

## Synthesis, Reaction of the Dipotassiodisilene and -digermene Bearing Extended Triptycyl Groups

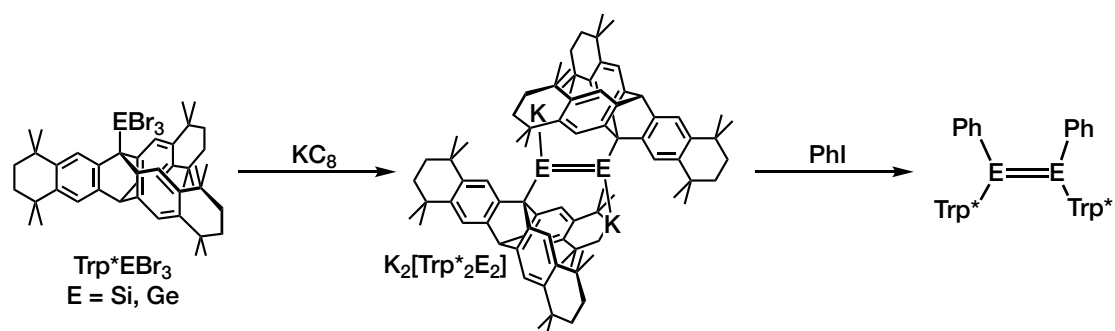
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Heavier analogues of vinylolithium, dimetallenes<sup>1)</sup> (dimetallene monoanions) can be utilized as building blocks for E=E bonds. Dimetallene dianions which are assumed to have a potential role of introducing two functional groups into the E=E bond. However, synthetic examples<sup>2)</sup> are so limited due to their high reactivity and lack of suitable synthetic route.

We have succeeded in the synthesis of the dipotassiodisilene and -digermene ( $K_2[Trp^*_2E_2]$ , E = Si, Ge) as the stable red crystals by taking advantage of a novel aliphatic steric protection group having rigid triptycyl framework (Trp\* group). In this presentation, we report the synthesis, structure, and reaction of the dimetallenedianions bearing Trp\* groups.

Treatment of the 6 equivalents of  $KC_8$  to  $Trp^*EBr_3$  or  $Trp^*GeBr_3$  in THF gave  $K_2[Trp^*_2E_2]$  as the thermally stable red crystals, respectively. Each structure was determined by X-ray crystallographic analysis and revealed the effective steric protection of Trp\* groups around E=E double bond moiety. Reaction of dimetallene dianions with iodobenzene gave the corresponding disilene or digermene derivatives. The detailed structure and other reactivities will also be discussed.



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