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978-1-107-41328-3 - Materials Research Society Symposium Proceedings: Volume 597:

Thin Films for Optical Waveguide Devices and Materials for Optical Limiting

Editors: Keiichi Nashimoto, Ruth Pachter, Bruce W. Wessels, Joseph Shmulovich,

Alex K-Y. Jen, Keith Lewis, Richard Sutherland and Joseph W. Perry

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**MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 597**

Thin Films for Optical Waveguide Devices and Materials for Optical Limiting

Symposia held November 30–December 3, 1999, Boston, Massachusetts, U.S.A.

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Materials Research Society
Warrendale, Pennsylvania

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CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press

32 Avenue of the Americas, New York NY 10013-2473, USA

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9781107413283

Materials Research Society

506 Keystone Drive, Warrendale, PA 15086

<http://www.mrs.org>

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First published 2000

First paperback edition 2013

Single article reprints from this publication are available through
University Microfilms Inc., 300 North Zeeb Road, Ann Arbor, MI 48106

CODEN: MRSPDH

ISBN 978-1-107-41328-3 Paperback

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PREFACE

This volume contains papers presented at Symposium Z, "Thin Films for Optical Waveguide Devices," and Symposium PP, "Materials for Optical Limiting III," held November 30–December 3 at the 1999 MRS Fall Meeting in Boston, Massachusetts. The symposia provided a multidisciplinary discussion of science and technology of optical materials and devices for materials scientists, chemists, and physicists. Symposium Z covered materials properties, thin film processing, and optical waveguide device integration. Range of thin films involved ferroelectrics, dielectrics, glasses, and polymers with epitaxial, glass, or polymeric structures. Thin film processing included sputtering, MBE, PLD, MOCVD, FHD, sol-gel, and spin casting for luminescent waveguides, electrooptic waveguides, magneto-optic waveguides, and photonic crystals. Symposium PP, which addressed the development of materials for optical limiters and tunable filters which can suppress undesired radiation, was a continuation of the first two MRS symposia on this topic held in the Fall of 1994 and the Spring of 1997. Topics of this symposium include growing areas of interest such as two-photon absorbers and photorefractives, as well as continued emphasis on reverse saturable absorption, liquid crystals, and carbon-based suspensions. An interesting new form of the latter is carbon nanotubes. Symposium PP also covered new materials modeling and synthesis, nonlinear materials characterization, device applications using new materials, and analyses of materials impact on optical limiting applications. We hope that the papers presented here stimulate further discussion and research.

Keiichi Nashimoto
Ruth Pachter
Bruce W. Wessels
Joseph Shmulovich
Alex K-Y. Jen
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July 2000

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ACKNOWLEDGMENTS

The symposium organizers thank all of the contributing and invited authors for the outstanding quality of their presentations, and for their contributions to the proceedings. The success of the two symposia, and the publication of this proceedings volume, is due to the efforts of many people to whom we are grateful. We also gratefully acknowledge the financial support for "Thin Films for Optical Waveguide Devices," received from the following organizations:

Fuji Xerox Co., Ltd.
Shinkosha Co., Ltd.

Support for "Materials for Optical Limiting III" is gratefully acknowledged from:

Air Force Research Laboratory (U.S.A.)
Defence Research Agency (U.K.)

Cambridge University Press

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