

Letters

FullMarch 2018

Rapid feedback of chemical vapor deposition growth mechanisms by operando X-ray diffraction

Aiden A. Martin, Philip J. Depond, Michael Bagge-Hansen, Jonathan R. I. Lee more...

Journal of Vacuum Science & Technology B **36**, 020601 (2018); <https://doi.org/10.1116/1.5019742>

SHOW ABSTRACT

Electronic & Optoelectronic Materials, Devices & Processing

FullMarch 2018

Interface states reduction in atomic layer deposited TiN/ZrO₂/Al₂O₃/Ge gate stacks

Lakshmi Ganapathi Kolla, Yiming Ding, Durga Misra, and Navakanta Bhat

Journal of Vacuum Science & Technology B **36**, 021201 (2018); <https://doi.org/10.1116/1.5006789>

SHOW ABSTRACT

FullMarch 2018

Band gap and strain engineering of pseudomorphic Ge_{1-x-y}Si_xSn_y alloys on Ge and GaAs for photonic applications

Nalin S. Fernando, Rigo A. Carrasco, Ryan Hickey, John Hart more...

Journal of Vacuum Science & Technology B **36**, 021202 (2018); <https://doi.org/10.1116/1.5001948>

SHOW ABSTRACT

FullMarch 2018

Focussed helium ion channeling through Si nanomembranes

Jiaming Wang, Symphony H. Y. Huang, Christoph Herrmann, Shelley A. Scott more...

SHOW ABSTRACT

FullMarch 2018

Emission properties of undoped and boron-doped nanocrystalline diamond films coated silicon carbide field emitter arrays

Oleg A. Ivanov, Sergey A. Bogdanov, Anatoly L. Vikharev, Victor V. Luchinin more...

Journal of Vacuum Science & Technology B **36**, 021204 (2018); <https://doi.org/10.1116/1.5012977>

SHOW ABSTRACT

Lithography

FullMarch 2018

Generalized method for probing ideal initial polarization states in multibeam Lloyd's mirror interference lithography of 2D scale gratings

Xiuguo Chen, Yuki Shimizu, Chong Chen, Yuan-Liu Chen more...

Journal of Vacuum Science & Technology B **36**, 021601 (2018); <https://doi.org/10.1116/1.5016505>

SHOW ABSTRACT

FullMarch 2018

***In situ* transformation and cleaning of tin-drop contamination on mirrors for extreme ultraviolet light**

Norbert Böwering, and Christian Meier

Journal of Vacuum Science & Technology B **36**, 021602 (2018); <https://doi.org/10.1116/1.5016821>

SHOW ABSTRACT

OpenMarch 2018

Polycarbonate as a negative-tone resist for electron-beam lithography

Nan Zheng, Haodi Min, Youwei Jiang, and Xing Cheng

Journal of Vacuum Science & Technology B **36**, 021603 (2018); <https://doi.org/10.1116/1.5012028>

SHOW ABSTRACT

Nanometer Science & Technology

FullMarch 2018

Role of ionic strength in the thicknesses of the biopolymer fringes, spring constants, and Young's moduli of *Pseudomonas putida*

Somayeh Ramezanian, Samuel Uzoechi, Balasingam Muhunthan, and Nehal Abu-Lail

Journal of Vacuum Science & Technology B **36**, 021801 (2018); <https://doi.org/10.1116/1.5002751>

SHOW ABSTRACT

FullMarch 2018

Direct formation of graphene on dielectric substrate: Controlling the location of graphene formation adopting carbon diffusion barrier

Ki-Ju Kim, Seong-Yong Cho, Hyun-Mi Kim, and Ki-Bum Kim

Journal of Vacuum Science & Technology B **36**, 021802 (2018); <https://doi.org/10.1116/1.5016591>

SHOW ABSTRACT

FullMarch 2018

Controlling defects in fine-grained sputtered nickel catalyst for graphene growth

Eugene Zakar, A. Glen Birdwell, Kevin Hauri, Richard X. Fu more...

Journal of Vacuum Science & Technology B **36**, 021803 (2018); <https://doi.org/10.1116/1.4998441>

[SHOW ABSTRACT](#)

Microelectronic & Nanoelectronic Devices

FullMarch 2018

Novel plasma enhanced chemical vapor deposition of highly conformal SiN films and their barrier properties

Woo-Jin Lee, and Yong-Ho Choa

Journal of Vacuum Science & Technology B **36**, 022201 (2018); <https://doi.org/10.1116/1.5002660>

[SHOW ABSTRACT](#)

FullMarch 2018

Evolution of traps in TiN/O₃-sourced Al₂O₃/GaN gate structures with thermal annealing temperature

Xinyu Liu, Sen Huang, Qilong Bao, Xinhua Wang more...

