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Original research article

Linear, nonlinear and optical limiting properties of carbon black in epoxy resin

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Abstract

Films of an [epoxy resin](#) doped [carbon black](#) were prepared by [casting](#) method onto BK7 [glass substrates](#). The [surface morphology](#) of these films were investigated together with the nonlinear optical properties under CW laser light irradiation of 532 nm wavelength using [diffraction](#) ring pattern and Z-scan techniques. The prepared samples exhibited strong self-defocusing effect and good optical limiting behavior.



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42.70.-a; 42.65-k; 42.65.An

Keywords

Surface morphology; Nonlinear refractive index; Diffraction ring pattern; Z-scan technique; Optical limiting

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