






# Evaluation of surface roughness, linear and nonlinear optical parameters of a mixture of sudan black b and polymer films for optical limiting application

Watan H. Jabber, Qusay M.A. Hassan  , F.A. Al-Saymari

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## Abstract

A film of a mixture of sudan black b (SBB) dye and a polymethyl methacrylate (PMMA) is fabricated by casting. X-ray diffraction measurement proves the SBB/PMMA film's structure is amorphous. The scanning probe microscope confirmed that the SBB/PMMA film has a good quality and homogeneous surface. The SBB/PMMA film's optical