

Optical characterization of graphene doped liquid crystalline matrix using z-scan technique

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Abstract The nonlinear optical properties of a liquid crystal mixture doped with different concentration of graphene nanoplates has been studied. The nonlinear refractive index (n_2) of guest-host system has been obtained by using Z-scan technique with continuous wave, He:Ne laser beam at 632.8 nm. The experimental results of the optical experiments have been shown that Graphene doped the liquid crystal includes the positive sign for n_2 which presents self-focusing optical nonlinearity. Also, the results have been revealed the striking values for different mass percentages of guest materials in order of 10^{-5} cm^2/w .

References

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Figures

