



Advances in OptoElectronics

- Journal Menu**
- Abstracting and Indexing
- Aims and Scope
- Article Processing Charges
- Author Guidelines
- Bibliographic Information
- Contact Information
- Editorial Board
- Editorial Workflow
- Reviewers Acknowledgment
- Subscription Information

- Open Special Issues
- Closed Special Issues
- Published Special Issues
- Special Issue Guidelines

Call for Book Manuscripts and Proposals

Advances in OptoElectronics
Volume 2008 (2008), Article ID 956908, 6 pages
doi:10.1155/2008/956908

Research Article

Second Harmonic Generation Using an All-Fiber Q-Switched Yb-Doped Fiber Laser and MgO:c-PPLN

Yi Gan,¹ Xijia Gu,² Joyce Y. C. Koo,² Wanguo Liang,¹ and Chang-qing Xu¹

¹Department of Engineering Physics, McMaster University, Hamilton, ON, L8S 4L7, Canada

²Department of Electrical and Computer Engineering, Ryerson University, Toronto, ON, M5B 2K3, Canada

Received 13 June 2008; Accepted 26 August 2008

Recommended by Hiroshi Murata

Abstract

We have experimentally demonstrated an efficient all-fiber passively Q-switched Yb-doped fiber laser with Samarium doped fiber as a saturable absorber. Average output power of 3.4 W at a repetition rate of 250 kHz and a pulse width of 1.1 microseconds was obtained at a pump power of 9.0 W. By using this fiber laser system and an MgO-doped congruent periodically poled lithium niobate (MgO:c-PPLN), second harmonic generation (SHG) output at 532 nm was achieved at room temperature. The conversion efficiency is around 4.2% which agrees well with the theoretical simulation.

- Abstract
- Full-Text PDF
- Full-Text HTML
- Linked References
- How to Cite this Article