

Letters

FullNovember 2018

Precise control of ion and radical production using electron beam generated plasmas

David R. Boris, and Scott G. Walton

Journal of Vacuum Science & Technology A **36**, 060601 (2018); <https://doi.org/10.1116/1.5053615>

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Review Articles

FullNovember 2018

Review Article: Atomic layer deposition for oxide semiconductor thin film transistors: Advances in research and development

Jiazhen Sheng, Jung-Hoon Lee, Wan-Ho Choi, TaeHyun Hong, MinJung Kim, and Jin-Seong Park

Journal of Vacuum Science & Technology A **36**, 060801 (2018); <https://doi.org/10.1116/1.5047237>

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Interfaces

FullNovember 2018

Plasma enhanced chemical vapor deposition of SiO₂ and SiN_x on AlGaN: Band offsets and interface studies as a function of Al composition

Pramod Reddy, Shun Washiyama, Will Mecouch, Luis H. Hernandez-Balderrama, Felix Kaess, M. Hayden Breckenridge, Biplab Sarkar, Brian B. Haidet, Alexander Franke, Erhard Kohn, Ramon Collazo, and Zlatko Sitar

Journal of Vacuum Science & Technology A **36**, 061101 (2018); <https://doi.org/10.1116/1.5050501>

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Photovoltaics and Energy

FullNovember 2018

Metalliclike thermoelectric Ti-V oxide nanocomposites

Denis Music, and Damian M. Holzapfel

Journal of Vacuum Science & Technology A **36**, 061201 (2018); <https://doi.org/10.1116/1.5046924>

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Plasma Science and Technology

FullNovember 2018

Enhanced silicon nitride etching in the presence of F atoms: Quantum chemistry simulation

Yuri V. Barsukov, Vladimir Volynets, Anton A. Kobelev, Nikolai A. Andrianov, Alexander V. Tulub, and Alexander S. Smirnov

Journal of Vacuum Science & Technology A **36**, 061301 (2018); <https://doi.org/10.1116/1.5044647>

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Hydrophobic surface modification of polymethyl methacrylate by two-dimensional plasma jet array at atmospheric pressure

Feng Liu, Meiling Cai, Bo Zhang, Zhi Fang, Chunqi Jiang, and Kostya (Ken) Ostrikov

Journal of Vacuum Science & Technology A **36**, 061302 (2018); <https://doi.org/10.1116/1.5030718>

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Argon clustering in silicon under low-energy irradiation: Molecular dynamics simulation with different Ar–Si potentials

Anastasia A. Sycheva, Ekaterina N. Voronina, Tatyana V. Rakhimova, and Alexander T. Rakhimov

Journal of Vacuum Science & Technology A **36**, 061303 (2018); <https://doi.org/10.1116/1.5050325>

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Titanium coverage for plasma-induced uniform HfSiON film from Hf nanoscale islands on SiO₂/Si

Takeshi Kitajima, Ryosuke Kage, and Toshiki Nakano

Journal of Vacuum Science & Technology A **36**, 061304 (2018); <https://doi.org/10.1116/1.5053164>

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Low damage patterning of In_{0.53}Ga_{0.47}As film for its integration as n-channel in a fin metal oxide semiconductor field effect transistor architecture

Maxime Bizouerne, Erwine Pargon, Camille Petit-Etienne, Sébastien Labau, Sylvain David, Mickael Martin, and Pauline Burtin

Journal of Vacuum Science & Technology A **36**, 061305 (2018); <https://doi.org/10.1116/1.5051505>

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SiO₂ etch characteristics and environmental impact of Ar/C₃F₆O chemistry

Ho Seok Lee, Kyung Chae Yang, Soo Gang Kim, Ye Ji Shin, Dae Woong Suh, Han Dock Song, Nae Eung Lee, and Geun Young Yeom

Journal of Vacuum Science & Technology A **36**, 061306 (2018); <https://doi.org/10.1116/1.5027446>

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Enhanced photodesorption from near- and mid-infrared plasmonic nanocrystal thin films

Weize Hu, and Michael A. Filler

Journal of Vacuum Science & Technology A **36**, 061401 (2018); <https://doi.org/10.1116/1.5046381>

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Nanoscale investigation of Si nanoribbon growth on Ag(110)

Michel Daher Mansour, Romain Parret, and Laurence Masson

Journal of Vacuum Science & Technology A **36**, 061402 (2018); <https://doi.org/10.1116/1.5041917>

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Probing covalency with oxidant K edge x-ray absorption spectroscopy of UF₄ and UO₂

