

NNN 19 P CHARACTERIZATION OF NEW NANOCOMPOSIT PEPC / ANTHRACENE-HALCON

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Polyepoxypropylcarbozol oligomer (PEPC) is a material widely used in optoelectronics and in making electroluminescent devices. The compound 3 - (anthracene-9-yl) -1 - (4-izotiocianatofenil)-prop-2-en-1-onei (ANA-Halcon) contains a double-bond (-CH = CH-) metin cationic group, which, together with an antrocen group, is easily excited to ultraviolet light.

Nanocomposites PEPC / ANA-Halcon (chemical formula is shown below Figure 1) were investigated. Nanocomposite coatings were obtained by the chemical solution method. PEPC and ANA-Halcon were separately dissolved in benzene (Bz) well then stirred for mixed not less than 24 hours, then mixed well together and later on, nanocomposite coatings were deposited on optical glass substrates by means of drops and then dried.

Nanocomposite coatings were studied separately by microscopy, optical transmission and photoluminescence spectra. The absorption threshold at different concentrations of ANA-Halcon in PEPC was approximately the same (2.21-2.25 eV). When the layers were treated by the ultraviolet light optical transmission variation occurs. From this we can conclude that the nanocomposite layers are photosensitive at introducing optical information.

At excitation with light of laser (N2-337nm) photoluminescence of nanocomposite is observed in actual green luminescence (500-545 nm), Figure 2. Under the action of ultraviolet light, the photoluminescence intensity increases.

Data on layers demonstrate that they are photosensitive and luminescent nanocomposites, and can be applied in optoelectronics for introducing information and for making optical luminescent panels.

