

LETTERS

Effect of surface derived hydrocarbon impurities on Ar plasma properties

Nick Fox-Lyon, Gottlieb S. Oehrlein and Valery Godyak

J. Vac. Sci. Technol. A **32**, 030601 (2014); <http://dx.doi.org/10.1116/1.4867158>

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Influence of pulse power amplitude on plasma properties and film deposition in high power pulsed plasma enhanced chemical vapor deposition

Daniel Lundin, Jens Jensen and Henrik Pedersen

J. Vac. Sci. Technol. A **32**, 030602 (2014); <http://dx.doi.org/10.1116/1.4867442>

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Effect of WN content on toughness enhancement in $V_{1-x}W_xN/MgO(001)$ thin films

H. Kindlund, D. G. Sangiovanni, J. Lu, J. Jensen, V. Chirita, I. Petrov, J. E. Greene and L. Hultman

J. Vac. Sci. Technol. A **32**, 030603 (2014); <http://dx.doi.org/10.1116/1.4867610>

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Characterizing low-frequency oscillation of Hall thrusters by dielectric wall temperature variation

Guo Ning, Wei Liqiu and Ding Yongjie

J. Vac. Sci. Technol. A **32**, 030604 (2014); <http://dx.doi.org/10.1116/1.4869284>

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Structural and composition investigations at delayered locations of low k integrated circuit device by gas-assisted focused ion beam

Dandan Wang, Pik Kee Tan, Maggie Yamin Huang, Jeffrey Lam and Zhihong Mai

J. Vac. Sci. Technol. A **32**, 030605 (2014); <http://dx.doi.org/10.1116/1.4869283>

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REVIEW ARTICLES

Atmospheric-pressure low-temperature plasma processes for thin film deposition

Hiroaki Kakiuchi, Hiromasa Ohmi and Kiyoshi Yasutake

J. Vac. Sci. Technol. A **32**, 030801 (2014); <http://dx.doi.org/10.1116/1.4828369>

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INTERFACES

Control of the interfacial abruptness of Au-catalyzed Si-Si_{1-x}Ge_x heterostructured nanowires grown by vapor–liquid–solid

Priyanka Periwal, Thierry Baron, Laurence Latu-Romain, Bassem Salem, Franck Bassani, Gilles Patriarche and Pascal Gentile

J. Vac. Sci. Technol. A **32**, 031101 (2014); <http://dx.doi.org/10.1116/1.4867264>

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PLASMA SCIENCE AND TECHNOLOGY

Comparative study of GaN mesa etch characteristics in Cl₂ based inductively coupled plasma with Ar and BC_l₃ as additive gases

Dipendra Singh Rawal, Henika Arora, Bhupender Kumar Sehgal and Rangarajan Muralidharan

J. Vac. Sci. Technol. A **32**, 031301 (2014); <http://dx.doi.org/10.1116/1.4868616>

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Precision plasma etching of Si, Ge, and Ge:P by SF₆ with added O₂

Chalermwat Wongwanitwattana, Vishal A. Shah, Maksym Myronov, Evan H. C. Parker, Terry Whall and David R. Leadley

J. Vac. Sci. Technol. A **32**, 031302 (2014); <http://dx.doi.org/10.1116/1.4868615>

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Argon–oxygen dc magnetron discharge plasma probed with ion acoustic waves

Partha Saikia, Bipul Kumar Saikia, Kalyan Sindhu Goswami and Arindam Phukan

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Observation of radio frequency ring-shaped hollow cathode discharge plasma with MgO and Al electrodes for plasma processing

Yasunori Ohtsu and Naoki Matsumoto

J. Vac. Sci. Technol. A **32**, 031304 (2014); <http://dx.doi.org/10.1116/1.4871467>

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SURFACES

Portable total reflection x-ray fluorescence analysis in the identification of unknown laboratory hazards

Ying Liu, Susumu Imashuku, Nobuharu Sasaki, Long Ze, Jun Kawai, Shotaro Takano, Yoshiki Sohrin, Hiroko Seki and Hiroya Miyauchi

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Microstructure of surface cerium hydride growth sites

Martin Brierley, John Knowles, Neil Montgomery and Michael Preuss

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Recycling gold nanohole arrays

Donna Hohertz, Sean F. Romanuik, Bonnie L. Gray and Karen L. Kavanagh
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Observation of dynamic water microadsorption on Au surface

Xiaokang Huang, Gaurav Gupta, Weixiang Gao, Van Tran, Bang Nguyen, Eric McCormick, Yongjie Cui, Yinbao Yang, Craig Hall and Harold Isom
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THIN FILMS

Effect of stacking sequence on crystallization in Al/a-Ge bilayer thin films

Tianwei Zhang, Yuhong Huang, Weilin Zhang, Fei Ma and Kewei Xu
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Electrical conductance behavior of thin Ni catalyst films during intermittent direct current magnetron sputtering

Yuji Kusumoto, Hiroshi Furuta, Kazuki Sekiya, Hirofumi Koji and Akimitsu Hatta
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Phase formation and morphological stability of ultrathin Ni-Co-Pt silicide films formed on Si(100)

Peng Xu, Tomas Kubart, Xindong Gao, Dongping Wu and Shi-Li Zhang
J. Vac. Sci. Technol. A **32**, 031503 (2014); <http://dx.doi.org/10.1116/1.4868121>

