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Host/Guest-Inclusion Compounds of N,N'-Ditosyl-*p*-phenylenediamine with Furane, Benzene and Dioxane

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Herrn Professor Manfred Eigen gewidmet

Z. Naturforsch. **53 b,** 1413–1424 (1998); eingegangen am 19. August 1998

N,N'-Ditosyl-*p*-phenylenediamine, Inclusion Compounds, Crystal Growth, Structures, Host/Guest-Relations

Basic principles of known clathrate inclusion compounds are reviewed and of the novel class discovered with N,N'-ditosyl-*p*-phenylenediamine as a capable host, three additional molecular aggregates containing five- or six-membered, π- as well as σ-type rings as guests are reported. All of them crystallize in the space group $P2_1/c$, but only those of furane and benzene are isostructural, whereas that of dioxane differs in the hydrogen bonding network of the N,N'-ditosyl-*p*-phenylenediamine host exhibiting sulfonamide / sulfonamide cyclic dimers instead of catemer chains. The low-temperature structures of the crystals are discussed in detail including conformational differences and packing coefficients to gain some insight in their different weathering behavior observed: clathrate cavity inclusion provides more stable crystals than storage of guest molecules within lattice channels.

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