Strained Silicon Clusters Arisen from Amidinate-Stabilized Silicon Compounds

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Small ring systems (n = 3-5) possess unique electronic and bonding properties. Due largely to the small bond angles present in their structures, these lead to unique hybridization modes in the participating atoms, thus shaping the valence orbitals of these complexes and granting access to novel reactivity. In this presentation, we explore the synthesis of strained ring systems bearing B, Si and Ge atoms, possessing curious structural characteristics and fascinating modes of electron distribution. The diverse mechanistic pathways in the synthesis of these novel spiro molecules will be discussed alongside demonstration of their intriguing electronic properties through relevant reactivity studies.