



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/123456789/2729>

Title:	Bulky iminophosphonamines for N-P-N coordination: Synthesis and structural characterization of lithium iminophosphonamides and homoleptic bis-chelates of Co(II), Ni(II) and Cu(II)
Authors:	Prashanth, B. (/jspui/browse?type=author&value=Prashanth%2C+B.) Singh, Sanjay (/jspui/browse?type=author&value=Singh%2C+Sanjay)
Keywords:	Bulky iminophosphonamines N-P-N coordination Synthesis iminophosphonamides
Issue Date:	2015
Publisher:	Springer India
Citation:	Journal of Chemical Sciences, 127(2)
Abstract:	Two new sterically demanding iminophosphonamine ligands (2,4,6-Me ₃ C ₆ H ₂ NH)P(Ph) ₂ =N(C ₆ H ₂ -2,4,6-Me ₃)(1) and (2,6-iPr ₂ C ₆ H ₃ NH)P(Ph) ₂ =N(C ₆ H ₂ -2,4,6-Me ₃) (2) and their lithium derivatives as tmeda adducts (Li·tmeda)[(2,4,6-Me ₃ C ₆ H ₂)NP(Ph) ₂ =N(C ₆ H ₂ -2,4,6-Me ₃)] (3) and (Li·tmeda)[(2,6-iPr ₂ C ₆ H ₃)NP(Ph) ₂ =N(C ₆ H ₂ -2,4,6-Me ₃)] (4), respectively are reported here. Compounds 1-4 have been investigated by ¹ H, ¹³ C and ³¹ P{ ¹ H} NMR spectroscopy. The ⁷ Li NMR for complexes 3 and 4 has also been reported. Utility of the ligands and their lithium derivatives have been shown in the synthesis of bis-homoleptic metal complexes M[Ph ₂ P(NC ₆ H ₂ -2,4,6-Me ₃) ₂] ₂ (M = Co (5), Cu (6) and Ni (7)). Metal-bis-silylamide generated in situ was reacted with the ligand (for 5 and 6) or the lithium derivative of the ligand was reacted with the metal chloride (for 7). Molecular structure of compounds 1-7 has been elucidated by single crystal X-ray diffraction analyses. The complexes are formed in good yields and are highly lipophilic in a wide range of solvents. © 2015 Indian Academy of Sciences.
URI:	https://link.springer.com/article/10.1007/s12039-015-0769-2 (https://link.springer.com/article/10.1007/s12039-015-0769-2) http://hdl.handle.net/123456789/2729 (http://hdl.handle.net/123456789/2729)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/2729/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text	View/Open (/jspui/bitstream/123456789/2729/1/Need%20to%20add%20pdf.odt)

Show full item record (/jspui/handle/123456789/2729?mode=full)

(/jspui/handle/123456789/2729/statistics)

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