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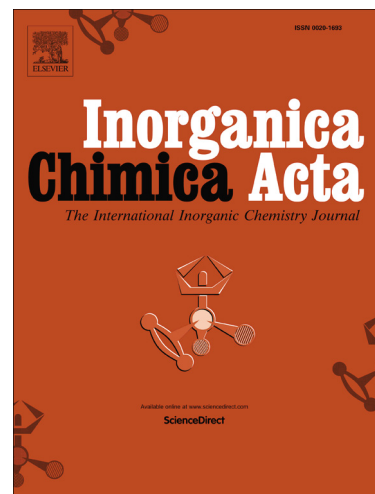
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# Synthesis of novel bifunctional organosilicon dendrons via platinum-catalyzed hydrosilylation

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**Abstract:** The synthesis of novel bifunctional organosilicon dendrons has been successfully achieved. The synthetic route is based on sequential platinum-catalyzed hydrosilylation reactions, that efficiently leads to the corresponding carbosilane dendrons containing a wide range of functional groups, such as  $-\text{OSiMe}_3$ ,  $-\text{Cl}$ ,  $-\text{F}$  and  $-\text{COOCR}$ . Finally, the core of these dendrons comprises reactive alkoxy groups that can be further used for grafting in various materials.

**Keywords:** hydrosilylation; platinum; dendrons; silanes; alkoxy silanes; synthetic methods

## 1. Introduction

Dendrons and dendrimers make an interesting class of compounds [1]. Their names come from the Greek word for tree. The molecules of these compounds resemble tree branches and have a unique three-dimensional molecular architecture connected to attractive properties like high degree of arrangement and multifunctionality [2–13]. In this respect, they are eye-catching and marketable for high-end sectors of the biochemical industry [14–19]. What is more, they play a significant role as the supports for the catalysts [20–23] and as the connectors between organic and inorganic species (hybrid materials) [24,25]. Alkoxy silanes are chemicals with several applications. Their use for silanization of various materials still is an active area of research. The formation of strong covalent bonds to different materials surfaces offers lots of advantages for many biochemical applications [26]. On the other hand, hydrosilylation is one of the most important synthetic methods for derivatization of organosilicon compounds [27–33]. It is compatible with atom economy strategy and widely used in industry. It provides simple pathway to a wide range of pharmaceuticals and fine-chemicals.

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