



High power L-band mode-locked fiber laser based on topological insulator saturable absorber

Submitted by François Sanchez on Mon, 01/25/2016 - 17:04

Titre	High power L-band mode-locked fiber laser based on topological insulator saturable absorber
Type de publication	Article de revue
Auteur	Meng, Yichang [1], Semaan, Georges [2], Salhi, Mohamed [3], Niang, Alioune [4], Guesmi, Khmaies [5], Luo, Zhi-chao [6], Sanchez, François [7]
Pays	Etats-Unis
Editeur	Optical Society of America
Ville	Washington
Type	Article scientifique dans une revue à comité de lecture
Année	2015
Langue	Anglais
Date	Septembre 2015
Numéro	18
Pagination	23053-23058
Volume	23
Titre de la revue	Optics Express
ISSN	1094-4087
Mots-clés	fibers [8], Mode-locked lasers [9], Nonlinear optics [10]
Résumé en anglais	We demonstrate a passive mode-locked Er:Yb doped doubleclad fiber laser using a microfiber-based topological insulator (Bi ₂ Se ₃) saturable absorber (TISA). By optimizing the cavity loss and output coupling ratio, the mode-locked fiber laser can operate in L-band with high average output power. With the highest pump power of 5 W, 91st harmonic mode locking of soliton bunches with average output power of 308 mW was obtained. This is the first report that the TISA based erbium-doped fiber laser operating above 1.6 μm and is also the highest output power yet reported in TISA based passive mode-locked fiber laser.
URL de la notice	http://okina.univ-angers.fr/publications/ua14406 [11]
DOI	10.1364/OE.23.023053 [12]
Lien vers le document	https://www.osapublishing.org/oe/abstract.cfm?uri=oe-23-18-23053 [13]
Titre abrégé	Opt. Express

Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=9350](http://okina.univ-angers.fr/publications?f[author]=9350)

[2] [http://okina.univ-angers.fr/publications?f\[author\]=15653](http://okina.univ-angers.fr/publications?f[author]=15653)

- [3] <http://okina.univ-angers.fr/m.salhi/publications>
- [4] <http://okina.univ-angers.fr/alniang/publications>
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=9352](http://okina.univ-angers.fr/publications?f[author]=9352)
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=24354](http://okina.univ-angers.fr/publications?f[author]=24354)
- [7] <http://okina.univ-angers.fr/francois.sanchez/publications>
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=20661](http://okina.univ-angers.fr/publications?f[keyword]=20661)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=9529](http://okina.univ-angers.fr/publications?f[keyword]=9529)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=4799](http://okina.univ-angers.fr/publications?f[keyword]=4799)
- [11] <http://okina.univ-angers.fr/publications/ua14406>
- [12] <http://dx.doi.org/10.1364/OE.23.023053>
- [13] <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-23-18-23053>

Publié sur *Okina* (<http://okina.univ-angers.fr>)