

## Letters

FullNovember 2017

### **Thermal stability and small-signal characteristics of AlGaIn/GaN HEMTs with gate insertion metal layer for millimeter-wave applications**

Dong-Hwan Kim, Su-Keun Eom, Jun-Seok Jeong, Jae-Gil Lee more...

Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena **35**, 060601 (2017); <https://doi.org/10.1116/1.4998310>

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## Electronic & Optoelectronic Materials, Devices & Processing

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### **Improvement of Ohmic contacts on Ga<sub>2</sub>O<sub>3</sub> through use of ITO-interlayers**

Patrick H. Carey IV, Jiancheng Yang, Fan Ren, David C. Hays more...

Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena **35**, 061201 (2017); <https://doi.org/10.1116/1.4995816>

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### **Spectral response characteristics of transmission-mode alkali telluride photocathodes working from vacuum-ultraviolet to ultraviolet band**

Xiang Zhang, Yijun Zhang, Yunsheng Qian, Cheng Feng more...

Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena **35**, 061202 (2017); <https://doi.org/10.1116/1.5006049>

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### **Temperature dependence of the morphology and electronic structure of ultrathin platinum on TiO<sub>2</sub>-terminated SrTiO<sub>3</sub> (001)**

Wei Guo, Agham B. Posadas, and Alexander A. Demkov

Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena **35**, 061203 (2017); <https://doi.org/10.1116/1.4991892>

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## Comparison study of the low temperature growth of dilute GeSn and Ge

Perry C. Grant, Wei Dou, Bader Alharthi, Joshua M. Grant more...

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## Characterization of *n*-type Cu<sub>2</sub>O deposited by reactive ion beam sputter deposition

Assamen Ayalew Ejigu, and Liang-chiun Chao

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## Generation and elimination of silicon pitting for 300 mm CMOS process technologies

Santosh Kumar Pani, Royston Hugh Hogan, Madhavan Pandurangan, Jian Zhang more...

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## Fabrication and pixel characterization of a row-column addressable 128 × 128 InAs/GaSb type-II superlattice midwave infrared photodiode array

Sona Das, and Utpal Das

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## Lithography

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## Characteristic study of image-based alignment for increasing accuracy in lithography application

Libin Zhang, Lisong Dong, Xiaojing Su, and Yayi Wei

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## **Study of shot noise in photoresists for extreme ultraviolet lithography through comparative analysis of line edge roughness in electron beam and extreme ultraviolet lithography**

Suchit Bhattarai, Andrew R. Neureuther, and Patrick P. Naulleau

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## **Lithographic performance of ZEP520A and mr-PosEBR resists exposed by electron beam and extreme ultraviolet lithography**

Roberto Fallica, Dimitrios Kazazis, Robert Kirchner, Anja Voigt more...

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## **Practical design of the electron gun for a microfocus x-ray source**

W. P. Li, P. F. Wang, J. B. Liu, W. X. Zhao more...

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## **Nanometer Science & Technology**

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## **Comparison of air and heptane solvent annealing of block copolymers for bit-patterned media**

Allen G. Owen, Hao Su, Angelique Montgomery, and Subhadra Gupta

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## Effect of lift-off conditions on micropatterning of nanocrystalline quantum dot films

Ala H. Sabeeh, Jared S. Price, and Jerzy Ruzyllo

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## MEMS & NEMS

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### Improved properties of the MEMS-type ion-sorption micropump

Tomasz Grzebyk, Anna Górecka-Drzazga, and Jan A. Dziuban

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### Deposition of Mo/Si multilayers onto MEMS micromirrors and its utilization for extreme ultraviolet maskless lithography

Nikolay Chkhalo, Vladimir Polkovnikov, Nikolay Salashchenko, and Mikhail Toropov

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## Microelectronic & Nanoelectronic Devices

FullNovember 2017

### Study of CO<sub>2</sub> ashing for porous SiOCH film using 100 MHz/13.56 MHz dual frequency superimposed capacitive coupled plasma

Tsubasa Imamura, Katsumi Yamamoto, Kazuaki Kurihara, and Hisataka Hayashi

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### Independent tuning of work function and field enhancement factor in hybrid lanthanum hexaboride-graphene-silicon field emitters

Fatemeh Rezaeifar, Qingfeng Lin, Xiangyu Chen, Tracy M. Mattox more...

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### **Work function consideration in vacuum field emission transistor design**

Jiwon Kim, Hyeongwan Oh, Jungsik Kim, Rock-Hyun Baek more...

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## **Measurement and Characterization**

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### **Electrophysical parameters of the space charge region of the low-threshold field cathode**

A. Yafyasov, and V. Bogevolnov

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### **Effect of well/barrier thickness ratio on strain relaxation in GaN/AlN superlattices grown on GaN/sapphire template**

Serhii B. Kryvyi, Petro M. Lytvyn, Vasyi P. Kladko, Hryhorii V. Stanchu more...

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## **PAPERS FROM THE 61st INTERNATIONAL CONFERENCE ON ELECTRON, ION, AND PHOTON BEAM TECHNOLOGY AND NANOFABRICATION**

### **EIPBN Review Articles**

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## **Review Article: Active scanning probes: A versatile toolkit for fast imaging and emerging nanofabrication**

Ivo W. Rangelow, Tzvetan Ivanov, Ahmad Ahmad, Marcus Kaestner more...

