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Title:	1,3-Diazolyl functionalized organopropylsilatranes: Synthesis and structural characterization
Authors:	Khullar, S. (/jspui/browse?type=author&value=Khullar%2C+S.) Mandal, S.K. (/jspui/browse?type=author&value=Mandal%2C+S.K.)
Keywords:	Silatranes 3,7,10-Trimethylsilatranes Benzimidazole 2-Isopropylimidazole 3-Chloropropyltriethoxysilane
Issue Date:	2014
Publisher:	Elsevier S.A.
Citation:	Inorganica Chimica Acta,413, pp.203-207.
Abstract:	This work aims at the synthesis of unsubstituted and 3,7,10- trimethylsubstituted organopropylsilatranes by the reaction of 1,3-diazoles, viz. benzimidazole and 2-isopropylimidazole with 3-chloropropyltriethoxysilane which results in the triethoxysilanes: N-(3-triethoxysilylpropyl)benzimidazole (3) and N-(3-triethoxysilylpropyl)-2-isopropylimidazole (4). In the presence of a base, these silanes undergo transesterification reaction with triethanolamine (1) and tris(isopropanol)amine (2) thus forming the corresponding silatranes, N-(3-silatranylpropyl)benzimidazole (5), N-[3-(3,7,10-trimethylsilatranyl) propyl]benzimidazole (6), N-(3-silatranylpropyl)-2-isopropylimidazole (7), N-[3-(3,7,10-trimethylsilatranyl)propyl]-2-isopropylimidazole (8). Among these novel silatranes, which have been characterized by elemental analysis, IR, <sup>1</sup> H, <sup>13</sup> C NMR spectroscopy, mass spectrometry and thermogravimetric analysis, the structure of silatrane (5) has been deduced by single crystal X-ray diffraction analysis.
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://www.sciencedirect.com/science/article/pii/S0020169314000474?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0020169314000474?via%3Dihub</a> ( <a href="https://www.sciencedirect.com/science/article/pii/S0020169314000474?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0020169314000474?via%3Dihub</a> ) <a href="http://hdl.handle.net/123456789/2983">http://hdl.handle.net/123456789/2983</a> ( <a href="http://hdl.handle.net/123456789/2983">http://hdl.handle.net/123456789/2983</a> )
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