

## Interesting bonds formed by heavier main group elements

Shigeru Nagase<sup>1</sup>

*<sup>1</sup>Department of Theoretical and Computational Molecular Science  
Institute for Molecular Science, Japan*

Carbon plays a central role in many fields of chemistry and provides a wide variety of important saturated and unsaturated compounds. It is of considerable interest to replace the skeletal carbons of these compounds by heavier homologues such as silicon, germanium, tin, and lead to create new compounds featured by interesting bonds and structures, which are not expected for carbon compounds. In this talk, I present our recent research on the bonds and structures of hypervalent, aromatic, and multiply-bonded compounds containing heavier main group elements (and transition metals), which is performed in collaboration with experiment.