Synthesis and Mesomorphic Properties of Polymethylene-α,ω-bis [2-thio-5-(4',4''n-alcoxybenzoyloxy)phenyl]-1,3,4-oxadiazole

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Three homologous series of polymethylene-α,ω-bis[2-thio-5(4',4"n-alkoxybenzoyloxy)-phenyl]-1,3,4-oxadiazole (series **5 a, b, c**), are reported.The compounds have identical mesogenic units at both ends of a spacer (*i.e.* they are twins). These twins possess a spacer of 6, 8 and 10 carbon atoms joined directly to the oxadiazole ring through sulphur atoms. The lateral alkylic chains vary between 6 and 10 carbon atoms.The presence of enantiotropic and monotropic nematic phase is related to the length of the spacer group.

The influence of molecular structure on the mesomorphic properties has been studied. Mesomorphic properties and phase transitions have been determined using polarizing hot-stage microscopy and differential scanning calorimetry.

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