

Anti-Stokes femtosecond photon echo in a polymer film

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Abstract

An anti-Stokes model is proposed which explains the room-temperature blue shift of the echo-signal spectrum compared to the spectrum of exciting femtosecond pulses in a polymer film doped with dye molecules. The possibility of realising the anti-Stokes regime of coherent laser cooling of such films is analysed. © 2007 Kvantovaya Elektronika and Turpion Ltd.

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Keywords

Femtosecond pulses, Optical cooling, Photon echo