chem.* **2008**, 1143–1145; *Angew. Chem. Int. Ed.* **2008**, 47, 1127–1129. (In this paper we demonstrated the first use of an ionic liquid as a base that promotes the hydrogenation of CO₂ to form formic acid.)
3. “Reversible Switching of Lamellar Liquid Crystals into Micellar Solutions using CO₂”: J. L. Zhang, B. X. Han, W. Li, Y. J. Zhao, M. Q. Hou, *Angew. Chem.* **2008**, 120, 10273–10277; *Angew. Chem. Int. Ed.* **2008**, 47, 10119–10123. (In this work we discovered that compressed CO₂ can induce the transition between lamellar liquid crystals and micellar solutions of AOT/water systems reversibly at ambient temperature by controlling the pressure.)
4. “Reverse Micelles in Carbon Dioxide with Ionic-Liquid Domains”: J. H. Liu, S. Q. Cheng, J. L. Zhang, X. Y. Feng, X. G. Fu, B. X. Han, *Angew. Chem.* **2007**, 3377–3379; *Angew. Chem. Int. Ed.* **2007**, 46, 3313–3315. (This paper reported ionic liquids in supercritical CO₂ microemulsions for the first time.)
5. “Pd Nanoparticles Immobilized on Molecular Sieves by Ionic Liquids: Heterogeneous Catalysts for Solvent-Free Hydrogenation”: J. Huang, T. Jiang, H. X. Gao, B. X. Han, Z. M. Liu, W. Z. Wu, Y. H. Chang, G. Y. Zhao, *Angew. Chem.* **2004**, 116, 1421–1423; *Angew. Chem. Int. Ed.* **2004**, 43, 1397–1399. (Pd nanoparticles were immobilized with a guanidinium-ion-based ionic liquid on molecular sieves and exhibited excellent performance in liquid-phase hydrogenation of olefins.)

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