Abstracts

Optical Faraday rotator using Ce-substituted fibrous YIG single crystal grown by floating zone method with YAG laser heating

T. Sekijima, T. Fujii, K. Wakino and M. Okada. "Optical Faraday rotator using Ce-substituted fibrous YIG single crystal grown by floating zone method with YAG laser heating." 1999 MTT-S International Microwave Symposium Digest 99.3 (1999 Vol. III [MWSYM]): 1369-1372 vol.3.

A new optical Faraday rotator using fibrous Ce-substituted YIG (Ce:YIG) single crystal is developed. The fibrous Ce:YIG single crystal was successfully grown by floating zone method with IR assisted YAG laser heating at a fast growth rate. This crystal has a good quality, and shows a better figure of merit for an optical Faraday rotator at wavelength /spl lambda/=1.55 /spl mu/m compared with commonly used Bi-substituted YIG (Bi:YIG) films. Ce:YIG single crystals grown by our method are expected to reduce the cost of optical isolators.

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