

MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1002

Printing Methods for Electronic, Photonics and Biomaterials

April 9-13, 2007
San Francisco, California, USA

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

ISBN: 978-1-60560-436-7

Some format issues inherent in the e-media version may also appear in this print version.

Copyright (2007) by the Materials Research Society.
All rights reserved.

For permission requests, please contact the Materials Research Society at the address below.

Materials Research Society
Proceedings
506 Keystone Dr.
Warrendale, PA 15086
Phone: 724-779-3004 x 531
Fax: 724-779-4396
eproceedings@mrs.org

TABLE OF CONTENTS

Pattern Transfer Process Using Innovative Polymers in Combined Thermal and UV Nanoimprint Lithography (TUV-NIL)	1
<i>F. Brunetti, S. Harrer, G. Scarpa, P. Lugli, M. Kubenz, C. Schuster, F. Reuther</i>	
3D Photonic Structures by Sol-Gel Imprint Lithography	7
<i>M. Verschuuren, H. Van Sprang</i>	
Fabrication of Piezoelectric Polyvinylidene Fluoride (PVDF) Microstructures by Soft Lithography for Tissue Engineering and Cell Biology Applications	13
<i>D. Gallego, N. J. Ferrell, D. J. Hansford</i>	
Adhesion Promoting Photo-acid Generator APPAG - A New Class of Lithographic Material	19
<i>S. Sharma, G. Sharma, R. Meagley</i>	
High Resolution Electron Beam Lithographic Deposition of Metal and Metal Oxide Films from Metal Complexes	26
<i>X. Zhang, R. H. Hill</i>	
Robust Printing and Dispensing Solutions with Three Sigma Volumetric Control for 21st Century Manufacturing and Packaging	32
<i>B. Li, P. A. Clark, K. H. Church</i>	
Micro/Nanofabrication by Spin Dewetting on a Poly(dimethylsiloxane) Mold	38
<i>N. Ferrell, A. Bross, D. Hansford</i>	
Fabrication of Molecular Micro-NanoStructures by Surface-Tension-Driven Technique	44
<i>I. Viola, F. D. Sala, M. Piacenza, L. Favaretto, M. Gazzano, G. Barabella, R. Cingolani, G. Gigli</i>	
Hot Embossing of Electron Beam Generated Structures in Polypropylene	53
<i>P. W. Leech</i>	
Modeling of Self-Assembly Dynamics of Photolithographically Patterned MUFFINS Biosensor Arrays	59
<i>S. Lee, P. Carmichael, J. Meiring, M. Dickey, S. Grayson, R. T. Bonnecaze, C. G. Willson</i>	
Gas Phase Nanoparticle Integration	66
<i>C. R. Barry, U. Kortshagen, H. O. Jacobs</i>	
Photoresist Free Negative and Positive Photolithographic Deposition of Zirconium Oxide Films from Photosensitive Metal Organic Compounds	72
<i>X. Zhang, R. H. Hill</i>	
Evaluation and Testing of Organometallic Precursor for Copper Direct-Write	78
<i>P. Majumder, M. Tiwari, C. Megaridis, J. McAndrew, M. Xu, J. Belot, C. G. Takoudis</i>	
Author Index	