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On Hypercoordination in Non-quaternary Phosphonium Salts and a Secondary Phosphine with the (8-Dimethylamino-naphth-1-yl) Substituent

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The  $^{31}P$  NMR data of non-quaternary (8-dimethylamino-naphth-1-yl)phosphonium salts, with emphasis on the  $^{1}J(^{31}P, ^{1}H)$  coupling constants, where scrutinized for their potential to yield information about N $\rightarrow$ P dative interactions. As for  $\delta(^{29}Si)$  and  $^{1}J(^{29}Si, ^{1}H)$  in the isosteric silanes, the data do not permit conclusions in favour of such interactions.  $^{1}J(^{31}P, ^{1}H)$  of bis(8-dimethylamino-naphth-1-yl)phosphine in conjunction with the distances  $d(N \cdots P)$  invalidates the basic assumption on which the claim of dative N $\rightarrow$ P/Si bonding in such phosphorus and silicon compounds rests, viz. that N $\cdots$ P/Si distances of ca. 270 pm are evidence for P/Si-hypercoordination. No evidence for hydrogen bonds N $\cdots$ H $\rightarrow$ P was found.

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