

**MATERIALS RESEARCH SOCIETY**  
**SYMPOSIUM PROCEEDINGS VOLUME 1220**

**Green Chemistry in  
Research and Development  
of Advanced Materials**

November 30 - December 4, 2009  
Boston, Massachusetts, USA

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

**ISBN: 978-1-61738-398-4**

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

Copyright© (2010) by the Materials Research Society  
All rights reserved.

Printed by Curran Associates, Inc. (2010)

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](mailto:eproceedings@mrs.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

<b>Development of Switchable “Smart” Biomaterials Using an Environmental Friendly Technology .....</b>	<b>1</b>
<i>T. Barroso, R. Viveiros, E. Costa, M. Temtem, T. Casimiro, A. Aguiar-Ricardo</i>	
<b>Greener Synthesis of Nanoparticles Using Fine Tuned Hydrothermal Routes .....</b>	<b>7</b>
<i>H. Han, G. Di Francesco, A. Sexton, A. Tretiak, M.M. Maye</i>	
<b>Controllable Mesopore-size and Outer Diameter of Silica Nanoparticles Prepared by a Novel Water/Oil-Phase Technique.....</b>	<b>11</b>
<i>A.B.D. Nandiyanto, Y. Kaihatsu, F. Iskandar, K. Okuyama</i>	
<b>Mist Deposition Technique as a Green Chemical Route for Synthesizing Oxide and Organic Thin Films .....</b>	<b>18</b>
<i>S. Fujita, K. Kaneko, Y. Fukui, H. Nishinaka, T. Ikenoue, T. Nomura</i>	
<b>MS2 Bacteriophage as a Biotemplate for Semiconductor Nanoparticle Synthesis .....</b>	<b>24</b>
<i>B.A. Cohen, A.E. Kaloyeros, M. Bergkvist</i>	
<b>The Cytotoxicity of Quantum Dots CdSe/CdS Functionalized with -COOH and -NH<sub>2</sub>.....</b>	<b>30</b>
<i>L. Shen, J. Cui, J. Liu, X. Xu, M. Zhu</i>	
<b>The Surface Modification of Nanocrystals for Biological and Environmental Applications.....</b>	<b>36</b>
<i>C. Zhou, P. Rong, W. Wang, W. Zhang, Q. Wan, B. Zou</i>	
<b>APCVD SiC<sub>x</sub>O<sub>y</sub> Deposition as Na Barrier Layers for TCO/Low-E Glass Coatings .....</b>	<b>43</b>
<i>W. Zhang, T. Salagaj, C. Jensen, K. Strobl, M. Davies</i>	
<b>Fabrication of Porous SiC Sheets with Controlled Porosity from Waste Clutch Boards.....</b>	<b>50</b>
<i>Y. Domi, S. Shimada</i>	
<b>Preparation and Properties of Infrared Transparent Conductive Thin Films.....</b>	<b>56</b>
<i>Y. Wang, L. Li, J. Chen, Z. Song, Y. An, Y. Zhang</i>	
<b>Author Index</b>	