

Z-scan technique to study gain properties and pump-induced processes in Ce:LiCAF UV active medium

Rakhimov N., Lovchev A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2018 SPIE. The preliminary data of studying optical gain properties of active media using the open aperture z-scan technique without an additional probe beam are demonstrated. The prospects of evaluating pump induced photodynamic processes parameters in UV solid-state active media on the pumping and lasing wavelengths: excited-state absorption and photoionization cross-sections of active ions, effective absorption and ionization cross-sections of color centers and recombination rates are discussed.

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Keywords

active media, amplified spontaneous emission, optical gain, Z-scan

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