peri-Interactions in Naphthalenes, 10 [1]. In Search of Independent Criteria for N⟶P Bonding: Protonation Studies on (8-Diethylamino-naphth-1-yl)-diphenyl-phosphine

Günter Paulus Schiemenz, Christian Näther, and Simon Pörksen

Institut für Anorganische Chemie der Universität, 24098 Kiel, Germany

Reprint requests to Prof. Dr. G. P. Schiemenz. Fax: +49 (0)431 880 1558.
E-mail: schiemenz@ac.uni-kiel.de

Z. Naturforsch. **58b,** 663 – 671 (2003); received February 10, 2003

Enhancement of the basicity of the amino group in (8-dialkylamino-naphth-1-yl)-diphenyl-phosphines diverts protonation from the P to the N atom. Thus the cation 8-Et_2N^+(H)-$C_{10}H_6$-PPh_2 becomes available whose ^{1}H and ^{31}P NMR spectra provide arguments against dative N→P interactions in the phosphines and their quaternary phosphonium salts. Likewise, the X-ray structure of 8-Et_2N-$C_{10}H_6$-PPh_2 does not indicate such interactions.

Key words: N→P Bonding, NMR Protonation Shifts, *d*(N···P) Distances