$[Si(SiMe_3)_3]_6Ge_{18}M$ (M = Cu, Ag, Au): Metalloid cluster compounds as unusual building blocks for a supramolecular chemistry .

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Supporting Information

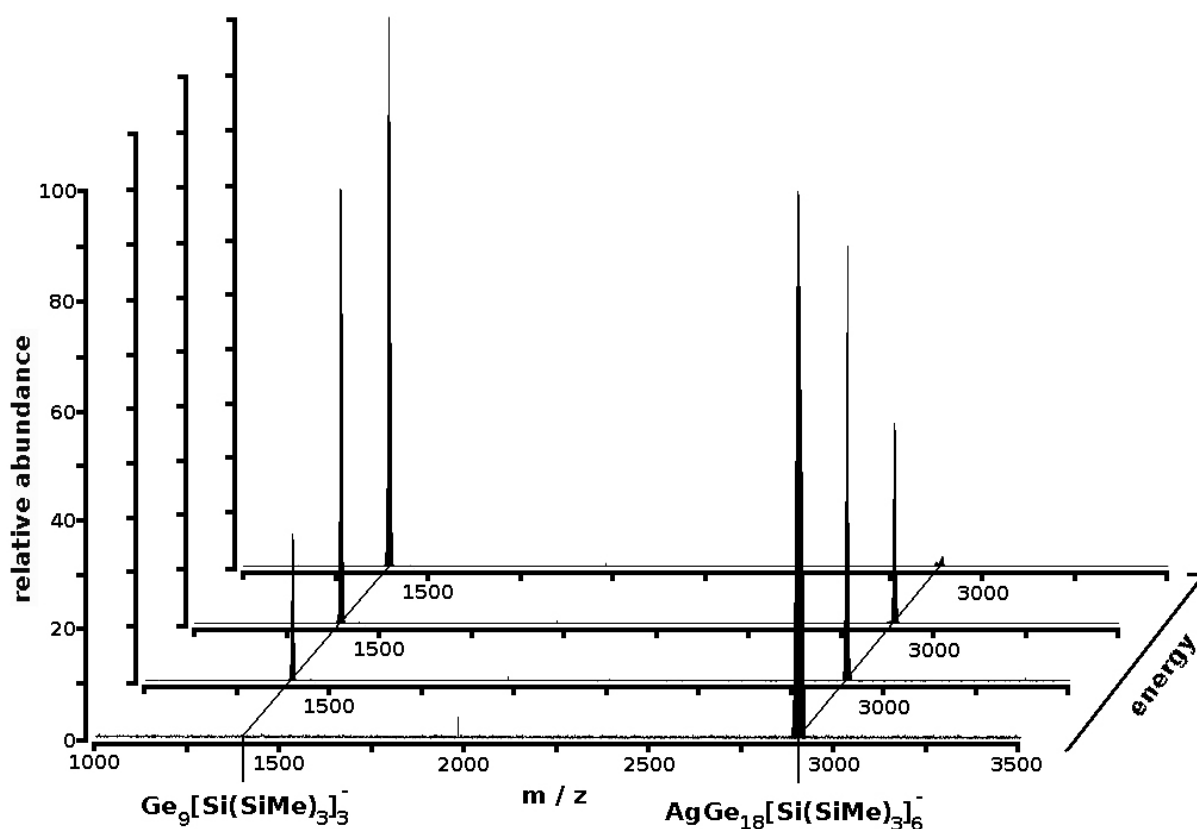## 1.) Gas phase investigations of $[AgGe_{18}R_6]^-$ (R = Si(SiMe$_3$)$_3$) **3**

Figure S1: The FT/ICR-mass spectra obtained from a solution of $[AgGe_{18}R_6]^-$ (R = Si(SiMe$_3$)$_3$) **3** in thf using ESI as ionisation method. In the dissociation experiments (SORI-CAD) the parent ion **3** dissociates to give the fragment ion Ge$_9$R$_3^-$ (R = Si(SiMe$_3$)$_3$) **1**. The relative abundance of the fragment ion **1** depends on the translation energy of the parent ion **3** prior to fragementation. Low energy gives less fragement ion than higher.

