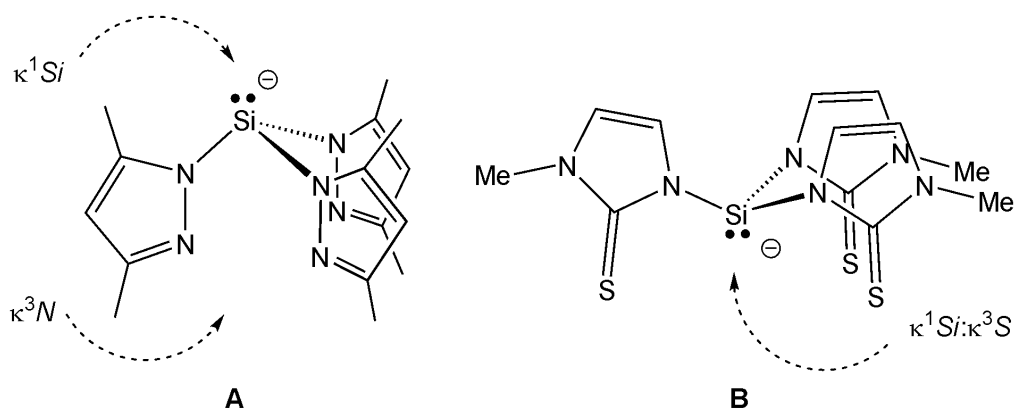


## Coordination Chemistry of Novel Ambidentate Si-based Ligands

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There is a growing interest in multidentate ligand systems featuring dual functionality.<sup>[1]</sup> The modification of "classical" chelating ligands using podand topology to produce novel, flexible, multidentate ligand systems has opened up an exciting area of chemistry over the last decades. In order to extend our previous studies on the Janus-head type tris(pyrazolyl)methanide ligands,<sup>[2]</sup> we have recently turned our focus to the coordination chemistry of Si-based *inter*-(**A**)<sup>[3,4]</sup> and *intramolecular* (**B**)<sup>[5]</sup> coordinating, ambidentate ligands featuring a tripodal shape and a Lewis-basic ligand backbone (see Chart).



Ambidentate Si-bridged ligands of type **A** are of particular interest since, apart from interesting characteristics introduced by the more metallic bridge, the expansion of the bite size of the chelating donors as well as the accessibility of the ligand backbone may be envisaged.<sup>[3,4]</sup> Intramolecular ligands of type **B** merit attention due to the *trans* influencing, anionic silanide donor. Furthermore, we have recently demonstrated that multifunctional ligands such as tris(methimazolyl)silanids, [Si(mt<sup>Me</sup>)<sub>3</sub>]<sup>-</sup> (**B**), are suitable chelating ligands for the stabilisation of a *triangulo* palladium cluster.<sup>[5]</sup> The poster will serve as a platform to discuss the coordination variability of **A** and **B**, including solid-state structures of selected metal complexes and advanced NMR spectroscopic investigations on their solution behaviour.

[1] Review: I. Kuzu, I. Krummenacher, J. Meyer, F. Armbruster, F. Breher, *Dalton Trans.* **2008**, 5836. [2] Breher and Mountford *et al.* in *Angew. Chem. Int. Ed.* **2004**, 43, 2521; *Dalton Trans.* **2006**, 1073; *Chem. Eur. J.* **2008**, 14, 5918; *Chem. Eur. J.* **2009**, 15, 4350; *Organometallics* **2010**, 29, 1174. [3] F. Armbruster I. Fernández, F. Breher, *Dalton Trans.* **2009**, 5612. [4] I. Fernández, P. Oña Burgos, F. Armbruster, I. Krummenacher, F. Breher, *Chem. Commun.* **2009**, 2586. [5] F. Armbruster, J. Meyer, A. Baldes, P. Oña Burgos, I. Fernández, F. Breher, *Chem. Commun.* **2010**, DOI: 10.10139/C002435J (first published on the web 28th April 2010).