

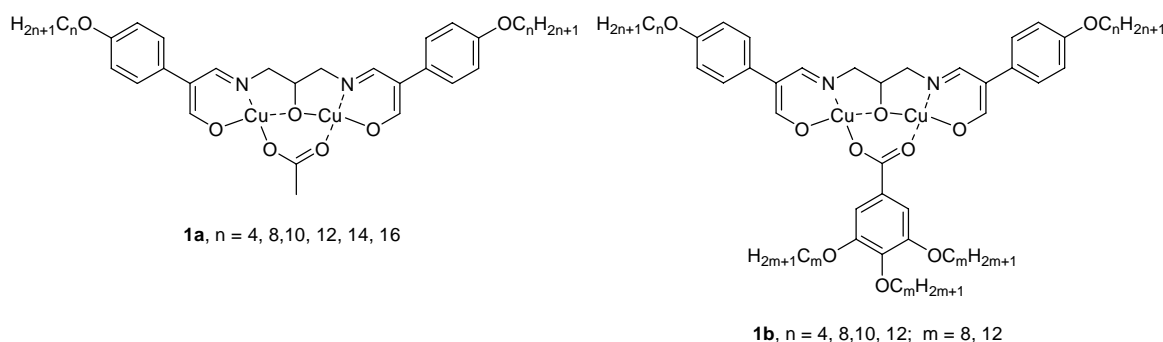
Bimetallochromes : synthesis and mesomorphic properties of copper complexes of 3,3'-(2-hydroxypropane-1,3-diyl)bis(azan-1-yl-1-ylidene)bis(2-(4-alkoxyphenyl)prop-1-en-1-ol)

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A new type of 3,3'-(2-hydroxypropane-1,3-diyl) bis(azan-1-yl-1-ylidene)bis(2-(4-alkoxyphenyl)prop-1-en-1-ol) and their copper complexes was prepared and mesomorphic properties characterized. The mesomorphic properties of these copper complexes were studied by differential scanning calorimetry (DSC), polarized optical microscopy (POM) and powder x-ray diffraction. X-ray structural crystallographic analysis showed that these bimetallic compounds have two copper centers coordinated with central square planar geometry. These molecules all have total two **1a** or five alkoxy sidechains **1b** appended around the central core. The mesomorphic behavior exhibited was found to be dependent on the sidechain density. All compounds in **1a** exhibited smectic mesophases, however, compounds in **1b** exhibited hexagonal columnar phases (Col_h), which were characterized by optical textures and confirmed by powder x-ray diffraction.



References

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