Polylithiation of Small Molecules. Synthesis and Structure of the
Functional Lithium Phosphide [Li(TMEDA)]_2[PhPCMe_2C_5H_4]

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Lithium Phosphides, Cyclopentadienides

Treatment of 6,6-dimethylfulvene with LiPHPh in hexane/TMEDA (TMEDA = N,N',N',N'-tetramethylethylenediamine) affords the monolithiated phosphinomethyl cyclopentadienide [Li(TMEDA)][PhHPCMe_2C_5H_4] (1). Further reaction with Li^nBu in diethylether/TMEDA leads to the formation of the doubly lithiated phosphidomethyl cyclopentadienide [Li(TMEDA)]_2[PhPCMe_2C_5H_4] (2) whose crystal and molecular structure was determined (orthorhombic, space group P2_1_2_1_2_1, a = 9.579(4), b = 12.788(2), c = 24.108(6) Å, Z = 4).