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عنوان مقاله:
The Third Order Nonlinear Optical behavior of Poly Ether Urethane

محل انتشار:
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خلاصه مقاله:
Poly (ether) urethane close/open cell (PEUCC/PEUOC) has been prepared by using in situ polymerization approach. The third-order optical nonlinearities of dissolved samples in DMF were characterized by Z-scan technique at the measurement wavelength of 532 nm. The synthesized samples were also examined by optical microscopy and UV-Vis absorption spectroscopy. The nonlinear refractive (NLR) indices of the synthesized samples were obtained in the order of 10-10(cm2/W) with negative sign. By focusing on the collected UV-Vis absorption spectra of PEUCC/PEUOC, it was found that the red shift in the absorption edge of the samples is larger in the case of PEUCC that in the PEUOC. It was revealed that introducing some materials into polyurethane (PU) spatially PEUCC could increase nonlinearity that they can be considered as a promising candidate for the application to optical limiting in the visible region.

کلمات کلیدی:
Nonlinearity, Polyurethane, Z-scan

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