

Synthesis of Silatriazole Trimers

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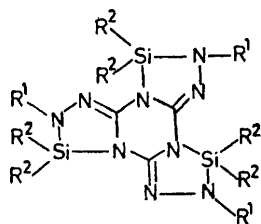
Summary Silatriazole trimers can be prepared by the reaction of diorganodihalogenosilanes with 2,4,6-trihydrazino-*s*-triazine and 2,4,6-triphenylhydrazino-*s*-triazine; they show appreciable hydrolytic stability.

RECENTLY Dewar and Spanninger¹ have shown that 2,4-dihydrazinopyrimidine reacts with phenylboronic acid to form derivatives of boratriazole dimers. However, these compounds are reported to be unstable in boiling alcohol. Since it has been shown recently² that cyclosilazanes con-

ested in synthesizing silatriazoles. Initially, we tried to prepare silatriazole trimers from 2,4-dihydrazinopyrimidine derivatives but the product obtained was very unstable. However, the reaction of diorganodihalogenosilanes with 2,4,6-trihydrazino-*s*-triazine derivatives gave the desired silatriazole trimers, which had good hydrolytic stability. The diphenylsilatriazole trimers were quite stable and were not cleaved when boiled for 2 min with acid (10% HCl) or alkali (10% NaOH). However, the dimethylsilatriazole trimers were cleaved in boiling acid (10%). Similar hydrolytic stability was found in dioxan, in which these compounds are soluble, indicating that solubility does not affect the hydrolytic stability.

The title compounds (1)–(4) were prepared as follows. 2,4,6-Trihydrazino-*s*-triazine³ was converted into the sodium salt by reaction with NaH (6 mol. equiv.) in dry toluene under nitrogen. Reaction with Ph₂SiCl₂ (3 mol. equiv.) then gave the corresponding silatriazole trimer in the yields indicated. All compounds gave satisfactory analytical data.

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	R ¹	R ²	M.p./°C	Yield/%
(1)	Me	H	275–277	40
(2)	Me	Ph	87–90	55
(3)	Ph	H	128–129	50
(4)	Ph	Ph	120–123	60

taining a double bond have thermal as well as hydrolytic stability probably owing to *p* → *d* overlap, we were inter-

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¹ M. J. S. Dewar and P. A. Spanninger, *Tetrahedron*, 1972, **28**, 959.

² V. E. Inamdar, Ph.D.(Tech.) Thesis, University of Bombay, Bombay, India.

³ Y. M. Nabe, *J. prakt. Chem.*, 1910, **82**, 532.