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Catalytic Functionalisation of Si-H Group on the Titanocene Periphery

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**CATALYTIC FUNCTIONALISATION OF SI-H GROUP ON THE
TITANOCENE PERIPHERY.**

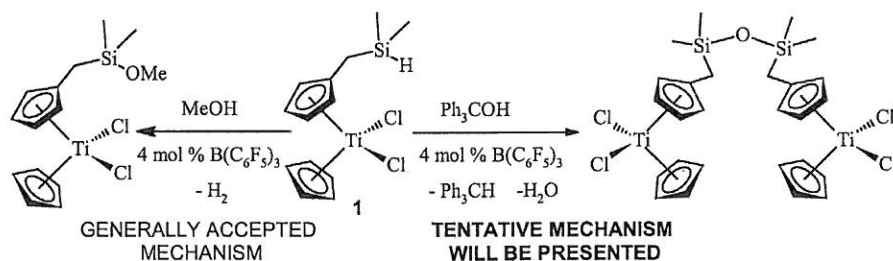
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The present work covers a long-term interest of our laboratory in preparation of group 4 metallocene complexes bearing pendant functional group, which could be modified directly in the metallocene framework. The pendant Si-H group is a reasonable choice and it is easily introduced at early stage of the metallocene dichloride synthesis, and possesses a reasonable stability towards air and moisture. The Si-H group on the metallocene periphery can be subsequently modified via catalytic hydrosilylation¹ or intramolecular dehydrocoupling reactions.² Herein we introduce a new titanocene dichloride bearing pendant Si-H group (**1**) as a convenient precursor for preparation of titanocene dichlorides with pendant silyl-ether functionality using silylation of methanol catalyzed with B(C₆F₅)₃ via mechanism described by Blakwell *et al.*³ Unlike to methanol the reaction of **1** with Ph₃COH proceeds in a different way with transfer of hydroxyl group from trityl group to silicon atom. The plausible mechanism of the reaction will be discussed in detail.



References:

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- (3) Blackwell, J. M.; Foster, K. L.; Beck, V. H.; Piers, W. E. *J. Org. Chem.* **1999**, *64*, 4887-4892.

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- ⁴ Shi, S.; Go