

Highly ytterbium-doped bismuth-oxide-based fiber

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Abstract: Thermally stable highly ytterbium-doped bismuth-oxide-based glasses have been investigated. The absorbance increased linearly with Yb_2O_3 concentration, reaching 7800 dB/m with 3 mol-% of Yb_2O_3 . An ytterbium-doped bismuth-oxide-based fiber has also been fabricated with a fiber loss of 0.24 dB/m. A fiber laser is also demonstrated, and it shows a slope efficiency of 36%.

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