

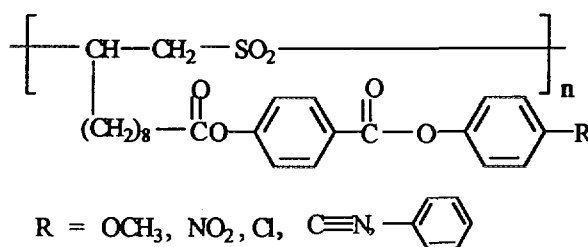


## Radiation effects on the liquid crystalline properties of poly(Allylsulfone)s

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Properties of thermotropic liquid crystalline polysulfones with olefinic and mesogenic groups in the side chains have been studied.<sup>(1, 2)</sup> When poly(sulfone)s with alkyl side chains are  $\gamma$ -irradiated, main-chain scission takes place rather than cross-linking, because of the weakness and specificity of fracture of C-S bonds in the main chain.<sup>(3, 4)</sup> In this study, thermotropic liquid crystalline poly (allylsulfone)s which have different end groups on the side chain such as cyano, nitro, methoxy, phenyl, and chloro have been synthesised. The structures of polymers are as follow:



The effect of  $\gamma$ -radiation on the thermotropic liquid crystalline properties of poly (allylsulfone)s have been investigated using CP-MAS-NMR, DSC, X-ray diffractometry, and CP-microscopy.

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