
Plasma Processing 19

Editor:

S. Mathad

S/C Tech Consulting USA
Poughkeepsie, New York, USA

Sponsoring Divisions:



Dielectric Science & Technology



Electronics and Photonics



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

ecstransactions™

Vol. 50, No. 46

Copyright 2013 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 978-1-62332-082-9 (Softcover)
ISBN 978-1-60768-434-3 (PDF)

Printed in the United States of America.

Table of Contents

Preface *iii*

Chapter 1 Thin Film Etching Processes and Technologies

Patterning Aspects of SiGe/Ge BFFT Fabrication 3
A. Milenin, L. Witters, M. Demand

Systematic Approach to Time Division Multiplexed Si Etch Process 11
Development
C. W. Johnson, D. Johnson, L. Martinez, J. Plumhoff

High Resolution Patterning for Sub 30 nm Technology Nodes Using a Ceramic 21
Based Dual Hard Mask
J. Paul, M. Rudolph, S. Riedel, X. Thrun, V. Beyer, S. Wege, C. Hohle

Precision, Damage-Free Etching by Electron-Enhanced Reactions: Results and 33
Simulations
H. P. Gillis, S. J. Anz, S. P. Han, J. Su, W. A. Goddard III

Chapter 2 Poster Session

Low Temperature TiC Coating Process by Plasma Enhanced Chemical Vapor 47
Deposition
H. Masaoka, T. Saito, K. Kondo, N. Okamoto, T. Kan

Surface Conduction Mechanism in AlGaIn/GaN High Electron Mobility 53
Transistors with Pre-Gate Treatment
C. H. Cheng, T. Chang, S. Y. Liao, W. D. Ho, Y. C. Shiau, T. Chang, J. S. Sen

Feature Profile 2D and 3D Simulation with Etching, Deposition, and Implantation Processes <i>P. Moroz, D. J. Moroz</i>	61
---------------------------------------------------------------------------------------------------------------------------	----

Chapter 3
AP Plasma and Microplasma Applications

Charge-based Delivery of Molecules to Skin Using Atmospheric Plasmas <i>A. M. Hoff, R. Connolly, T. Chapman, J. Llewellyn, R. Gilbert, K. Ugen, M. Jaroszeski</i>	77
Evaluation of Micro Plasma Formed in the Narrow Gap in Electrolyte Solution <i>H. Tamai, M. Hafner, A. Hassel, H. Tachikawa, K. Azumi</i>	85
Author Index	93