668.
标题: Continuous-wave and actively Q-switched Nd:LSO crystal lasers
作者: Zhuang, S (Zhuang, S.); Li, D (Li, D.); Xu, X (Xu, X.); Wang, Z (Wang, Z.); Yu, H (Yu, H.); Xu, J (Xu, J.); Chen, L (Chen, L.); Zhao, Y (Zhao, Y.); Guo, L (Guo, L.); Xu, X (Xu, X.)
来源出版物: APPLIED PHYSICS B-LASERS AND OPTICS 卷: 107 期: 1 页: 41-45
DOI: 10.1007/s00340-011-4831-6 出版年: APR 2012
在 Web of Science 中的被引频次: 0
被引频次合计: 0
引用的参考文献数: 27
摘要: With a fiber coupled laser diode array as the pump source, Nd-doped Lu2SiO5 (Nd:LSO) crystal lasers at F-4(3/2)-> I-4(11/2) and F-4(3/2)-> I-4(13/2) transitions were demonstrated. The active Q-switched dual-wavelength lasers at about 1.08 mu m, as well as continuous-wave (CW) and active Q-switched lasers at 1357 nm are reported for the first time, to the best of our knowledge. Considering the small emission cross-sections and long fluorescence lifetime, this material possesses large energy storage ability and excellent Q-switched properties. The special emission wavelength at 1357 nm will have promising applications to be used in many fields, such as THz generation, pumping of Cr3+:LiSAF, repumping of strontium optical clock, laser Doppler velocimeter and distributed fiber sensor.
入藏号: WOS:000303375700006
语种: English
文献类型: Article
KeyWords Plus: TEMPERATURE CW OPERATION; DIODE-PUMPED ND; ROOM-TEMPERATURE; RING LASER; YAG LASER; POWER; LSO; NM
地址: [Zhuang, S.; Wang, Z.; Yu, H.; Chen, L.; Zhao, Y.; Guo, L.; Xu, X.] Shandong Univ, State Key Lab Crystal Mat, Jinan 250100, Peoples R China
[Li, D.; Xu, X.] Chinese Acad Sci, Shanghai Inst Opt & Fine Mech, Key Lab Mat High Power Laser, Shanghai 201800, Peoples R China
[Xu, J.] Shanghai Inst Ceram, Key Lab Transparent & Optofunct Inorgan Mat, Shanghai 201800, Peoples R China
[Zhuang, S.] Shandong Jianzhu Univ, Sch Sci, Jinan 250101, Peoples R China
通讯作者地址: Wang, Z (通讯作者),Shandong Univ, State Key Lab Crystal Mat, Jinan 250100, Peoples R China
电子邮件地址: xgxu@sdu.edu.cn; zpwang@sdu.edu.cn; xgxu@sdu.edu.cn
出版商: SPRINGER
出版商地址: 233 SPRING ST, NEW YORK, NY 10013 USA
Web of Science 分类: Optics; Physics, Applied
学科类别: Optics; Physics
IDS 号: 933PY
ISSN: 0946-2171
29 字符的来源出版物名称缩写: APPL PHYS B-LASERS O
ISO 来源出版物缩写: Appl. Phys. B-Lasers Opt.
来源出版物页码计数: 5