

LETTERS

Optimizing charge neutralization for a magnetic sector SIMS instrument in negative mode

Alexander L. Pivovarov and Georgiy M. Guryanov

J. Vac. Sci. Technol. A **30**, 040601 (2012); <http://dx.doi.org/10.1116/1.4719960>

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Selective chemical etch of gallium nitride by phosphoric acid

Chongmin Lee, Jennifer K. Hite, Michael A. Mastro, Jaime A. Freitas Jr., Charles R. Eddy Jr., Hong-Yeol Kim and Jihyun Kim

J. Vac. Sci. Technol. A **30**, 040602 (2012); <http://dx.doi.org/10.1116/1.4719528>

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Effect of *p*-type doping on the oxidation of H-Si(111) studied by second-harmonic generation

Bilal Gokce, Daniel B. Dougherty and Kenan Gundogdu

J. Vac. Sci. Technol. A **30**, 040603 (2012); <http://dx.doi.org/10.1116/1.4721329>

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Evaporation-assisted high-power impulse magnetron sputtering: The deposition of tungsten oxide as a case study

Axel Hemberg, Jean-Pierre Dauchot, Rony Snyders and Stephanos Konstantinidis

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Characterization of geometrical factors for quantitative angle-resolved photoelectron spectroscopy

Eugenie Martinez, Alberto Herrera-Gomez, Mickael Allain, Olivier Renault, Alain Faure, Amal Chabli and Francois Bertin

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Nanopillar ITO electrodes via argon plasma etching

Jaron G. Van Dijken and Michael J. Brett

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REVIEW ARTICLE

Pulsed high-density plasmas for advanced dry etching processes

Samer Banna, Ankur Agarwal, Gilles Cunge, Maxime Darnon, Erwine Pargon and Olivier Joubert

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Status and prospects of Al₂O₃-based surface passivation schemes for silicon solar cells

G. Dingemans and W. M. M. Kessels

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PLASMA SCIENCE AND TECHNOLOGY**Dry etching characteristics of TaN absorber for extreme ultraviolet mask with Ru buffer layer**

Wanjae Park, Ohjung Kwon, Ki-Woong Whang and Jeongyun Lee

J. Vac. Sci. Technol. A **30**, 041301 (2012); <http://dx.doi.org/10.1116/1.4718420>[+ VIEW DESCRIPTION](#)

Comprehensive computer model for magnetron sputtering. I. Gas heating and rarefaction

Francisco J. Jimenez and Steven K. Dew

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Damage by radicals and photons during plasma cleaning of porous low-*k* SiOCH. I. Ar/O₂ and He/H₂ plasmas

Juline Shoeb, Ming Mei Wang and Mark J. Kushner

J. Vac. Sci. Technol. A **30**, 041303 (2012); <http://dx.doi.org/10.1116/1.4718444>[+ VIEW DESCRIPTION](#)

Damage by radicals and photons during plasma cleaning of porous low-*k* SiOCH. II. Water uptake and change in dielectric constant

Juline Shoeb and Mark J. Kushner

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Role of surface temperature in fluorocarbon plasma-surface interactions

Caleb T. Nelson, Lawrence J. Overzet and Matthew J. Goeckner

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Nanostructuring of molybdenum and tungsten surfaces by low-energy helium ions

Gregory De Temmerman, Kirill Bystrov, Jakub J. Zielinski, Martin Balden, Gabriele Matern, Cecile Arnas and Laurent Marot

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SURFACES

Tracking electron-induced carbon contamination and cleaning of Ru surfaces by Auger electron spectroscopy

Aloke Kanjilal, Mark Catalfano, Sivanandan S. Harilal, Ahmed Hassanein and Bryan Rice
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Effect of surface contamination on electron tunneling in the high bias range

Hailang Qin, Kuan Eng Johnson Goh, Michel Bosman, Xiang Li, Kin Leong Pey and Cedric Troadec
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Photoemission band mapping with a tunable femtosecond source using nonequilibrium absorption resonances

Mehmet B. Yilmaz, Jerry I. Dadap, Kevin R. Knox, Nader Zaki, Zhaofeng Hao, Peter D. Johnson and Richard M. Osgood Jr.
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In situ laser processing in a scanning electron microscope

Nicholas A. Roberts, Gregory A. Magel, Cheryl D. Hartfield, Thomas M. Moore, Jason D. Fowlkes and Philip D. Rack
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THIN FILMS

Atomic layer deposited iridium oxide thin film as microelectrode coating in stem cell applications

Tomi Rynnänen, Laura Ylä-Outinen, Susanna Narkilahti, Jarno M. A. Tanskanen, Jari Hyttinen, Jani Hämäläinen, Markku Leskelä and Jukka Lekkala
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Characterization studies of aluminum oxide barrier coatings on polymeric substrates

Carolyn F. Struller, Peter J. Kelly, Nick J. Copeland and Christopher M. Liauw
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Initiated-chemical vapor deposition of organosilicon layers: Monomer adsorption, bulk growth, and process window definition

Gianfranco Aresta, Jurgen Palmans, Mauritius C. M. van de Sanden and Mariadriana Creatore

