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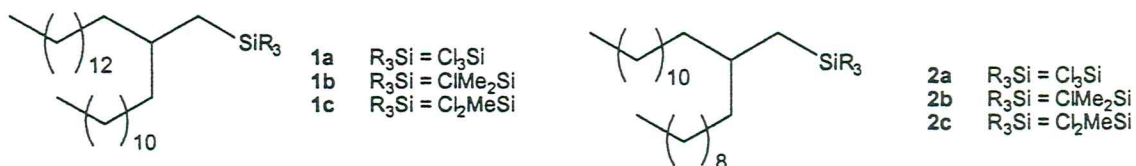
## NOVEL ORGANOSILANES FOR SEPARATION SCIENCE

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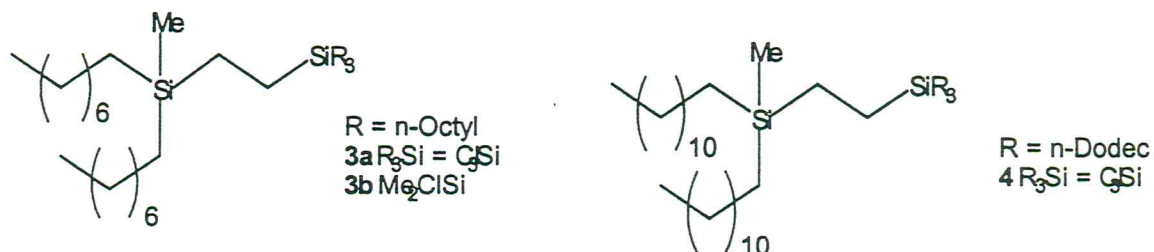
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Investigations into the potential for improved stationary bonded phases in reversed phase HPLC applications have led to two new classes of organosilanes that can be reacted with the silica surface and serve as stable, non-folding bonded phases. In the first of these involves the hydrosilation of 13-methylideneheptacosene and 11-methylidenetricosene, readily available from 1-dodecene and 1-tetradecene to give the corresponding silanes **1** and **2**, respectively.



The second of these involved the alkylation and hydrosilation of methylvinylchlorosilane to produce. These reactions occurred in high yields to give the expected products **3** and **4**.



All of these compounds compared favorably with respect to the standard octadecylsilane, C-18, systems in terms of performance and stability. The C-27 silanes, **1**, did show a reduced tendency towards phase collapse, but also showed a loss of retention upon longer exposure to aqueous media. The C-23 analogs, **2**, showed considerably less loss of retention under similar conditions with a total reversal of the small loss in retention being obtained with a 5 minute methanol wash.

In a similar manner, silica treated with silane **3b** showed a much lower tendency towards phase collapse and a lower loss of retention as compared to the standard C-18 bonded silica systems.