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IL04 – Iron Catalyzed C–H Bond Amination Using High-Spin Complexes

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Pursuant to the development of new catalysts capable of C–H bond functionalization, we have introduced dipyrrinato iron complexes as amination catalysis. The operative oxidants feature high-spin iron imido or iminyl radicals which are competent for intra- and intermolecular C–H bond amination. Details concerning the characterization of the putative intermediates competent for group transfer catalysis will be described. Additionally, the scope of group transfer reactivity will be described, highlighted by the protecting-group free syntheses of complex heterocycles.

References

- 1. Hennessy, E. T.; Liu, R. Y.; Iovan, D. A.; Duncan, R. A.; Betley, T. A. Chem. Sci., 2014, 5, 1526.
- 2. Hennessy, E. T.; Betley, T. A. Science **2013**, 340, 591.