ABSTRACT

TITLE:	Synthesis and Characterization of P,P'-1,4-Diphospha-Cyclohexane Derivatives and Their Metal Coordination Reactions
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ABSTRACT: The previously reported P,P'-diphenyl-1,4-diphospha-cyclohexane (dpdpc) ligand has been used to form novel metal complexes with extremely small bite angles for a bidentate phosphine ligand. Currently the only derivative of this ligand reported in the literature contains phenyl substituents at the phosphorus atoms. Herein we report the synthesis of a new derivative of this ligand, P,P'-1,4-diphospha-cyclohexane (dpc) through reaction of bis-(phospido)ethane with 1,2-dicholroethane. Reactions of dpc with BuLi and alkyl-halides to form dpc derivatives with other substituents at the phosphorus atoms will be reported. Preliminary metal coordination studies with these novel ligands will also be reported.