

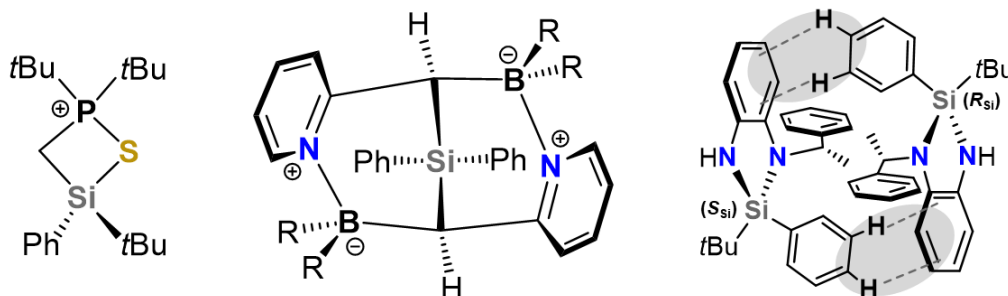


Silicon-Based Ring Systems: Structural Motifs, Stereochemical Aspects, and Use as Synthetic Intermediates

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Small inorganic ring systems have always been highly attractive targets for exploring new bonding concepts and impressively demonstrate the diversity of the structural chemistry of main-group element compounds.^[1] The development of new types of silicon-based cycles that carry functional or chiral information can give important impetus for the design of novel reactivity patterns.^[2-5] For example, we enabled synthetic access to stereochemically pure four-membered heterocyclic cations with phosphine chalcogenide-stabilized silicon centers and studied their stereochemical behaviour in ring-opening and ring-closing reactions.^[2] The synthesis and reactivity of siloxane-based cationic rings was also described by us.^[3] Recently, we reported a route to diaminocyclosilanes that proved to be versatile reactive intermediates for siloxane scaffold design.^[5] The presentation gives an overview of our recent and ongoing work on synthesis, stereochemistry, and application of new silicon-based ring systems.



References

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