

Accepted Manuscript

Title: Fabrication and laser oscillation of Yb:Sc₂O₃ transparent ceramics from co-precipitated nano-powders

Authors: Zhengfa Dai, Qiang Liu, Guido Toci, Matteo Vannini, Angela Pirri, Vladimir Babin, Martin Nikl, Wei Wang, Haohong Chen, Jiang Li



PII: S0955-2219(17)30705-7
DOI: <https://doi.org/10.1016/j.jeurceramsoc.2017.10.027>
Reference: JECS 11514

To appear in: *Journal of the European Ceramic Society*

Received date: 14-9-2017
Accepted date: 15-10-2017

Please cite this article as: Dai Zhengfa, Liu Qiang, Toci Guido, Vannini Matteo, Pirri Angela, Babin Vladimir, Nikl Martin, Wang Wei, Chen Haohong, Li Jiang. Fabrication and laser oscillation of Yb:Sc₂O₃ transparent ceramics from co-precipitated nano-powders. *Journal of The European Ceramic Society* <https://doi.org/10.1016/j.jeurceramsoc.2017.10.027>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Fabrication and laser oscillation of Yb:Sc₂O₃ transparent ceramics from co-precipitated nano-powders

Zhengfa Dai^{a,b}, Qiang Liu^b, Guido Toci^c, Matteo Vannini^c, Angela Pirri^d, Vladimir Babin^e, Martin Nikl^e, Wei Wang^a, Haohong Chen^a, Jiang Li^{a,*}

^a Key Laboratory of Transparent and Opto-functional Inorganic Materials, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai 200050, China

^b School of Material Science and Engineering, Jiangsu University, Zhenjiang 212013, China

^c C.N.R. - National Research Council, Istituto Nazionale di Ottica, Via Madonna del Piano 10, I-50019 Sesto Fiorentino (FI) Italy

^d C.N.R. - National Research Council, Istituto di Fisica Applicata "Nello Carrara" Via Madonna del Piano 10, I-50019 Sesto Fiorentino (FI) Italy

^e Institute of Physics Academy of Sciences of the Czech Republic, Cukrovarnicka 10, Prague 162 53, Czech Republic

* Corresponding author. Tel: +86-21-52412816; Fax: +86-21-52413903

E-mail address: lijiang@mail.sic.ac.cn (Jiang Li)

Abstract

Ytterbium doped scandium oxide (Yb:Sc₂O₃) transparent ceramics were fabricated by a co-precipitation and vacuum sintering method. The characteristics of the precursor and the calcined powders were investigated by BET, XRD, and SEM. Ultra-fine and low agglomerated 5at% Yb:Sc₂O₃ powders with the average particle size

Download English Version:

<https://daneshyari.com/en/article/7898791>

Download Persian Version:

<https://daneshyari.com/article/7898791>

[Daneshyari.com](https://daneshyari.com)