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Passively Q-switched S+/S band fiber laser with copper telluride saturable absorber (Article)

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Abstract

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A Q-switched S-band fiber laser based on a thulium-fluoride fiber gain medium and copper telluride (Cu2Te) based saturable absorber (SA) is demonstrated. The Cu2Te based SA is fabricated as a thin film and at the maximum pump power, the generated Q-switched output has a minimum pulse width of 3.2 μs and highest pulse energy of 56.7 nJ. The pulse train varies from 20.9 kHz to 30.2 kHz at the highest pump power. The wavelength of the generated output can be tuned over a range of 32 nm from 1470 nm to 1502 nm. The demonstrated laser has a high potential for industrial applications focusing on the S-band region. © 2020 Astro Ltd

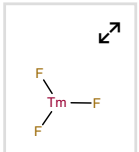
SciVal Topic Prominence

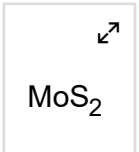
Topic: Saturable Absorbers | Erbium-Doped Fiber | Mode-locked Fiber Lasers

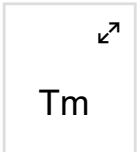
Prominence percentile: 99.458

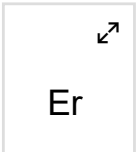
Chemistry database information

Substances









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