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Title:	A Highly Efficient Base-Metal Catalyst: Chemoselective Reduction of Imines to Amines Using An Abnormal-NHC-Fe(0) Complex
Authors:	Adhikari, D. (/jspui/browse?type=author&value=Adhikari%2C+D.)
Keywords:	Catalyzed Hydrosilylation Exhibits Chemoselectivity
Issue Date:	2016
Publisher:	American Chemical Society
Citation:	Organometallics, 35(17), pp.2930–2937.
Abstract:	A base-metal, Fe(0)-catalyzed hydrosilylation of imines to obtain amines is reported here which outperforms its noble-metal congeners with the highest TON of 17000. The catalyst, (aNHC)Fe(CO) <sub>4</sub> , works under very mild conditions, with extremely low catalyst loading (down to 0.005 mol %), and exhibits excellent chemoselectivity. The facile nature of the imine reduction under mild conditions has been further demonstrated by reducing imines towards expensive commercial amines and biologically important N-alkylated sugars, which are difficult to achieve otherwise. A mechanistic pathway and the source of chemoselectivity for imine hydrosilylation have been proposed on the basis of the well-defined catalyst and isolable intermediates along the catalytic cycle.
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://pubs.acs.org/doi/abs/10.1021/acs.organomet.6b00478">https://pubs.acs.org/doi/abs/10.1021/acs.organomet.6b00478</a> ( <a href="https://pubs.acs.org/doi/abs/10.1021/acs.organomet.6b00478">https://pubs.acs.org/doi/abs/10.1021/acs.organomet.6b00478</a> ) <a href="http://hdl.handle.net/123456789/2481">http://hdl.handle.net/123456789/2481</a> ( <a href="http://hdl.handle.net/123456789/2481">http://hdl.handle.net/123456789/2481</a> )
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