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In/ITO whisker and optoelectronic properties of ITO films deposited by ion beam sputtering

Jung-Hsiung Shen, Sung-Wei Yeh and Lay Gaik Teoh

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Laboratory investigations of irradiated acetonitrile-containing ices on an interstellar dust analog

Ali G. M. Abdulgalil, Demian Marchione, Alexander Rosu-Finsen, Mark P. Collings and Martin. R. S. McCoustra

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Cross characterization of ultrathin interlayers in HfO₂ high-k stacks by angle resolved x-ray photoelectron spectroscopy, medium energy ion scattering, and grazing incidence extreme ultraviolet reflectometry

Matus Banyay, Larissa Juschkin, Eric Bersch, Daniel Franca, Michael Liehr and Alain Diebold

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Influence of gamma irradiation on the C-V characteristics of the Al/SiN_x/Si MIS capacitors

Ervin Tugay, Ercan Yilmaz and Rasit Turan

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Oxidation resistance of quintuple Ti-Al-Si-C-N coatings and associated mechanism

Guizhi Wu, Shengli Ma, Kewei Xu, Vincent Ji and Paul K. Chu

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Cooling effect of nanoscale Bi₂Te₃/Sb₂Te₃ multilayered thermoelectric thin films

Mardercial Hines, Joshua Lenhardt, Ming Lu, Li Jiang and Zhigang Xiao

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Compositional depth profiling of TaCN thin films

Christoph Adelman, Thierry Conard, Alexis Franquet, Bert Brijs, Frans Munnik, Simon Burgess, Thomas Witters, Johan Meersschaut, Jorge A. Kittl, Wilfried Vandervorst and Sven Van Elshocht

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Extensive Raman spectroscopic investigation of ultrathin $\text{Co}_{1-x}\text{Ni}_x\text{Si}_2$ films grown on Si(100)

Yinghua Piao, Zhiwei Zhu, Xindong Gao, Aliaksandra Karabko, Cheng Hu, Zhijun Qiu, Jun Luo, Zhi-Bin Zhang, Shi-Li Zhang and Dongping Wu

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Microstructure, phase transition, and interfacial chemistry of $\text{Gd}_2\text{O}_3/\text{Si}(111)$ grown by electron-beam physical vapor deposition

Xiaojun Weng, Daniel A. Grave, Zachary R. Hughes, Douglas E. Wolfe and Joshua A. Robinson

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Indium and impurity incorporation in InGaN films on polar, nonpolar, and semipolar GaN orientations grown by ammonia molecular beam epitaxy

David A. Browne, Erin C. Young, Jordan R. Lang, Christophe A. Hurni and James S. Speck

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Spectroscopic ellipsometry of superparamagnetic nanoparticles in thin films of poly(*N*-isopropylacrylamide)^a

Sebastian Rauch, Klaus-Jochen Eichhorn, Manfred Stamm and Petra Uhlmann

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Permeability and corrosion in $\text{ZrO}_2/\text{Al}_2\text{O}_3$ nanolaminate and Al_2O_3 thin films grown by atomic layer deposition on polymers

Peter F. Garcia, Robert S. McLean, Zhigang G. Li, Michael H. Reilly and Will J. Marshall

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Magnetron-sputter epitaxy of $\beta\text{-FeSi}_2(220)/\text{Si}(111)$ and $\beta\text{-FeSi}_2(431)/\text{Si}(001)$ thin films at elevated temperatures

Hongfei Liu, Chengchuh Tan and Dongzhi Chi

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ENERGY FRONTIERS

Chemical and structural study of electrically passivating Al₂O₃/Si interfaces prepared by atomic layer deposition

Volker Naumann, Martin Otto, Ralf B. Wehrspohn and Christian Hagendorf
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Investigating the effects of proton exchange membrane fuel cell conditions on carbon supported platinum electrocatalyst composition and performance

Anant Patel, Kateryna Artyushkova, Plamen Atanassov, Vesna Colbow, Monica Dutta, David Harvey and Silvia Wessel
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Amorphous and nanocrystalline silicon thin film photovoltaic technology on flexible substrates

Baojie Yan, Jeffrey Yang and Subhendu Guha
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Photoresponse of PbS nanoparticles–quaterthiophene films prepared by gaseous deposition as probed by XPS

Michael W. Majeski, F. Douglas Pleticha, Igor L. Bolotin, Luke Hanley, Eda Yilmaz and Sefik Suzer
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Charge transport and relaxation in hydrogenated barium titanate films and their potential for integrated supercapacitors

Fadhel El Kamel and Patrice Gonon
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Correlations of Cu(In, Ga)Se₂ imaging with device performance, defects, and microstructural properties

Steve Johnston, Thomas Unold, Ingrid Repins, Ana Kanevce, Katherine Zaunbrecher, Fei Yan, Jian V. Li, Patricia Dippo, Rajalakshmi Sundaramoorthy, Kim M. Jones and Bobby To
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Variation in band offsets at ZnO/Sn:In₂O₃ heterojunctions measured by x-ray photoelectron spectroscopy

Tiffany C. Kaspar and Tim C. Droubay
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