

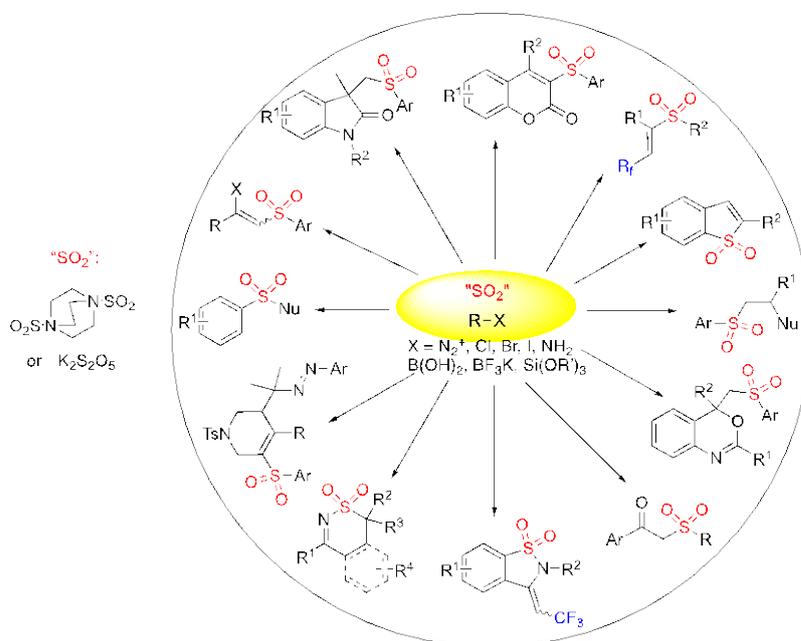
Synthesis of Sulfonyl Compounds through the Insertion of Sulfur Dioxide

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As a unique functional group, sulfone is presented in a broad range of natural products, pharmaceuticals, agrochemical molecules, and materials. Among the processes by introducing the sulfonyl building block, fixation of sulfur dioxide into small molecules is promising and attractive. In the past few years, the rapid development for the insertion of sulfur dioxide into small molecules has been witnessed.¹ Recently, we developed several approaches for the generation of sulfonyl compounds through insertion of sulfur dioxide under transition metal catalysis or metal-free conditions via radical process.²



1. For selected reviews, see: (a) Zheng, D.; Wu, J. "Sulfur Dioxide Insertion Reactions for Organic Synthesis", Nature Springer: Berlin, 2017; (b) Qiu, G.; Zhou, K.; Gao, L.; Wu, J. *Org. Chem. Front.* **2018**, *5*, 691; (c) Qiu, G.; Lai, L.; Cheng, J.; Wu, J. *Chem. Commun.* **2018**, *54*, 10405; (d) Qiu, G.; Zhou, K.; Wu, J. *Chem. Commun.* **2018**, *54*, 12561.
2. For selected examples, see: (a) Zheng, D.; Yu, J.; Wu, J. *Angew. Chem. Int. Ed.* **2016**, *55*, 11925; (b) Zheng, D.; An, Y.; Li, Z.; Wu, J. *Angew. Chem., Int. Ed.* **2014**, *53*, 2451; (c) Gong, X.; Chen, J.; Lai, L.; Cheng, J.; Sun, J.; Wu, J. *Chem. Commun.* **2018**, *54*, 11172; (d) Liu, T.; Li, Y.; Lai, L.; Cheng, J.; Sun, J.; Wu, J. *Org. Lett.* **2018**, *20*, 3605; (e) Liu, T.; Ding, Y.; Fan, X.; Wu, J. *Org. Chem. Front.* **2018**, *5*, 3153.

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