

1,2,4-Diazaphosphole und 1,2,4-Diazaarsole: Ringstruktur und Struktur wasserstoffbrücken-gebundener Paare und Helices

1,2,4-Diazaphospholes and 1,2,4-Diazaarsoles: Ring Structure and Structure of Hydrogen-Bonded Pairs and Helices

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Among the large family of azaphospholes 1,2,4-diazaphospholes feature a particularly stable ring system. 3,5-Unsubstituted and 3,5-equally substituted 1,2,4-diazaphospholes and -diazaarsoles are best made from 1,3-bis(dimethylamino)-2-phospha/arsaallyl chlorides and hydrazines. This way four examples for single crystal X-ray structure investigations were prepared: The unsubstituted 1,2,4-diazaphosphole **2** and -diazaarsole **4**, the *N*-substituted 1-(2-pyridyl) 1,2,4-diazaphosphole **1**, and the *C*-substituted 3,5-di-*tert*-butyl 1,2,4-diazaphosphole **3**. They all possess planar rings with small angles at P (86°) and As (81°). The *N*-unsubstituted molecules are connected to each other by NH ··· N hydrogen bonds forming in case of the isotopic compounds **2** and **4** a helix along a crystallographic axis and in case of compound **3** for steric reasons a dimer. The structures of the aggregates found are compared to those of pyrazoles.

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