



# 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/123456789/2563>

Title:	Cyclopenta[b]annulation of Heteroarenes by Organocatalytic $\gamma$ [C(sp <sup>3</sup> )-H] Functionalization of Ynones
Authors:	Raghu, M. (/jspui/browse?type=author&value=Raghu%2C+M.) Grover, J. (/jspui/browse?type=author&value=Grover%2C+J.) Ramasastry, S.S.V. (/jspui/browse?type=author&value=Ramasastry%2C+S.S.V.)
Keywords:	Cyclopenta Heteroarenes Organocatalytic Ynones
Issue Date:	2016
Citation:	Chemistry - A European Journal, 22(51), pp. 18316-18321
Abstract:	A new approach for the cyclopenta[b]annulation of heteroarenes through metal-free and directing-group-free $\gamma$ [C(sp <sup>3</sup> )-H] functionalization and intramolecular hydroalkylation of ynones has been developed. In an unprecedented event, nucleophilic addition of an organophosphine to the designed ynones triggers $\gamma$ [C(sp <sup>3</sup> )-H] functionalization, leading to the formation of heteroaryl-based ortho-quinodimethane (oQDM) intermediates that undergo carbocyclization to provide cyclopentannulated heteroarenes in good yields and excellent stereoselectivities. Deuterium-labeling experiments substantiated the proposed reaction mechanism as well as the speculated epimerization.
URI:	<a href="https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/chem.201604562">https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/chem.201604562</a> ( <a href="https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/chem.201604562">https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/chem.201604562</a> ) <a href="http://hdl.handle.net/123456789/2563">http://hdl.handle.net/123456789/2563</a> ( <a href="http://hdl.handle.net/123456789/2563">http://hdl.handle.net/123456789/2563</a> )
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/2563/1/Need%20to%20add%20pdf.odt)		7.9 kB	OpenDocument Text	<a href="#">View/Open (/jspui/bitstream/123456789/2563/1/Need%20to%20add%20pdf.odt)</a>

[Show full item record \(/jspui/handle/123456789/2563?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/2563/statistics\)](#)

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

