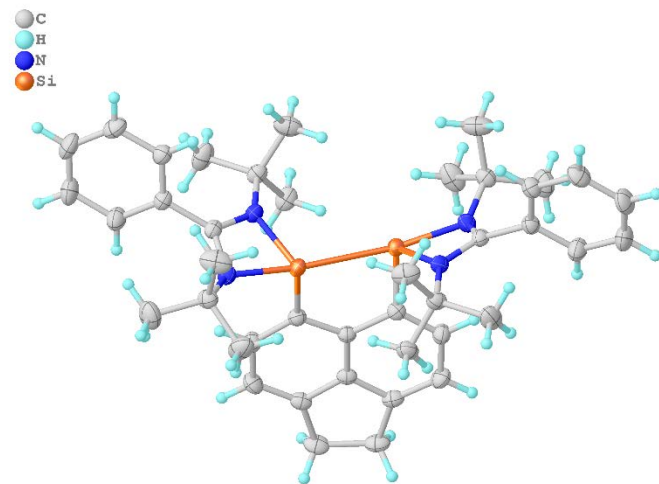


Longest silicon–silicon double bond

Read the full article at: rsc.li/2AORlts

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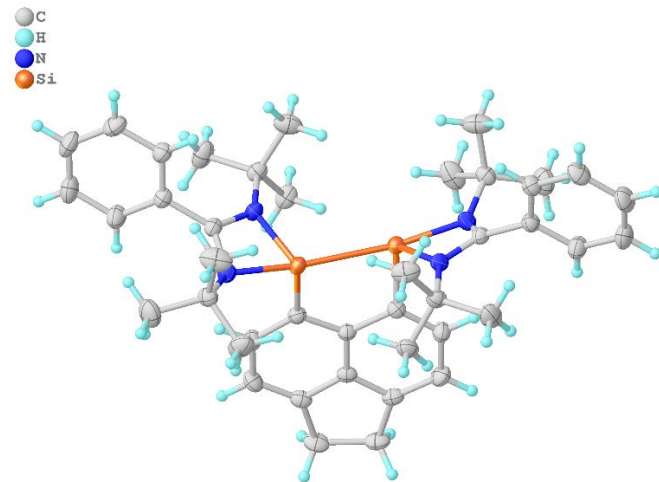
Bis-silylenylacenaphthene

The compound with the silicon–silicon bond is called bis-silylenylacenaphthene. It has a complex structure of carbon atoms, which holds two silicon atoms close together so they can form the double bond. Dative bonds from four nitrogen atoms help make the silicon–silicon bond longer. The compound can react in various ways. It can undergo addition reactions across the double bond, in a similar way to alkenes.

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1. How many electrons are shared in a double covalent bond?
2. Explain why silicon is a larger atom than carbon. Hint: think about electronic structures.
3. Write an equation for the addition reaction of bromine to ethene.
4. Suggest why covalent bonds between small atoms are stronger than bonds between large ones.