J. G. Tobin, S.-W. Yu, R. Qiao, W. L. Yang, and D. K. Shuh

Journal of Vacuum Science & Technology A **36**, 061403 (2018); <https://doi.org/10.1116/1.5046947>

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Corrosion resistance of sintered SiC against fluorinated plasmas

Tetsuya Goto, Michito Miyahara, Masaru Sasaki, and Shigetoshi Sugawa

Journal of Vacuum Science & Technology A **36**, 061404 (2018); <https://doi.org/10.1116/1.5046792>

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Thin Films

FullNovember 2018

Growth and properties of epitaxial $\text{Ti}_{1-x}\text{Mg}_x\text{N}(001)$ layers

Baiwei Wang, Sit Kerdsongpanya, Mary E. McGahay, Erik Milosevic, Panos Patsalas, and Daniel Gall

Journal of Vacuum Science & Technology A **36**, 061501 (2018); <https://doi.org/10.1116/1.5049957>

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Influence of nitride buffer layers on superconducting properties of niobium nitride

John H. Goldsmith, Ricky Gibson, Tim Cooper, Thaddeus J. Asel, Shin Mou, Dave C. Look, John S. Derov, and Joshua R. Hendrickson

Journal of Vacuum Science & Technology A **36**, 061502 (2018); <https://doi.org/10.1116/1.5044276>

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***In situ* XPS study of low temperature atomic layer deposition of B_2O_3 films on Si using BCl_3 and H_2O precursors**

Aparna Pilli, Jessica Jones, Veronica Lee, Natasha Chugh, Jeffrey Kelber, Frank Pasquale, and Adrien LaVoie

Journal of Vacuum Science & Technology A **36**, 061503 (2018); <https://doi.org/10.1116/1.5044396>

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Thermal atomic layer etching of HfO_2 using HF for fluorination and TiCl_4 for ligand-exchange

Younghee Lee, and Steven M. George

Journal of Vacuum Science & Technology A **36**, 061504 (2018); <https://doi.org/10.1116/1.5045130>

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Chemical vapor deposition of magnetic iron-cobalt alloy thin films: Use of ammonia to stabilize growth from carbonyl precursors

Pengyi Zhang, Zhejun Zhang, John R. Abelson, and Gregory S. Girolami

Journal of Vacuum Science & Technology A **36**, 061505 (2018); <https://doi.org/10.1116/1.5045671>

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Epitaxial growth and electrical properties of VO₂ on [LaAlO₃]_{0.3}[Sr₂AlTaO₆]_{0.7} (111) substrate

Yang Liu, Shanyuan Niu, Thomas Orvis, Haimeng Zhang, Huan Zhao, Han Wang, and Jayakanth Ravichandran

Journal of Vacuum Science & Technology A **36**, 061506 (2018); <https://doi.org/10.1116/1.5045358>

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***Ab initio* analysis of nucleation reactions during tungsten atomic layer deposition on Si(100) and W(110) substrates**

Mariah J. King, Patrick L. Theofanis, Paul C. Lemaire, Erik E. Santiso, and Gregory N. Parsons

Journal of Vacuum Science & Technology A **36**, 061507 (2018); <https://doi.org/10.1116/1.5044740>

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Rapid atomic layer etching of Al₂O₃ using sequential exposures of hydrogen fluoride and trimethylaluminum with no purging

David R. Zywotko, Jacques Faguet, and Steven M. George

Journal of Vacuum Science & Technology A **36**, 061508 (2018); <https://doi.org/10.1116/1.5043488>

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Deposition of ZrON thin films by reactive magnetron sputtering using a hollow cylindrical target

Hiroshi Iwata, Hiroki Ishii, Daiki Kato, Shohei Kawashima, Kakeru Kodama, Masashi Furusawa, Masatoshi Tanaka, and Takao Sekiya

Journal of Vacuum Science & Technology A **36**, 061509 (2018); <https://doi.org/10.1116/1.5042439>

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New insights on the chemistry of plasma-enhanced atomic layer deposition of indium oxysulfide thin films and their use as buffer layers in Cu(In,Ga)Se₂ thin film solar cell

Cathy Bugot, Muriel Bouttemy, Nathanaelle Schneider, Arnaud Etcheberry, Daniel Lincot, and Frédérique Donsanti

Journal of Vacuum Science & Technology A **36**, 061510 (2018); <https://doi.org/10.1116/1.5048124>

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Low temperature ($T_s/T_m < 0.1$) epitaxial growth of HfN/MgO(001) via reactive HiPIMS with metal-ion synchronized substrate bias