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## **Nanoimprint Lithography**

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### **Gold microelectrodes fabricated by a print-and-imprint method using laser-drilled polyimide through-hole masks**

Takahiro Nakamura, Kento Seki, Kazuro Nagase, and Masaru Nakagawa

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### **Hot embossing of Au- and Pb-based alloys for x-ray grating fabrication**

Lucia Romano, Joan Vila-Comamala, Helmut Schiff, Marco Stambanoni more...

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### **Principle and observation of fluorescence moiré fringes for alignment in print and imprint methods**

Eri Kikuchi, Yota Ishito, Shinya Matsubara, Takahiro Nakamura more...

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### **Double nanoimprint lithography: A technology for effectively reducing feature size**

Xiaohao Ma, Dandan Deng, and Dehu Cui

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### **Impact of preparation conditions on the properties of materials for replica stamps**

Marc Papenheim, Wolfgang Eidemüller, Christian Steinberg, Andre Mayer more...

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### **Low reflection Fresnel lenses via double imprint combined with vacuum-UV surface hardening**

Christian Steinberg, Nour Al-Hussainawi, Marc Papenheim, Andre Mayer more...

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### **Stochastic simulation of the UV curing process in nanoimprint lithography: Pattern size and shape effects in sub-50 nm lithography**

Masanori Koyama, Masamitsu Shirai, Hiroaki Kawata, Yoshihiko Hirai more...

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### **Three-dimensional photolithography using built-in lens mask**

Toshiki Tanaka, Daiki Sugihara, Masaru Sasago, Hisao Kikuta more...

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## **Nanophotonics and Plasmonics**

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### **Patterning of electrically tunable light-emitting photonic structures demonstrating bound states in the continuum**

Erika Penzo, Silvia Romano, Yu Wang, Scott Dhuey more...

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John P. Murphy, Jessica M. Andriolo, Nathan J. Sutton, Molly C. Brockway more...

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## **Light absorption and scattering of 40–170 nm gold nanoparticles on glass substrates**

Ranveig Flatabø, Vårin R. A. Holm, Håkon Eidsvåg, Bodil Holst more...

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## **Electron Beam Lithography**

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### **Adjustable sidewall slopes by electron-beam exposure layout**

Corinna Kaspar, Jörg Butschke, Mathias Irmscher, Stephan Martens more...

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## **Atom sieve for nanometer resolution neutral helium microscopy**

Ranveig Flatabø, Martin M. Greve, Sabrina D. Eder, Matthias Kalläne more...

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## **Effects of stochastic exposure on critical dimension in electron-beam lithography**

Hyesung Ji, Soo-Young Lee, Jin Choi, Seom-Beom Kim more...

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## **Improvement of silicon waveguide transmission by advanced e-beam lithography data fracturing strategies**

Shane Patrick, Richard J. Bojko, Stefan J. H. Stammberger, Enxiao Luan more...

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## **Isofocal dose based proximity effect correction tolerance to the effective process blur**

Gerald G. Lopez, Mohsen Azadi, Meredith G. Metzler, Nikola Belic more...

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## **Optical and Extreme UV (EUV) Lithography**

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### **Tip-to-tip variation mitigation in extreme ultraviolet lithography for 7 nm and beyond metallization layers and design rule analysis**

Yulu Chen, Lei Sun, Zhengqing John Qi, Shuo Zhao more...

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## **Nanoelectronics**

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### **Nanofluidic/nanoelectronic study on solvent-processed nanoscale organic transistors**

Da Li, Byunghoon Ryu, Qingyu Cui, Mikai Chen more...

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### **Fabrication of nickel stamp using e-beam evaporation and electroforming for electroreduction of carbon dioxide**

Yangchun Lan, Wuyang Zhuge, Dehu Cui, and Xing Cheng

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### **Thermal nanoimprint to improve the morphology of MAPbX<sub>3</sub> (MA = methylammonium, X = I or Br)**

Andre Mayer, Maximilian Buchmüller, Si Wang, Christian Steinberg more...

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### **Fabrication of a high-resolution electron beam with a carbon nanotube cold-cathode**

Ha Rim Lee, Hyeon Hee Yang, and Kyu Chang Park

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### **Fabrication of prebent MoS<sub>2</sub> biosensors on flexible substrates**

Byunghoon Ryu, Erika Yang, Younggeun Park, Katsuo Kurabayashi more...

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## Novel Imaging and Characterization Techniques

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### **Fabrication of hard x-ray zone plates with high aspect ratio using metal-assisted chemical etching**

Kenan Li, Michael J. Wojcik, Ralu Divan, Leonidas E. Ocola more...

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### **Camera for transmission He<sup>+</sup> ion microscopy**

Karen L. Kavanagh, Christoph Herrmann, and John A. Notte

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## Micro- and Nanofluidics

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### **Passive pumping for the parallel trapping of single neurons onto a microsieve electrode array**

Jean-Philippe Frimat, Bart Schurink, and Regina Lutge

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### **Subterahertz sensor in microfluidic devices for on-line determination and control of ethanol concentration**

Salomao Moraes da Silva Junior, Johan Stiens, Stanislav Moshkalev, Jacobus Willibrordus Swart more...

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## **Advanced Pattern Transfer**

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### **Chromium oxide as a hard mask material better than metallic chromium**

Ferhat Aydinoglu, Faycal Saffih, Ripon Kumar Dey, and Bo Cui

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## **Tip-based Lithography**

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### **Oxidation sharpening of silicon tips in the atmospheric environment**

Ripon Kumar Dey, Jiashi Shen, and Bo Cui

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