

Phase characterization of two homologous series of LC methacrylic monomers based on ω -hexyl- and ω -butyl-oxysalicylaldehyde groups with different alkoxy tail substitutions

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The phase characterization of two homologous series of liquid crystalline methacrylic monomers based on ω -hexyl- and ω -butyloxysalicylaldehyde groups, with different alkoxy tails, is presented. The liquid crystalline materials were characterized by polarising optical microscopy, differential scanning calorimetry, differential thermal analysis, and X-ray diffraction. All the monomers exhibit the simultaneous occurrence of smectic A and C phases. When the alkyl chain is short, a narrow nematic phase is observed, leading to an I-N-SmA-SmC phase sequence.