Michelle Marie S. Villamayor, Julien Keraudy, Tetsuhide Shimizu, Rommel Paulo B. Viloan, Robert Boyd, Daniel Lundin, Joseph E. Greene, Ivan Petrov, and Ulf Helmersson

Journal of Vacuum Science & Technology A **36**, 061511 (2018); <https://doi.org/10.1116/1.5052702>

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Role of the reactive sputtering deposition power in the phase control of cobalt oxide films

Nilton Francelosi Azevedo Neto, Douglas M. G. Leite, Paulo N. Lisboa-Filho, and José H. D. da Silva

Journal of Vacuum Science & Technology A **36**, 061512 (2018); <https://doi.org/10.1116/1.5046952>

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Low-temperature homoepitaxial growth of two-dimensional antimony superlattices in silicon

April D. Jewell, Michael E. Hoenk, Alexander G. Carver, and Shouleh Nikzad

Journal of Vacuum Science & Technology A **36**, 061513 (2018); <https://doi.org/10.1116/1.5040837>

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Perspectives

FullNovember 2018

Perspective: Nonequilibrium dynamics of localized and delocalized excitons in colloidal quantum dot solids

Elizabeth M. Y. Lee, William A. Tisdale, and Adam P. Willard

Journal of Vacuum Science & Technology A **36**, 068501 (2018); <https://doi.org/10.1116/1.5046694>

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FullNovember 2018

Responding to the growing issue of research reproducibility

Donald R. Baer, and Ian S. Gilmore

Journal of Vacuum Science & Technology A **36**, 068502 (2018); <https://doi.org/10.1116/1.5049141>

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Special Issue on Atomic Layer Deposition (ALD)

FullNovember 2018

Atomic layer deposition of Al₂O₃ and TiO₂ on MoS₂ surfaces

Jaron A. Kropp, Yuhang Cai, Zihan Yao, Wenjuan Zhu, and Theodosia Gougousi

Journal of Vacuum Science & Technology A **36**, 06A101 (2018); <https://doi.org/10.1116/1.5043621>

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Effect of thermal annealing and chemical treatments on secondary electron emission properties of atomic layer deposited MgO

Violeta Prodanovic', Hong Wah Chan, Anil U. Mane, Jeffrey W. Elam, Matthias M. Minjauw, Christophe Detavernier, Harry van der Graaf, and Pasqualina M. Sarro

Journal of Vacuum Science & Technology A **36**, 06A102 (2018); <https://doi.org/10.1116/1.5040813>

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Plasma-enhanced atomic layer deposition of titanium vanadium nitride

Mark J. Sowa, Ling Ju, Alexander C. Kozen, Nicholas C. Strandwitz, Guosong Zeng, Tomas F. Babuska, Zakaria Hsain, and Brandon A. Krick

Journal of Vacuum Science & Technology A **36**, 06A103 (2018); <https://doi.org/10.1116/1.5037463>

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FullNovember 2018

Synthesis and characterization of titanium silicon oxide thin films prepared by plasma enhanced atomic layer deposition

Shinya Iwashita, Tsuyoshi Moriya, and Akira Uedono

Journal of Vacuum Science & Technology A **36**, 06A104 (2018); <https://doi.org/10.1116/1.5043309>

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Role of reactive gas on the structure and properties of titanium nitride films grown by plasma enhanced atomic layer deposition

Igor Krylov, Xianbin Xu, Ekaterina Zoubenko, Kamira Weinfeld, Santiago Boyeras, Felix Palumbo, Moshe Eizenberg, and Dan Ritter

Journal of Vacuum Science & Technology A **36**, 06A105 (2018); <https://doi.org/10.1116/1.5057761>

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Thermal atomic layer deposition of Sn metal using SnCl₄ and a vapor phase silyl dihydropyrazine reducing agent

Eric C. Stevens, Moataz Bellah M. Mousa, and Gregory N. Parsons

Journal of Vacuum Science & Technology A **36**, 06A106 (2018); <https://doi.org/10.1116/1.5055212>

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Special Issue on Atomic Layer Etching (ALE)

FullNovember 2018

Transient behavior in quasi-atomic layer etching of silicon dioxide and silicon nitride in fluorocarbon plasmas

Chad M. Huard, Saravanapriyan Sriraman, Alex Paterson, and Mark J. Kushner

Journal of Vacuum Science & Technology A **36**, 06B101 (2018); <https://doi.org/10.1116/1.5049225>

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