Title:	Heteroleptic Iminophosphonamide In(III) Complexes: Source of Mild Lewis Acid Indium Centers
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Abstract:	New In(III) complexes with iminophosphonamide ligand are reported for the first time. Reaction of the lithium iminophosphonamide, LLi·2OEt2 with InCl3 afforded the heterobimetallic compound, LInCl(μ-Cl)2Li·2OEt2 (1) (L=(2,6-iPr2C6H3N)P(Ph2)(NtBu)). To prevent the formation of LiCl adduct in 1, and to obtain the targeted LInCl2 molecule, potassium salt of the ligand LK was reacted with InCl3 that gave the adduct LInCl2(THF) (2). Formation of compounds 1 and 2 can be considered an outcome of the In(III) centers to exhibit Lewis acidity. Reaction of LK with InCl3 in non coordinating solvent toluene gave the dimer [LInCl(μ-Cl)]2 (3) and its further treatment with Ph2P(=O)NHtBu afforded the adduct, LInCl2·(O=P(Ph2)NHtBu) (4). Formation of the dimer 3 or the adduct 4 are again the reminiscent of the Lewis acid tendency of In(III) centers. Complexes 1–4 have been characterized using multinuclear NMR and HRMS. The single crystal X-ray structures of 1, 3 and 4 have also been elucidated.
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