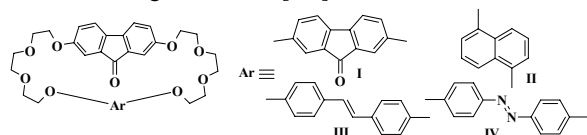


Crystal Structures of some Representatives of the Fluorenocrownophanes

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Four new crownophanes containing the 2,7-dioxyfluorenone fragment, bridged with another aromatic units (I – IV) via triethylene glycol residues were synthesized as the perspective complexing agents for the metal and organic cations [1-2].



The molecular geometry of crownophanes and their packing in crystals are governed by the combination of intra- and intermolecular C–H \cdots O hydrogen-bonding, C–H \cdots π and π – π stacking interaction that provide the T-shape for all but bisfluorenone crownophane (Ar = I) which exhibits the antiparallel alignment of the fluorenone units in the centrosymmetric molecule. The incorporation of fluorenone building block in crownophane molecule ensures the advantages, such as strong hydrogen bonding of the substrate, often dominating in the processes of molecular recognition. Fluorenone and its derivatives have good luminescence properties that are important for the development of sensitive fluorescence-based chemosensors.

[1] Lukyanenko N.G., Kirichenko T.I., Lyapunov A.Yu., Mazepa A.V., Simonov Yu.A., Fonari M.S., Botoshansky M.M., *Chem. Eur. J.*, 2005, **11**, 262. [2] Lukyanenko N.G., Kirichenko T.I., Lyapunov A.Yu., Kulygina C.Yu., Simonov Yu.A., Fonari M.S., Botoshansky M.M., *Tet. Lett.*, 2004, **45**, 2927.

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