2.) Gas phase investigations of $[CuGe_{18}R_6]^-$ (R = Si(SiMe$_3$)$_3$) **4**
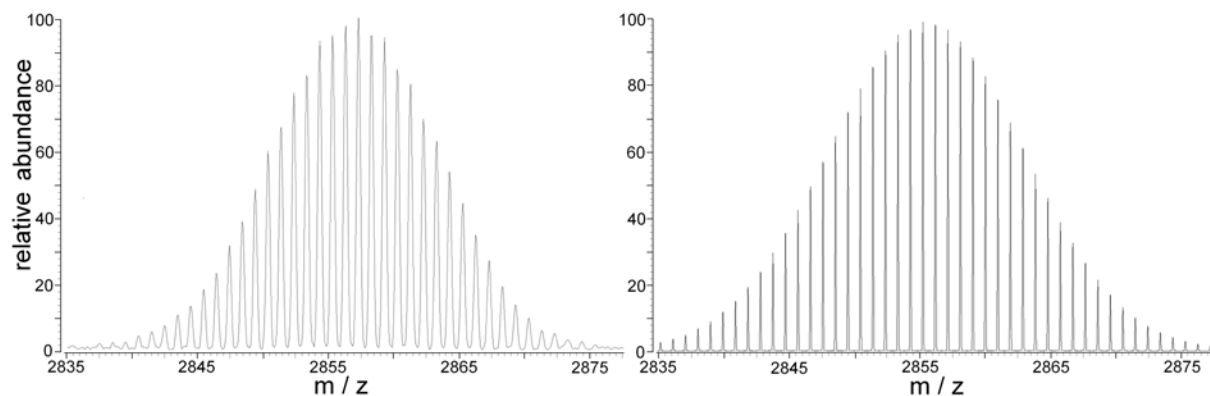

Figure S2: Measured (left) and calculated (right) isotopic pattern of the molecular peak of $\{CuGe_{18}[Si(SiMe_3)_3]_6^-$ **3**.

3.) Schematic presentation of subsequent reactions of $[AuGe_{18}R_6]^-$ **2**, $[AgGe_{18}R_6]^-$ **3**, $[CuGe_{18}R_6]^-$ **4** (R = Si(SiMe$_3$)$_3$.
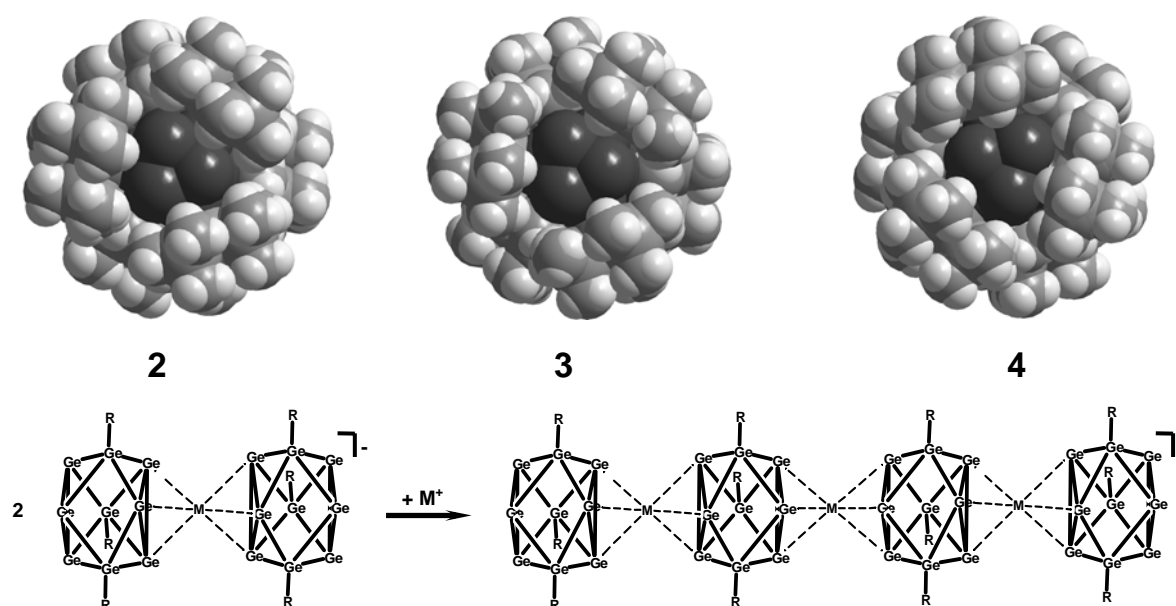
Figure S3: Top: Space filling models of $[AuGe_{18}R_6]^-$ **2**, $[AgGe_{18}R_6]^-$ **3**, $[CuGe_{18}R_6]^-$ **4** (R = Si(SiMe$_3$)$_3$; view along the threefold axis). Bottom: Schematic presentation of the formation of an $M_3Ge_{36}R_{12}^-$ unit.