MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS VOLUME 1723

Plasma Processing and Diagnostics for Life Sciences

November 30 – December 5, 2014 Boston, Massachusetts, USA

Printed from e-media with permission by:

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

ISBN: 978-1-5108-0607-8

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

©Materials Research Society 2015

This reprint is produced with the permission of the Materials Research Society and Cambridge University Press.

This publication is in copyright, subject to statutory exception and to the provisions of relevant collective licensing agreements. No reproduction of any part may take place without the written permission of Cambridge University Press.

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

Cambridge University Press 32 Avenue of the Americas, New York, NY 10013-2473, USA www.cambridge.org

Materials Research Society 506 Keystone Drive, Warrendale, PA 15086 www.mrs.org

CODEN: MRSPDH

ISBN: 978-1-5108-0607-8

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-part Internet Web sites referred to in this publication and does not guarantee that any content on such Web sites is, or will remain, accurate or appropriate.

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



TABLE OF CONTENTS

Direct Deposition of Gold Nanoparticles on Cellulose Fiber by Solution Plasma Process	1
S. Nemoto, A. Wattanphanit, N. Saito	
Comparative Study on the Pulmonary Toxicity of Indium Hydroxide, Indium-Tin Oxide, and Indium Oxide Following Intratracheal Instillations into the Lungs of Rats	8
A. Tanaka, M. Hirata, N. Matsumura, K. Koga, M. Shiratani, Y. Kiyohara	
Plasma Deposition of Biomolecules for Enhanced Biomedical Applications L. O'Neill, B. Twomey, P. Dobbyn, J. O'Donoghue	14
Effects of Atmospheric Air Plasma Irradiation to Seeds of Radish Sprouts on Chlorophyll and Carotenoids Concentrations in their Leaves	23
Enhanced Human Bone Marrow Mesenchymal Stem Cell Chondrogenic Differentiation on Cold Atmospheric Plasma Modified Cartilage Scaffold	28
Multigeneration Effects of Plasma Irradiation to Seeds of Arabidopsis Thaliana and Zinnia on Their Growth	34
Author Index	