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BOOK OF ABSTRACTS

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SYNTHESIS, ABSORPTION AND EMISSION PROPERTIES OF A NEW FAMILY OF STYRYL COUMARINS. POTENTIAL UTILITY AS MEMORY MEDIA

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Photochromism, the reversible transformation between two molecular forms that have different absorption spectra, resulting from photo-irradiation, has applicability in several fields including light modulation materials, optical recording materials, optical switches and photochromic ink.^[1] The switching from one molecular state to another is dependent upon the efficiency of light absorption by the chromophore. Coumarins are an old class of compounds of natural occurrence in several plant families. On substitution with various functional groups at different positions the coumarin chromophores expand their interesting properties. In recent years we have devoted some interest to the study of coumarin chromophores, with special emphasis on their synthesis and photophysical properties.^[2] We have been particularly interested in the extension of the π -delocalized system of the coumarin chromophore at the 3-position which allowed us to obtain derivatives with promising fluorescent behavior. Here we present the synthesis of a new coumarin family, the 5-styryl coumarins **1** and the study of the effect of the extension of the π -delocalized system of the coumarin chromophore at the 5-position (Fig.1). The synthesized compounds present *E-Z* isomerization around the carbon-carbon double bond which can potentially be envisaged to be used as a memory media.

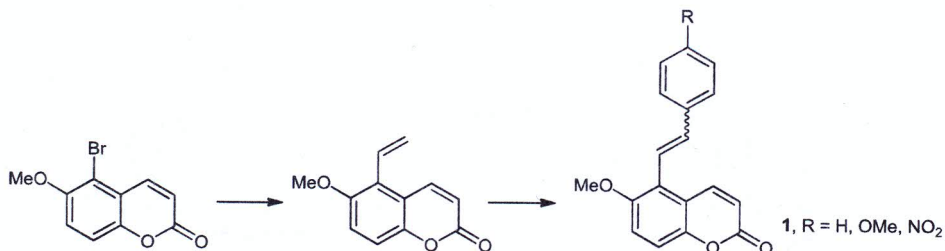


Figure1

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