



Characterization of a high-power erbium-doped fiber laser

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Résumé en anglais	<p>In this paper we investigate the properties of a 10 W double-clad Er:Yb doped fiber amplifier in two laser setups. It is first studied an all-fibered continuous laser. A laser efficiency of 20 % is obtained with an output power of about 8 W for 40 W pumping power. A passively mode-locked fiber laser is then built up. In the anomalous dispersion regime it is obtained a soliton crystal involving some hundreds of solitons. We demonstrate that the soliton crystal becomes unstable for higher pumping power resulting in its dislocation.</p>
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