# Polysulfonylamine, CLXXXII [1]. Bis(triphenylphosphoranyliden)ammonium-di(4-fluorbenzolsulfonyl)amid: Zwei Polymorphe mit unterschiedlichen Konformationen des Kations und des Anions

Polysulfonylamines, CLXXXII [1]. Bis(triphenylphosphoranylidene)ammonium Di(4-fluorobenzenesulfonyl)amide: Two Polymorphs Featuring Different Conformations of the Cation and the Anion

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Two polymorphs **A** and **B** of the previously unreported compound $[Ph_3PNPPh_3]^+[(4\text{-}F\text{–}C_6H_4\text{-}SO_2)_2N]^-$ have been revealed by serendipity (form **A**: triclinic, space group $P\bar{1}$, $Z' = 1$; form **B**: monoclinic, space group $P2_1/n$, $Z' = 1$). Conformational flexibility of both the cation and the anion appears to facilitate polymorph formation. The $(C_3P)_2N$ moiety of the cation, as viewed down P···P′, is ecliptic in **A** but staggered in **B**, whereas the extended conformations of the anion (C–S···S′–C′ antiperiplanar) display notably different torsion angles about the S–N and the S–C bonds. Each structure is characterized by an extensive network of weak C–H···O/N/F hydrogen bonds and CH/$\pi$ interactions. The packing of **A** consists of cation monolayers that intercalate parallel chains of anions. In contrast, polymorph **B** forms homoionic strands, whereby each strand comprises two ion chains and is surrounded by four parallel strands of opposite charge.

*Key words:* Conformational Polymorphism, Weak Hydrogen Bonding, CH/$\pi$ Interactions