Bis(diphenylphosphanyl)amine and its Disulfide and Diselenide. Application of the INEPT-HEED Pulse Sequence for Measurement of $^{1}J(^{31}P,^{15}N)$ and Isotope Induced Chemical Shifts $^{1}\Delta^{14/15}N(^{31}P)$ at Natural Abundance of ^{15}N

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Z. Naturforsch. **55 b,** 185–188 (2000); received December 6, 1999

Amines, Phosphorus, Sulfide, Selenide, NMR Data

Bis(diphenylphosphanyl)amine (**1**), the disulfide **1S** and diselenide **1Se** were selected to show the efficient application of the INEPT-HEED pulse sequence for measuring coupling constants $^{1}J(^{31}P,^{15}N)$ and isotope induced chemical shifts $^{1}\Delta^{14/15}N(^{31}P)$, both at natural abundance of ^{15}N, from ^{31}P NMR spectra. The sign of $^{1}J(^{31}P,^{15}N)$ (> 0) in all three compounds was determined by selective heteronuclear $^{1}H\{^{31}P\}$ double resonance experiments.