Recent Developments in Copper- and Iron-catalyzed Reactions in Diazo Chemistry

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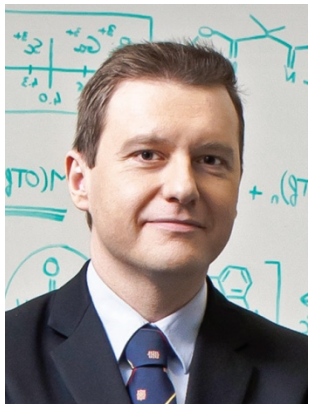

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Various Lewis acids have been developed as green catalysts for asymmetric synthesis. Chiral metal complexes derived from iron, copper, and bismuth salts have been employed in selected asymmetric C–C, C–Si, C–N, and C–S bond-forming reactions, such as the Mukaiyama aldol, epoxide opening, Michael and Diels-Alder reactions.[1] Enantioselective oxidation catalysts will also be presented.[2] As part of our ongoing interest in the development of greener reaction conditions, we report alternate reaction solvent systems. These results will contribute to the development of green acid catalysis for asymmetric synthesis.

1. (a) Li, M.; Carreras, V.; Jalba, A.; Ollevier, T. *Org. Lett.* **2018**, *20*, 995–998. (b) Lauzon, S.; Keipour, H.; Gandon, V.; Ollevier, T. *Org. Lett.* **2017**, *19*, 6324–6327. (c) Ollevier, T.; Plancq., B. *Chem. Commun.* **2012**, *48*, 2289–2291.
2. Jalba, A.; Régnier, N.; Ollevier, T. *Eur. J. Org. Chem.* **2017**, 1628–1637.