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Optimized composition of LiREFˆ4 (RE = Tb_⊠Y_(1–⊠) crystals for efficient green and yellow lasers - fluorescence quenching in Tb3+ ions

Thursday, 1 September 2022 12:00 (2 hours)

We investigated inversion dependent fluorescence quenching of Tb3+ via a Z-scan technique. Analysis with an analytical model yielded parameters describing the strength of energy transfer upconversion and energy migration between Tb3+ ions. This allows optimizing the quantum efficiency of the emitting ˆ5⊠_4-level in Tb3+-based lasers by optimized composition

code

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