

A Janus Head Type Diposphorus Trication as a Phosphorus Building Block

Feldmann, Kai-Oliver, Weigand, Dr Jan. J.

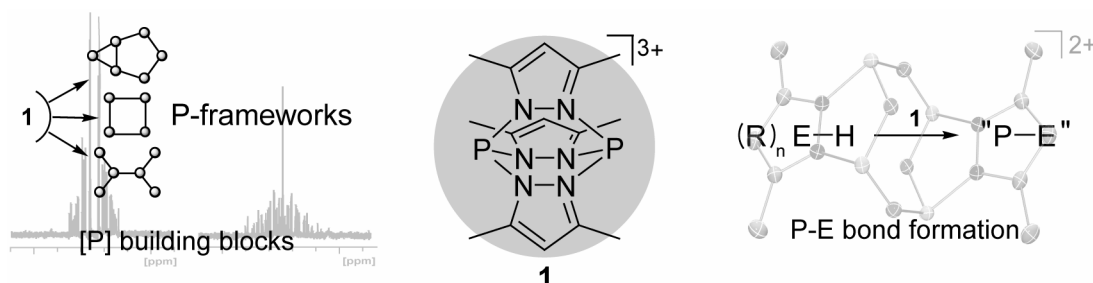
Graduate School of Chemistry and Department of Inorganic and Analytical Chemistry

WWU Münster, Corrensstr. 30, 48149 Münster, Germany

jweigand@uni-muenster.de

Approaching phosphorus chemistry from a coordination chemistry point of view by recognizing phosphorus(III) centers as Lewis acids opens the field of ligand-stabilized phosphorus cations.^[1,2]

We have developed an efficient, large scale synthesis to the novel, Janus-head type diposphorus trication **1**. The unique combination of weakly bound pyrazol moieties and the high positive charge of trication **1** promises an interesting reactivity.^[3] We systematically investigate the reactivities of **1** e. g. in substitution and protolysis reactions. In this contribution we focus on protolysis reactions which give rise to novel phosphorus frameworks. The observed products reflect unusual aspects for main group element–element bond formation. Our investigations of these fundamentally important reactivities aim for the application of highly-reactive, polycationic phosphorus compounds as a source of [P] building blocks. This is a conceptually new approach to the preparation of large phosphorus and mixed phosphorus-main group element frameworks.



Janus-head type diposphorus trication as a source of [P] building blocks.

References:

[1] N. Burford, P. J. Ragoon, *Dalton Trans.* **2002**, 4307; [2] J. J. Weigand, N. Burford, A. Decken, A. Schulz, *Eur. J. Inorg. Chem.* **2007**, 4868; [3] J. J. Weigand, K.-O. Feldmann, A. K. C. Echterhoff, A. Ehlers, K. Lammertsma, *Angew. Chem.* **2010**, DOI:10.1002/ange.201001363.