

## AIMS AND OBJECTIVES

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Many Liquid Crystals are now known. However, there is great upheaval in the synthesis of Liquid crystals from two aspects. One type of synthesis is directed towards synthesis of liquid crystals which can find an application, whereas another direction is to widen the horizon of liquid crystal chemistry by synthesizing new liquid crystals of some novelty in the structural aspects.

In the present study it was proposed to synthesize liquid crystalline mesogenic homologous series which would have some novel terminus at the end of long polarizable molecules. It was also proposed to explore trisubstituted mesogens from lateral phenolic group to lateral aromatic segment to introduce novelty in the structure.

Naphthalene nucleus is also of interest and it was proposed to synthesize a few simple naphthalene derivatives to explore mesomorphic properties in such compounds.

Biphenyl derivatives are highly mesogenic. It was thought to introduce less studied central linkages like amide and  $\alpha$ -methylazine to evaluate their effect on mesomorphism.