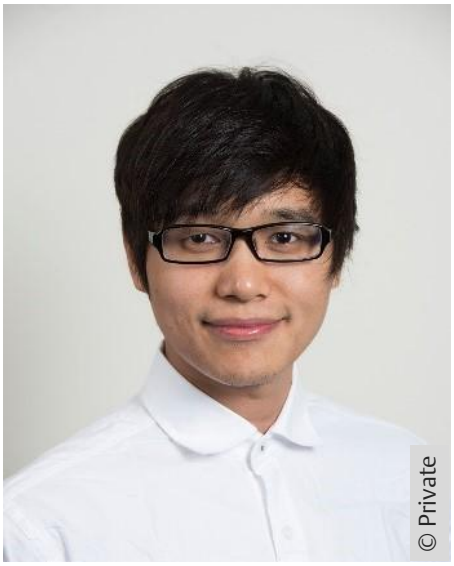
Meet Dr. Conghui Tang, Thieme Chemistry Journals Awardee 2025!



Dr. Conghui Tang *completed his bachelor's degree at Huazhong University of Science and Technology (HUST) in 2011 and earned his PhD from Peking University in 2016. In 2020, after three postdoctoral research assignments, he returned to HUST where he is now a full professor and principal investigator.*

Thieme: Which field of organic chemistry are you interested in the most and why?

Dr. Tang: I am deeply interested in the development of non-noble metal-catalyzed C–C, C–N, and C–O bond formation reactions. Our work aims to improve both homogeneous catalysts and, more importantly, to develop recyclable, supported heterogeneous catalysts that exhibit high efficiency and turnover (Figure 1). Such sustainable catalytic processes are vital for the synthesis of pharmaceuticals, natural products, and functional materials. By minimizing waste and energy consumption, these innovations directly contribute to green chemistry, which aligns with our commitment to both scientific and environmental responsibility.

Thieme: Following that, what is the focus of your current research activity?

Dr. Tang: My current research lies at the intersection of catalysis and green chemistry, with a particular focus on the synthesis of heterogeneous atomically dispersed metal catalysts and their application in organic transformations. We are investigating how these atomically dispersed metal catalysts can exhibit unique selectivity, distinct from traditional homogeneous catalysts, offering significant advantages in terms of reactivity, efficiency, and sustainability. My work seeks to contribute to the development of catalytic systems that are not only highly efficient but also environmentally friendly, with broad application potential in industrial processes.

Thieme: What do you think about the modern role and prospects of organic chemistry?

Dr. Tang: Organic chemistry remains at the core of scientific and technological advancement. With the increasing demand for new materials, pharmaceuticals, and renewable energy solutions, organic chemistry is more relevant than ever. Modern organic chemistry is highly interdisciplinary, bridging connections with fields such as materials science, environmental chemistry, and biochemistry. The prospects for organic chemistry are particularly promising in the development of sustainable

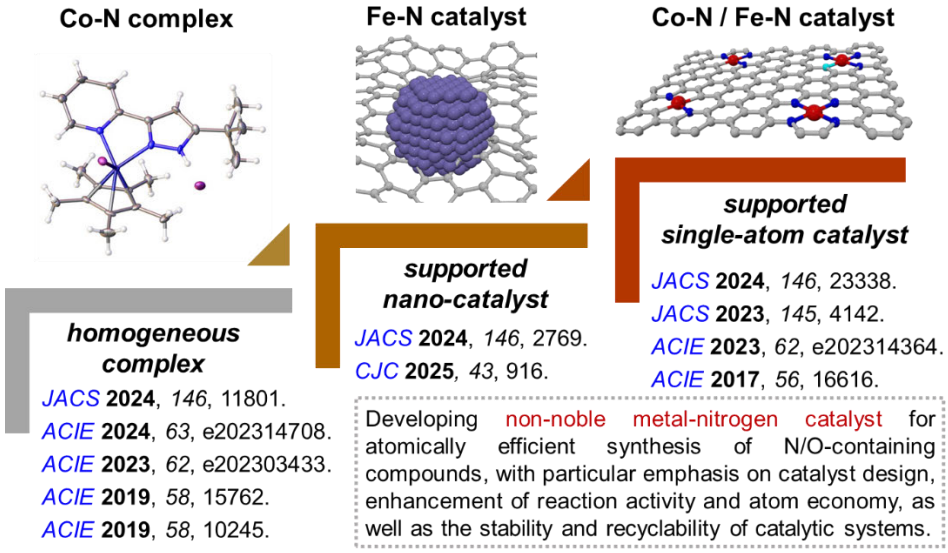


Figure 1 Developing non-noble metal-based catalysts and their application in organic synthesis.

technologies, such as catalysts for green chemistry, and in the design of materials for renewable energy applications. These areas will likely define the next era of innovation in organic chemistry.

Thieme: Which difficulties are there for young upcoming chemists in your field? Do you have any tips?

Dr. Tang: For young chemists, one of the biggest challenges is navigating the transition from the academic environment to the professional world. While research opportunities are abundant, there are often obstacles in terms of funding, access to resources, and establishing a strong professional network. My advice would be to focus on building collaborative relationships early on, seek out mentors who can offer guidance, and always stay curious. Interdisciplinary work is increasingly important, so developing expertise in multiple areas can open many doors. Also, always be ready to adapt and learn new skills as science evolves.

Thieme: What is your most important scientific achievement to date and why?

Dr. Tang: One of my most significant scientific achievements has been the development of sustainable organic synthesis methodologies using modern heterogeneous catalysis technology. For instance, we developed a heterogeneous iron-catalyzed aerobic allylic C–H bond oxidation to enones, providing a green and efficient strategy for selective oxidation in natural product synthesis, including steroids and terpenes (*J. Am. Chem. Soc.* **2024**, *146*, 2769). This method was recognized by Dr. Christophe Allais, Senior Principal Scientist at Pfizer, who commented that it “holds the promise to be of industrial interest” (*Org. Process Res. Dev.* **2024**, *28*, 4240). Additionally, our work on atomically dispersed Co/Fe catalysts for C–N bond formation reactions has achieved high catalyst turnover and recyclability, opening a new pathway for the synthesis of aziridines, quinolines, etc. (*J. Am. Chem. Soc.* **2023**, *145*, 4142; *Angew. Chem. Int. Ed.* **2023**, *62*, e202314364; *J. Am. Chem. Soc.* **2024**, *146*, 23338).

Thieme: Could you tell us something about yourself outside the lab, such as your hobbies or extra-work interests?

Dr. Tang: Outside the lab, I’m passionate about sports, including soccer, badminton, cycling, and billiards. These activities allow me to disconnect, recharge, and stay mentally and physically active. I believe that a well-rounded life outside of work enhances creativity and problem-solving skills, which are essential for tackling complex scientific challenges. Staying active also helps me maintain a healthy work–life balance, which is crucial for long-term success.