
Chemical Mechanical Polishing 13

Editors:**R. Rhoades**

Entrepix Inc.
Phoenix, Arizona, USA

Y. Obeng

NIST
Gaithersburg, Maryland, USA

G. Banerjee

Air Products and Chemicals
Allentown, Pennsylvania, USA

B. Basim

Ozyegin University
Istanbul, Turkey

L. Economikos

IBM
Hopewell Junction, New York, USA

Sponsoring Division:

Dielectric Science & Technology



Published by

The Electrochemical Society

65 South Main Street, Building D
Pennington, NJ 08534-2839, USA

tel 609 737 1902

fax 609 737 2743

www.electrochem.org

ECS transactions™

Vol. 61, No. 17

Copyright 2014 by The Electrochemical Society.
All rights reserved.

This book has been registered with Copyright Clearance Center.
For further information, please contact the Copyright Clearance Center,
Salem, Massachusetts.

Published by:

The Electrochemical Society
65 South Main Street
Pennington, New Jersey 08534-2839, USA

Telephone 609.737.1902
Fax 609.737.2743
e-mail: ecs@electrochem.org
Web: www.electrochem.org

ISSN 1938-6737 (online)
ISSN 1938-5862 (print)
ISSN 2151-2051 (cd-rom)

ISBN 978-1-62332-208-3 (Soft Cover)
ISBN 978-1-60768-565-4 (PDF)

Printed in the United States of America.

ECS Transactions, Volume 61, Issue 17

Chemical Mechanical Polishing 13

Table of Contents

| | |
|--|-----|
| Preface | iii |
| Chemically Impregnated Abrasives Provide High Planarization Efficiency Copper CMP Slurry <i>R. Ihnfeldt</i> | 1 |
| A Cahn-Hilliard Modeling of Metal Oxide Thin Films for Advanced CMP Applications <i>A. Karagoz, Y. Sengul, G. B. Basim</i> | 15 |
| Development of 3-D Chemical Mechanical Polishing Process for Nanostructuring of Bioimplant Surfaces <i>Z. Ozdemir, O. Orhan, O. Bebek, G. B. Basim</i> | 21 |
| Effect of La Doping of Ceria Abrasives for STI CMP <i>B. V. S. Praveen, J. G. Park, S. Ramanathan</i> | 27 |
| Improving Selectivity on Germanium CMP Applications <i>A. Karagoz, G. B. Basim</i> | 37 |
| Current Status of Slurries and Cleans for CMP of III-V Device Fabrications – A Critical Review <i>G. Banerjee</i> | 43 |
| Application of Fluorescence Correlation Spectroscopy in the Characterization of Particle Size Distributions of Colloidal Silica Abrasives Used in Chemical-Mechanical Planarization <i>L. M. Jacobson, D. K. Turner, A. K. Rawat, C. T. Carver, A. Tripahi, M. Moinpour, E. E. Remsen</i> | 55 |
| Author Index | 65 |