New Para-Substituted Non-Symmetric Isoflavones For Their Fast Photo-Switching Ability: Synthesis And Their Liquid Crystal Characterization

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ABSTRACT

The first example of non-symmetric isoflavone-based fast photo-switchable liquid crystals with different functional groups at the terminal position were synthesized and characterized. Polarizing optical microscopy study revealed that the compounds showed least ordered nematic phase. Optical photo switching study exhibited very fast photoisomerization effect in solution. The $E$–$Z$ and $Z$–$E$ conversion occurred around 3–5 s and 40–700 s respectively. This is also the first example of para-substituted non-symmetric isoflavone liquid crystals exhibiting very fast photo switching property in solution. Argument based on non-symmetrical isoflavone liquid crystals exhibiting very fast photoswitching property in

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