Journal of Vacuum Science & Technology B **36**, 022202 (2018); <https://doi.org/10.1116/1.5010029>

[SHOW ABSTRACT](#)

Measurement and Characterization

FullMarch 2018

Multimodal imaging technology by integrated scanning electron, force, and microwave microscopy and its application to study microscaled capacitors

Olaf C. Haenssler, Sergej Fatikow, and Didier Theron

Journal of Vacuum Science & Technology B **36**, 022901 (2018); <https://doi.org/10.1116/1.5006161>

[SHOW ABSTRACT](#)

FullMarch 2018

Ferromagnetism in Fe₂CrAl nanowires

Rajendra P. Dulal, Bishnu R. Dahal, Andrew Forbes, Niraj Bhattacharai more...

Journal of Vacuum Science & Technology B **36**, 022902 (2018); <https://doi.org/10.1116/1.5011189>

SHOW ABSTRACT

FullMarch 2018

Three-wire method to characterize the thermoelectric properties of one-dimensional materials

Weigang Ma, Shaoyi Shi, and Xing Zhang

Journal of Vacuum Science & Technology B **36**, 022903 (2018); <https://doi.org/10.1116/1.5022118>

SHOW ABSTRACT

FullMarch 2018

Study of charge transport properties in a ZnO/CdS/Cu(In,Ga)Se₂ solar cell via admittance spectroscopy

Sanjoy Paul, Roberto Lopez, Ingrid L. Repins, and Jian V. Li

Journal of Vacuum Science & Technology B **36**, 022904 (2018); <https://doi.org/10.1116/1.5013046>

SHOW ABSTRACT

FullMarch 2018

High temperature diode sensors based on InGaN/AlGaN structures

Vasily A. Krasnov, Stanislav V. Shutov, Sergey Y. Yerochin, and Aleksey N. Demenskiy

Journal of Vacuum Science & Technology B **36**, 022905 (2018); <https://doi.org/10.1116/1.5016967>

SHOW ABSTRACT

Papers from the 30th International Vacuum Nanoelectronics Conference

FullMarch 2018

Optimization of pyroelectric electron sources for the generation of x-rays for x-ray fluorescence applications

Markus Wilke, Karsten Harnisch, Wolfram Knapp, Martin Ecke more...

Journal of Vacuum Science & Technology B **36**, 02C101 (2018); <https://doi.org/10.1116/1.5004749>

[SHOW ABSTRACT](#)

FullMarch 2018

Electron emission from electrically isolated spheres

Joshua T. Holgate, and Michael Coppins

Journal of Vacuum Science & Technology B **36**, 02C102 (2018); <https://doi.org/10.1116/1.5004748>

[SHOW ABSTRACT](#)

FullMarch 2018

Deep-ultraviolet light source with a carbon nanotube cold-cathode electron beam

Sung Tae Yoo, Ji Hwan Hong, Jung Su Kang, and Kyu Chang Park

Journal of Vacuum Science & Technology B **36**, 02C103 (2018); <https://doi.org/10.1116/1.5004621>

[SHOW ABSTRACT](#)

FullMarch 2018

High-performance carbon-nanotube-based cold cathode electron beam with low-thermal-expansion gate electrode

Jung Su Kang, Ji Hwan Hong, and Kyu Chang Park

Journal of Vacuum Science & Technology B **36**, 02C104 (2018); <https://doi.org/10.1116/1.5005025>

[SHOW ABSTRACT](#)

FullMarch 2018

Field emission characterization of *in situ* deposited gold nanocones with variable cone densities

Johannes Bicker, Farough Roustaie, Helmut F. Schlaak, Christoph Langer more...

Journal of Vacuum Science & Technology B **36**, 02C105 (2018); <https://doi.org/10.1116/1.5009504>

[SHOW ABSTRACT](#)

FullMarch 2018

Local current–voltage estimation and characterization based on field emission image processing of large-area field emitters

Eugeni O. Popov, Anatoly G. Kolosko, Sergey V. Filippov, and Evgeny I. Terukov

Journal of Vacuum Science & Technology B **36**, 02C106 (2018); <https://doi.org/10.1116/1.5007006>

[SHOW ABSTRACT](#)

FullMarch 2018

Technology and parameters of thin membrane-anode for MEMS transmission electron microscope

Michał Krysztof, Tomasz Grzebyk, Piotr Szyszka, Karolina Laszczyk more...

Journal of Vacuum Science & Technology B **36**, 02C107 (2018); <https://doi.org/10.1116/1.5006151>

[SHOW ABSTRACT](#)

FullMarch 2018

Characterization of thin carbon films capable of low-field electron emission

Alexander Andronov, Ekaterina Budylina, Pavel Shkitun, Pavel Gabdullin more...

