The material causing slight cloudiness in a polysulfone was isolated, and its powder diffraction pattern could be indexed on a primitive monoclinic unit cell having \( a = 9.5703(15) \), \( b = 18.7752(18) \), \( c = 13.3945(12) \) Å, and \( \beta = 92.684(11) \). Single crystals as large as 80 x 80 x 10 µm could be grown from boiling dimethylsulfoxide. The single crystal had a primitive monoclinic cell with \( a = 9.561(3) \), \( b = 18.728(5) \), \( c = 13.382(4) \) Å, and \( \beta = 92.66(3) \). Both forms crystallize in \( P2_1/c \), with \( Z = 2 \). The structure of the DMSO solvate was solved and refined using the single crystal data, and the structure of the unsolvated form was refined using powder data.

The crystal structure consists of discrete centrosymmetric cyclic oligomers, containing two of each of the diphenylsulfone and bisphenol A monomers. At the center of each macrocycle in the solvated and unsolvated forms the torsion angles involving the ether oxygens differ by as much as \( 6^\circ \) in the solvated and unsolvated forms. The torsion angles involving the ether oxygens differ by less than \( 0.6^\circ \) in the solvated and unsolvated forms. The conformational differences are discussed in light of observed distributions of the torsion angles in diphenylsulfones, diphenylisopropylidines, and diphenyl ethers, as well as the distributions expected from conformational analyses. These structures provide valuable experimental measurements of the torsion angles in polysulfones.

Hexa-N-pyrrolebenzene (I) has a propeller conformation, with pyrrole rings forming dihedral angles with the benzene plane ranging 49.2(1)-67.9(1)°. Tetra-N-pyrroleethylene (II) lies on a crystallographic twofold axis, and pyrrole rings form dihedral angles of 51.9(1)° and 46.5(1)° with the plane of the double bond. In III, the pyrrole rings form dihedral angles of 36.2(1)° and 56.0(1)° with the plane of the double bond. IV lies on an inversion center, and the C=C carbon atoms are disordered into two sets of sites with relative populations ca. 2:1. The pyrrole plane forms a dihedral angle of 67.7(1)° with the plane of the double bond.