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Abstract : In this thesis, two kind of new photochromic classes have been prepared. The first class is prepared from tetracyanoquinodimethane and one of aniline or pyrazol ,or hydrazon derivatives. A spectral study has been carried out to investigate the photochromic and thermochromic properties by using ultra violet- Visible spectroscopy of compounds in different Solvent system to study the influence of solvents polarities on their properties. We studied the kinetic of the colouration to determine the order of the reaction and half- time period of the colouration reaction. The second class of organic photochromic prepared are spiropyrane and spirooxazine derivatives . the spiropyrans are prepared from 2-hydroxy aromatic aldehydes and 1,3,3-trimethyl-2-methylene indolen, where, the spirooxazines are prepared from new prepared oximes and 1,3,3-trimethyl-2-methylene indolen. Photochromic and thermochromic properties of the spiro compounds was investigated in different solvent. Also the photochromic and thermochromic properties of some of these spiro compounds are investigated as thin polymer films.

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