Czech Chemical Society Lecture

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University Campus Bohunice, Kamenice 5, Building B11/room 132

N-COORDINATED TETRYLENES

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Tetrylenes of composition [L₂E:] or [L(X)E:] (E = Si, Ge, Sn, Pb; L = supporting ligand; X = polar group) attract attention in the present time due to their unique structures and reactivities.¹ As the central atom E has both pair of electron and vacant p orbital, tetrylenes may behave as donors and acceptors. While electrophilic tetrylenes are capable of activating small molecules, tetrylenes supported by amidinate, β -diketiminate and other chelate ligands are good donating ligands and may coordinate transition or main group metals.³ Some of these complexes are able to catalyse organic transformations.³ Tetrylenes containing different type of chelating ligands are also studied in our department. Therefore, chemistry of *N*-coordinated tetrylenes will be presented.

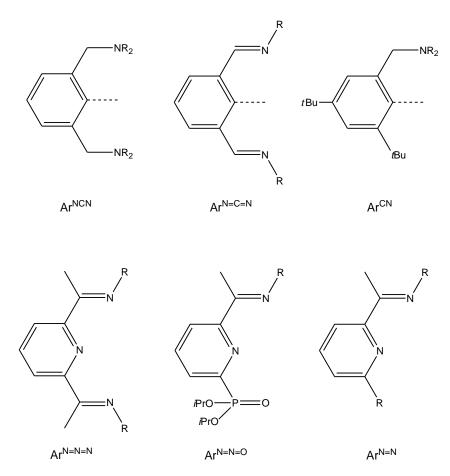


Figure 1. Examples of chelating ligands studied in group 14 elements

References:

1. V. Y. Lee and A. Sekiguchi, Organometallic Compounds of Low-Coordinate Si, Ge, Sn and Pb: From Phantom Species to Stable Compounds, Wiley, Chichester, U.K., 2010.

2 a) K. Izod, Coord. Chem. Rev., 2012, 256, 2972–2993; b) Y. Xiong, S. Yao and M. Driess, Angew. Chem., Int. Ed., 2013, 52, 4302–4311; c) S. K. Mandal and H. W. Roesky, Acc. Chem. Res., 2012, 45, 298–307.

3. L. Alvarez-Rodriguez, J. A. Cabeza, P. Garcia-Alvarez and D. Polo, Coord. Chem. Rev., 2015, 300, 1–28.