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Analytic expressions for atomic layer deposition: Coverage, throughput, and materials utilization in cross-flow, particle coating, and spatial atomic layer deposition

Angel Yanguas-Gil and Jeffrey W. Elam
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Effect of NH₃/N₂ ratio in plasma treatment on porous low dielectric constant SiCOH materials

Jun-Fu Huang, Tain-Cih Bo, Wei-Yuan Chang, Yu-Min Chang, Jihperng Leu and Yi-Lung Cheng
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Low sheet resistance titanium nitride films by low-temperature plasma-enhanced atomic layer deposition using design of experiments methodology

Micheal Burke, Alan Blake, Ian M. Povey, Michael Schmidt, Nikolay Petkov, Patrick Carolan and Aidan J. Quinn

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ZrN coatings deposited by high power impulse magnetron sputtering and cathodic arc techniques

Yashodhan Purandare, Arutiun Ehiasarian, Antonio Santana and Papken Hovsepian

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Optical characteristics of nanocrystalline $\text{Al}_x\text{Ga}_{1-x}\text{N}$ thin films deposited by hollow cathode plasma-assisted atomic layer deposition

Eda Goldenberg, Cagla Ozgit-Akgun, Necmi Biyikli and Ali Kemal Okyay

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Investigation on dielectric properties of atomic layer deposited Al_2O_3 dielectric films

Dilber Esra Yıldız, Mert Yıldırım and Muharrem Gökçen

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Growth and electrical properties of *in situ* phosphorus-doped polycrystalline silicon films using Si_3H_8 and PH_3

Byongju Kim, Hyunchul Jang, Sun-Wook Kim, Dae-Seop Byeon, Sangmo Koo, Jason S. Song and Dae-Hong Ko

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Plasma-enhanced atomic layer deposition of silicon dioxide films using plasma-activated triisopropylsilane as a precursor

Ki-Moon Jeon, Jae-Su Shin, Ju-Young Yun, Sang Jun Lee and Sang-Woo Kang

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Effect of water uptake on the fracture behavior of low- k organosilicate glass

Xiangyu Guo, Joseph E. Jakes, Samer Banna, Yoshio Nishi and J. Leon Shohet

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Time-resolved surface infrared spectroscopy during atomic layer deposition of

TiO₂using tetrakis(dimethylamido)titanium and water

Brent A. Sperling, John Hoang, William A. Kimes, James E. Maslar, Kristen L.

Steffens andNhan V. Nguyen

J. Vac. Sci. Technol. A **32**, 031513 (2014); <http://dx.doi.org/10.1116/1.4872166>[+ VIEW DESCRIPTION](#)**Low-temperature growth of gallium nitride films by inductively coupled-plasma-enhanced reactive magnetron sputtering**

Chih-Jui Ni and Franklin Chau-Nan Hong

J. Vac. Sci. Technol. A **32**, 031514 (2014); <http://dx.doi.org/10.1116/1.4871472>[+ VIEW DESCRIPTION](#)**Ag:TiN nanocomposite thin films for bioelectrodes: The effect of annealing treatments on the electrical and mechanical behavior**

Paulo Pedrosa, Diogo Machado, Manuel Evaristo, Albano Cavaleiro, Carlos Fonseca andFilipe Vaz

J. Vac. Sci. Technol. A **32**, 031515 (2014); <http://dx.doi.org/10.1116/1.4873555>[+ VIEW DESCRIPTION](#)

VACUUM SCIENCE AND TECHNOLOGY**Microtrenching-free two-step reactive ion etching of 4H-SiC using NF₃/HBr/O₂ and Cl₂/O₂**

Yuan-Hung Tseng and Bing-Yue Tsui

J. Vac. Sci. Technol. A **32**, 031601 (2014); <http://dx.doi.org/10.1116/1.4867355>[+ VIEW DESCRIPTION](#)**Use of non evaporable getter pumps to ensure long term performances of high quantum efficiency photocathodes**

Daniele Sertore, Paolo Michelato, Laura Monaco, Paolo Manini and Fabrizio Siviero

J. Vac. Sci. Technol. A **32**, 031602 (2014); <http://dx.doi.org/10.1116/1.4867488>[+ VIEW DESCRIPTION](#)**Influencing factors on the sensitivity of MEMS-based thermal conductivity vacuum gauges**

Florian Dams and Rupert Schreiner

J. Vac. Sci. Technol. A **32**, 031603 (2014); <http://dx.doi.org/10.1116/1.4867486>[+ VIEW DESCRIPTION](#)**Hydrogen traps in the outgassing model of a stainless steel vacuum chamber**

Robert F. Berg

J. Vac. Sci. Technol. A **32**, 031604 (2014); <http://dx.doi.org/10.1116/1.4869962>[+ VIEW DESCRIPTION](#)**Calibration of tip and sample temperature of a scanning tunneling microscope using a**

superconductive sample

Matthias Stocker, Holger Pfeifer and Berndt Koslowski

J. Vac. Sci. Technol. A **32**, 031605 (2014); <http://dx.doi.org/10.1116/1.4871082>

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BRIEF REPORTS AND COMMENTS**Vacuum compatibility of 3D-printed materials**

Alexander P. Povilus, Caroline J. Wurden, Zak Vendeiro, Marcelo Baquero-Ruiz and Joel Fajans

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