

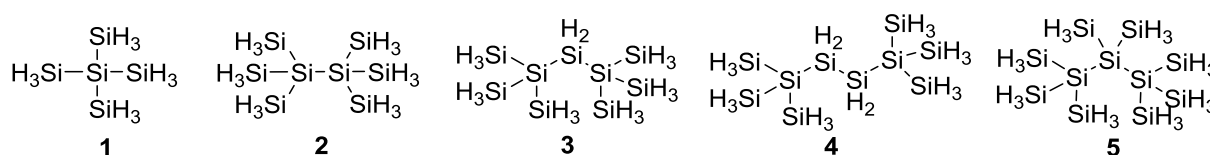
Selective Chemical Transformations of Neopentasilane

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In the last decade higher silicon hydrides attracted considerable attention as precursors for the liquid phase deposition (LPD) of silicon films.^[1] Among the currently used precursor materials neopentasilane **1** is most easily accessible in technical amounts.^[2] **1**, however, exhibits unfavourable properties such as its highly pyrophoric character which limit possible future applications. In this contribution we will present convenient approaches for the preparation of the branched hydrosilanes **2 - 5** starting from **1**.^[3] To the best of our knowledge, **2 - 5** are the first silicon hydrides with $n \geq 8$ reported in the literature which have been synthesized and isolated in preparative amounts.



Scheme 1. Target molecules addressed in this contribution

Compounds **2 - 5** are non-pyrophoric on contact with air and can be oligomerized by UV irradiation much more effectively as compared to **1**. Thus, a-Si films of excellent quality could be deposited starting from **2** after photooligomerization.

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