

Jayaraman, N.; Singh, M. K.; Shankar Rao D. S.; Prasad, S. K., 2007, "Studies of the mesomorphic behavior of bivalent carbohydrate amphiphiles", *J. Mater. Chem.*, 17, 2228 – 2232.

Carbohydrate amphiphiles are known to be thermotropic liquid crystals, exhibiting smectic A phase largely. With the importance associated with multivalent sugar derivatives, a study of the thermotropic behavior of bivalent sugar amphiphiles, wherein two sugar units occupy the hydrophilic segment, was undertaken. From a series of bivalent sugar amphiphiles, varying in the alkylene chain lengths, the thermotropic behavior of these amphiphiles is identified to be smectic A phase. Results of the studies of the mesophase behavior of bivalent sugar amphiphiles, obtained from polarizing optical microscopy, differential scanning calorimetry and X-ray powder diffraction methods, are presented in this report.