

MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1063

Solids at the Biological Interface

November 26-30, 2007
Boston, Massachusetts, USA

Printed from e-media with permission by:

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

ISBN: 978-1-60560-837-2

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

Copyright© (422:) by the Materials Research Society
All rights reserved.

Printed by Curran Associates, Inc. (202;)

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

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
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

The Detection and Characterization of Nanoparticulate Heavy Metals in Epithelial Tissues in Patients with Nephrogenic Fibrosing Dermopathy	1
<i>R. Ayers, W. High, J. Chandler, J. Ranville</i>	
Buckling of Microtubules in Living Cells Modulated by Surrounding Cytoplasm and Filament Network	16
<i>T. Li</i>	
Sol-gel Encapsulated Gold-Silica Nanoshell-based SERS Sensors	22
<i>Y. J. Lin, P. Gala, S. W. Bishnoi</i>	
Effect of Ligand Density Gradient on the Adhesion Kinetics of Biological Membranes	27
<i>A. Sarvestani, E. Jabbari</i>	
Drug Delivery Systems Based on Hydroxyapatite-coated Poly(lactic-co-glycolic acid) Microspheres	33
<i>Q. Xu, J. T. Czemuska</i>	
Functionalized Porous Silicon in a Simulated Gastrointestinal Tract: Modeling the Biocompatibility of a Monolayer Protected Nanostructured Material	39
<i>D. S. Albrecht, J. T. Lee, N. Molby, S. D. Rhodes, H. M. Dam, J. L. Siegel, L. A. Porter</i>	
A Bacterium's Sense of "Touch"	45
<i>R. Yougsunthon, B. H. Lower, V. G. Fowler, E. Alexander, S. K. Lower</i>	
Effects of Changes in Structural Hydration of Multiphasic Heterogeneous Calcium Phosphate Powders Created via Auto-Ignition Combustion Synthesis	51
<i>N. Vollmer, D. Burkes, J. Moore, R. Ayers</i>	
Mechanical Properties of Nanoparticle Hydroxyapatite/gelatin Constructs	58
<i>S. Fox, I. Stanishevskaya, S. Chowdhury, S. Catledge, A. Stanishevsky</i>	
Patterning Cylindrical Fibers with Long-Range Electrostatic Forces	64
<i>K. L. Kohlstedt, G. Vernizzi, M. Olvera de la Cruz</i>	
Author Index	