

Recent advances in mechanochemical reactions of [60]fullerene and non-fullerene molecules

Guan-Wu Wang^{a,b*}

^a School of Chemistry and Materials Science, Anhui Normal University, Wuhu, Anhui 241002, P. R. China

^b Department of Chemistry, University of Science and Technology of China, Hefei, Anhui 230026, P. R. China

*Corresponding author: gwang@ustc.edu.cn

Abstract

Over the years, mechanochemical organic synthesis has garnered increasing attention due to its unique advantages. These reactions are typically conducted in ball mills under solvent-free conditions or via liquid-assisted grinding (LAG), offering benefits such as high reaction efficiency, precise stoichiometric control, and reduced waste generation compared to traditional solvent-based methods.^{1,2} In this talk, I will present our recent advances in the mechanochemistry of [60]fullerene and non-fullerene molecules, showcasing their potential in sustainable synthetic strategies.

Keywords: mechanochemistry, fullerenes, non-fullerene molecules, solvent-free, green organic synthesis

References

1. Zhu, S.-E; Li, F.; Wang, G.-W. *Chem. Soc. Rev.* **2013**, *42*, 7535-7570.
2. Wang, G.-W. *Chem. Soc. Rev.* **2013**, *42*, 7668-7700.

A short biography

Guan-Wu Wang earned his B.S., M.S. and Ph.D. degrees from Lanzhou University in 1987, 1990 and 1993, respectively. He then did his postdoctoral work at Fudan University, Kyoto University, University of Kentucky, University of Chicago and Yale University. In May of 2000, he joined the University of Science and Technology of China as an awardee of the “High-Level Talent Program” of the Chinese Academy of Sciences (1999). He is a Fellow of Chinese Chemical Society (FCCS), a recipient of the National Science Fund for Distinguished Young Scholars (2001) and named as Elsevier’s Most Cited Chinese Researchers (2014-now). He is a Chair Professor at University of Science and Technology of China (2022) and Anhui Normal University (2024). His research interests include mechanochemical organic synthesis and fullerene chemistry.