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Er:YAG polycrystalline ceramics: The effects of the particle size distribution on the structural and optical properties

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The effects of the particle size distribution on the structural and optical properties of Er:YAG polycrystalline ceramics were investigated. For this purpose, two distribution groups were used: monomodal and bimodal. The results demonstrate that the use of bimodal distributions improves the density and optical properties of Er:YAG ceramics compared with the studied monomodal distributions. The best result was obtained for the bimodal distribution that resulted from mixing two monomodal distributions (1:4) with an average particle size ratio of 2:1.

Author keywords

C. Optical properties; Er:YAG ceramics; Microstructures; Particle size distribution