



Optical Phase Transition and Tilt Angle Studies on Cyano Groups of Binary Mixture of Nematic Liquid Crystals

T. N. Govindaiah

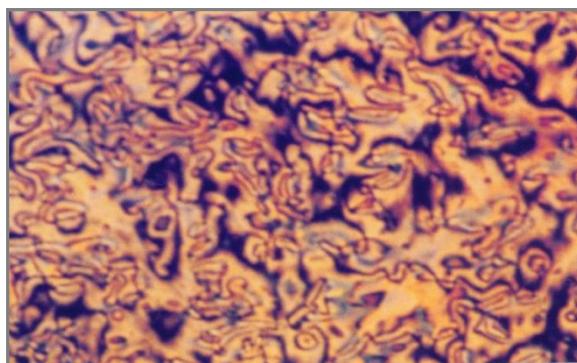
Post-Graduate Department of Physics, Government College (Autonomous), Mandya-571401, **INDIA**
Email: tngovi.phy@gmail.com

Accepted on 15th July, 2021

ABSTRACT

Optical phase transition studies on thermal properties of binary mixtures of n-octyloxy-cyanobiphenyl (8OCB) and 4-n-octyl-4-cyanobiphenyl (8CB) materials exhibits a re-entrant nematic and re-entrant smectic-A phases sequentially when the specimen cooled from its isotropic melt at different concentrations and at different temperatures respectively. X-ray studies are helps us to understand the molecular layer spacing's of re-entrant nematic, re-entrant SmA and SmC phases at different temperature. Temperature variations of tilt angles have also been discussed.

Graphical Abstract:



Microphotographs obtained in between the crossed polars.

Keywords: Phase transition, Molecular orientation, layer spacing's, Tilt angle.