Journal of Vacuum Science & Technology B **36**, 02C108 (2018); <https://doi.org/10.1116/1.5009906>

[SHOW ABSTRACT](#)

FullMarch 2018

Fabrication of a compact glass-sealed x-ray tube with carbon nanotube cold cathode for high-resolution imaging

Ji Hwan Hong, Jung Su Kang, and Kyu Chang Park

Journal of Vacuum Science & Technology B **36**, 02C109 (2018); <https://doi.org/10.1116/1.5007106>

[SHOW ABSTRACT](#)

FullMarch 2018

Electron emission properties of graphene-oxide-semiconductor planar-type electron emission devices

Katsuhisa Murakami, Shunsuke Tanaka, Takuya Iijima, Masayoshi Nagao more...

Journal of Vacuum Science & Technology B **36**, 02C110 (2018); <https://doi.org/10.1116/1.5006866>

[SHOW ABSTRACT](#)

Papers from the 33rd North American Conference on Molecular Beam Epitaxy

FullMarch 2018

Growth of high-quality Bi_2Se_3 topological insulators using $(\text{Bi}_{1-x}\text{In}_x)_2\text{Se}_3$ buffer layers

Yong Wang, Theresa P. Ginley, and Stephanie Law

Journal of Vacuum Science & Technology B **36**, 02D101 (2018); <https://doi.org/10.1116/1.5015968>

[SHOW ABSTRACT](#)

FullMarch 2018

***In situ* annealing of $\text{III}_{1-x}\text{Mn}_x\text{V}$ ferromagnetic semiconductors**

Xinyu Liu, Seul-Ki Bac, Pitambar Sapkota, Cameron Gorsak more...

Journal of Vacuum Science & Technology B **36**, 02D102 (2018); <https://doi.org/10.1116/1.5014983>

[SHOW ABSTRACT](#)

OpenMarch 2018

High-temperature molecular beam epitaxy of hexagonal boron nitride layers

Tin S. Cheng, Alex Summerfield, Christopher J. Mellor, Andrew Davies more...

Journal of Vacuum Science & Technology B **36**, 02D103 (2018); <https://doi.org/10.1116/1.5011280>

[SHOW ABSTRACT](#)

FullMarch 2018

Dependence of ferromagnetic properties on phosphorus concentration in $\text{Ga}_{1-x}\text{Mn}_x\text{As}_{1-y}\text{P}_y$

Xiang Li, Xinyu Liu, Sining Dong, Cameron Gorsak more...

Journal of Vacuum Science & Technology B **36**, 02D104 (2018); <https://doi.org/10.1116/1.5014055>

[SHOW ABSTRACT](#)

FullMarch 2018

Site-controlled droplet epitaxy of GaAs quantum dots by deposition through shadow masks

Viktoryia Zolatanosha, and Dirk Reuter

Journal of Vacuum Science & Technology B **36**, 02D105 (2018); <https://doi.org/10.1116/1.5013650>

[SHOW ABSTRACT](#)

FullMarch 2018

Formation of self-assembled GaAs quantum dots via droplet epitaxy on misoriented GaAs(111)B substrates

Alexander Trapp, and Dirk Reuter

Journal of Vacuum Science & Technology B **36**, 02D106 (2018); <https://doi.org/10.1116/1.5012957>

[SHOW ABSTRACT](#)

FullMarch 2018

Reduced twinning and surface roughness of Bi₂Se₃ and Bi₂Te₃ layers grown by molecular beam epitaxy on sapphire substrates

Ido Levy, Thor Axtmann Garcia, Sharmin Shafique, and Maria C. Tamargo

Journal of Vacuum Science & Technology B **36**, 02D107 (2018); <https://doi.org/10.1116/1.5017977>

[SHOW ABSTRACT](#)

FullMarch 2018

Sb-incorporation in MBE-grown metamorphic InAsSb for long-wavelength infrared applications

Stephanie Tomasulo, Chaffra A. Affouda, Nadeemullah A. Mahadik, Mark E. Twigg more...

Journal of Vacuum Science & Technology B **36**, 02D108 (2018); <https://doi.org/10.1116/1.5017982>

[SHOW ABSTRACT](#)

FullMarch 2018

Normally-off operating GaN-based pseudovertical MOSFETs with MBE grown source region

Rico Hentschel, Stefan Schmult, Andre Wachowiak, Andreas Großer more...

Journal of Vacuum Science & Technology B **36**, 02D109 (2018); <https://doi.org/10.1116/1.5017291>

[SHOW ABSTRACT](#)

FullMarch 2018

Growth of II-VI/III-V heterovalent quantum structures

Maxwell B. Lassise, Peng Wang, Brian D. Tracy, Guopeng Chen more...

Journal of Vacuum Science & Technology B **36**, 02D110 (2018); <https://doi.org/10.1116/1.5017972>

[SHOW ABSTRACT](#)

FullMarch 2018

Investigation of digital alloyed AlInSb metamorphic buffers

Vinita Dahiya, Julia I. Deitz, David A. Hollingshead, John A. Carlin more...

Journal of Vacuum Science & Technology B **36**, 02D111 (2018); <https://doi.org/10.1116/1.5018260>

[SHOW ABSTRACT](#)