C-H Abstraction via a Titanium Nitridyl Intermediate

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The reactivity of (nacnac) titanium dichloride complexes have been studied extensively in catalysis and in the context of metal-ligand multiple bonds. Despite nitrides being well known ligands relevant to catalysis and bioinorganic processes, the radical analogue, the nitridyl, has been largely unexplored. Herein we report a C-H insertion reaction via a transient titanium nitridyl species. NMR, EPR, IR, and X-ray crystallographic characterizations have been performed on compounds deriving from the reactive nitridyl functionality.