



Harmonic dissipative soliton resonance square pulses in an anomalous dispersion passively mode-locked fiber ring laser

Submitted by François Sanchez on Fri, 09/27/2019 - 10:27

Titre	Harmonic dissipative soliton resonance square pulses in an anomalous dispersion passively mode-locked fiber ring laser
Type de publication	Article de revue
Auteur	Semaan, Georges [1], Niang, Alioune [2], Salhi, Mohamed [3], Sanchez, François [4]
Editeur	Institute of Physics
Type	Article scientifique dans une revue à comité de lecture
Année	2017
Langue	Anglais
Date	Mai 2017
Numéro	5
Pagination	055401
Volume	14
Titre de la revue	Laser Physics Letters
ISSN	1612-2011
Mots-clés	dissipative soliton resonance [5], fiber laser [6], harmonic mode-locking [7], mode-locked laser [8]
Résumé en anglais	<p>We demonstrate the generation of dissipative soliton resonance square pulses from a co-doped Er:Yb double-clad fiber ring laser operating in an all anomalous dispersion regime. The obtained pulses have a repetition rate of 672 kHz and a pulse energy of 409 nJ. By carefully adjusting the polarization controllers while increasing the pump power, the square pulse can split into a series of identical equally spaced smaller square pulses up to the 13th harmonic of the fundamental repetition frequency. The average output energy of the square pulses follows a scaling law versus the harmonic order</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua20256 [9]
DOI	10.1088/1612-202X/aa6700 [10]
Lien vers le document	https://iopscience.iop.org/article/10.1088/1612-202X/aa6700 [11]
Titre abrégé	Laser Phys. Lett.

Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=15653>
- [2] <http://okina.univ-angers.fr/alniang/publications>
- [3] <http://okina.univ-angers.fr/m.salhi/publications>
- [4] <http://okina.univ-angers.fr/francois.sanchez/publications>
- [5] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=29361>

- [6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=9593>
- [7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=29364>
- [8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=29365>
- [9] <http://okina.univ-angers.fr/publications/ua20256>
- [10] <http://dx.doi.org/10.1088/1612-202X/aa6700>
- [11] <https://iopscience.iop.org/article/10.1088/1612-202X/aa6700>

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