



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)
/ Publications of IISER Mohali (/jspui/handle/123456789/4)
/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/4908>

Title:	Ligand-assisted nickel catalysis enabling sp ³ C–H alkylation of 9H-fluorene with alcohols
Authors:	Biswas, Ayanangshu (/jspui/browse?type=author&value=Biswas%2C+Ayanangshu) Bains, Amreen K. (/jspui/browse?type=author&value=Bains%2C+Amreen+K.) Adhikari, Debashis (/jspui/browse?type=author&value=Adhikari%2C+Debashis)
Keywords:	Ligand-assisted nickel catalysis enabling sp ³ C–H alkylation 9H-fluorene with alcohols
Issue Date:	2022
Publisher:	Royal Society of Chemistry
Citation:	Catalysis Science & Technology, 12(13), 4211-4216.
Abstract:	Herein we report a nickel-catalyzed sp ³ C–H alkylation protocol of 9H-fluorene using cheap and abundant alcohols as the source of alkyl groups. The developed method spans a host of primary, secondary, aliphatic and alicyclic alcohols as the alkylation partner and exhibits chemoselectivity during alkylation. The alkylated products were synthesized in moderate to high yields that can rival those of a handful number of other metal-catalyzed processes. One of the important intermediates during this alkylation reaction is 9-alkylidenefluorene, which undergoes hydrogenation to realize the final product. The process is ligand-dominated and follows a radical pathway, which is distinguishably different from all prior approaches to alkylate fluorene. To showcase that hydrogen is stored in the ligand backbone, we isolated a crucial intermediate where the hydrazo-form of the ligand was prominent and used such a molecule to hydrogenate 9-alkylidenefluorene.
Description:	Only IISER Mohali authors are available in the record.
URI:	https://doi.org/10.1039/d2cy00638c (https://doi.org/10.1039/d2cy00638c) http://hdl.handle.net/123456789/4908 (http://hdl.handle.net/123456789/4908)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need To Add...Full Text_PDF (/jspui/bitstream/123456789/4908/1/Need%20To%20Add%e2%80%a6Full%20Text_PDF)		15.36 kB	Unknown

[View/Open \(/jspui/t](#)

[Show full item record \(/jspui/handle/123456789/4908?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/4908/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

