## Triazolylidene iron(II) piano-stool complexes: synthesis and catalytic hydrosilylation of carbonyl compounds

C. J. Johnson<sup>1</sup>, M. Albrecht<sup>1</sup>\*

<sup>1</sup>Universität Bern

1,2,3-Triazolylidenes are a recently developed sub-class of NHC ligands which have tremendous versatility due to the synthetic flexibility of the copper catalysed cycloaddition of alkynes with azides (CuAAC). These ligands are strong  $\sigma$ -donors, exhibiting stronger donor properties than classic Arduengo-type imidazole-2-ylidenes. This property, coupled with the electronic flexibility of the mesoionic ligands makes them a powerful class of ligands for a large variety of catalytic transformations.

Iron is inexpensive, earth-abundant, non-toxic, biologically relevant, and environmentally benign. Thus, iron catalysts offer an attractive alternative to the systems based on rare and precious platinum group and coinage metals which dominate current literature.<sup>3</sup> Herein we present a new class of triazolylidene iron(II) piano stool complexes and their activity in catalytic hydrosilylation reactions.

- [1] P. Mathew, A. Neels, M. Albrecht, J. Am. Chem. Soc., 2008, 130, 13534-13535.
- [2] K. F. Donnelly, A. Petronilho, M. Albrecht, Chem. Commun., 2013, 49, 1145-1159.
- [3] K. Riener; S. Haslinger, A. Raba, M. P. Högerl, M. Cokoja, W. A. Herrmann, F. E. Kühn, *Chem. Rev.*, **2014**, *114*, 5215-5272.