MS43-O3 **Low Valent Silicon.** Dietmar Stalke, *Institut für Anorganische Chemie der Universität Göttingen, Tammannstraße 4, 37077 Göttingen, Germany*
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Currently the chemistry of silicon is mainly based on silicon(IV), whereas that of silicon(II) is still in its infancy. A silylene (R_2Si:) is a molecule with a divalent neutral silicon atom holding a lone pair of electrons. We elaborated the synthesis of the first base-stabilized dichlorosilylene that is stable at room temperature. The structure features a trigonal pyramidal threefold-coordinated silicon atom with the stereochemically active lone pair at the apex. The Cl-Si-Cl angle of only 97.3°, the side-on coordination of the NHC and the shape of the lone-pair suggest that the silicon atom is barely sp^2 hybridized and that the lone-pair adopts predominantly s-character [1]. Incorporation of a silylene in a Si_3PC five-membered ring stabilizes the heavier anti-aromatic CP^+ congener. Although this anti-aromatic ring is 24 kcal/mol higher in energy than the virtual aromatic anion the silicon and phosphorus atoms offer sufficient stabilization allowing the isolation of the cation [2]. The silylene activates white phosphorus and we were pleased to synthesise of a neutral acyclic P_4 chain. The Z-diphosphene isomer consists of two Si atoms and four P atoms, which together form a neutral acyclic Si_2P_4 (Si=P–P=P–P=Si) chain with 6p electrons accommodated in a diphosphene and two phosphasilene units [3]. The obstacles in the refinement of the various structures are discussed.

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