Monolithic Highly Stable Yb-Doped Femtosecond Fiber Lasers for Applications in Practical Biophotonics - DTU Orbit (23/12/2018)

Monolithic Highly Stable Yb-Doped Femtosecond Fiber Lasers for Applications in Practical Biophotonics

Operational and environmental stability of ultrafast laser systems is critical for their applications in practical biophotonics. Mode-locked fiber lasers show great promise in applications such as supercontinuum sources or multiphoton microscopy systems. Recently, substantial progress has been made in the development of all-fiber nonlinear-optical laser control schemes, which resulted in the demonstration of highly stable monolithic, i.e., not containing any free-space elements, lasers with direct fiber-end delivery of femtosecond pulses. This paper provides an overview of the progress in the development of such all-fiber mode-locked lasers based on Yb-fiber as gain medium, operating at the wavelength around 1 $\mu$m, and delivering femtosecond pulses reaching tens of nanojoules of energy.

General information
State: Published
Organisations: Department of Photonics Engineering, Fiber Optics, Devices and Non-linear Effects, Nanophotonics Theory and Signal Processing
Contributors: Liu, X., Lægsgaard, J., Turchinovich, D.
Pages: 1439-1450
Publication date: 2012
Peer-reviewed: Yes

Publication information
Journal: IEEE Journal on Selected Topics in Quantum Electronics
Volume: 18
Issue number: 4
ISSN (Print): 1077-260X
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 3.34 SJR 1.116 SNIP 1.346
Web of Science (2017): Impact factor 3.367
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 2.99 SJR 1.217 SNIP 1.409
Web of Science (2016): Impact factor 3.971
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 3.03 SJR 1.475 SNIP 1.437
Web of Science (2015): Impact factor 3.466
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 3.49 SJR 1.884 SNIP 2.044
Web of Science (2014): Impact factor 2.828
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 4.55 SJR 2.249 SNIP 2.353
Web of Science (2013): Impact factor 3.465
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 4.35 SJR 2.736 SNIP 2.598
Web of Science (2012): Impact factor 4.078
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 3.87 SJR 2.368 SNIP 2.78
Web of Science (2011): Impact factor 3.78
ISI indexed (2011): ISI indexed yes