

**Nanochannel fabrication based on double patterning with hydrogen silsesquioxane**

Kenneth Diest, Russell Goodman and Mordechai Rothschild

J. Vac. Sci. Technol. B **33**, 020601 (2015); <http://dx.doi.org/10.1116/1.4906486>[+ VIEW DESCRIPTION](#)**Improvement of negative-bias-illumination-stress stability in all-transparent double-gate InGaZnO thin-film transistors**

Da-Bin Jeon, Min-Ki Ryu, Chun-Won Byun, Jong-Heon Yang, Chi-Sun Hwang and Sung-Min Yoon

J. Vac. Sci. Technol. B **33**, 020602 (2015); <http://dx.doi.org/10.1116/1.4906570>[+ VIEW DESCRIPTION](#)**Dependence of dielectric constant of SiOCH low-k films on porosity and pore size**

Alexander Palov, Tatiana V. Rakhimova, Mikhail B. Krishtab and Mikhail R. Baklanov

J. Vac. Sci. Technol. B **33**, 020603 (2015); <http://dx.doi.org/10.1116/1.4906816>[+ VIEW DESCRIPTION](#)**Origin analysis of thermal neutron soft error rate at nanometer scale**

Takashi Yamazaki, Takashi Kato, Taiki Uemura, Hideya Matsuyama, Yoko Tada, Kazutoshi Yamazaki, Takeshi Soeda, Toyoo Miyajima and Yuji Kataoka

J. Vac. Sci. Technol. B **33**, 020604 (2015); <http://dx.doi.org/10.1116/1.4907400>[+ VIEW DESCRIPTION](#)**Oscillation characteristics in terahertz transmission through a dipole-based metamaterial**

Jun Luo, Yehua Bie, Xinyu Zhang, Hongshi Sang, An Ji and Changsheng Xie

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**ELECTRONIC & OPTOELECTRONIC MATERIALS, DEVICES & PROCESSING****Fabrication of long-range surface plasmon hydrogen sensors on Cytop membranes integrating grating couplers**

Norman R. Fong, Pierre Berini and Niall Tait

J. Vac. Sci. Technol. B **33**, 021201 (2015); <http://dx.doi.org/10.1116/1.4906827>[+ VIEW DESCRIPTION](#)**Development of seed layer for electrodeposition of copper on carbon nanotube bundles**

Matthew B. Jordan, Ying Feng and Susan L. Burkett

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**Oxide structure-dependent interfacial layer defects of HfAlO/SiO<sub>2</sub>/Si stack analyzed by conductance method**

Yi Ming Ding and Durgamadhab Misra

J. Vac. Sci. Technol. B **33**, 021203 (2015); <http://dx.doi.org/10.1116/1.4913280>[+ VIEW DESCRIPTION](#)**Comparison of the phase-invariant and mosaic crystal models for dynamical x-ray diffraction from metamorphic In<sub>x</sub>Ga<sub>1-x</sub>As/GaAs (001) structures**

Paul B. Rago and John E. Ayers

J. Vac. Sci. Technol. B **33**, 021204 (2015); <http://dx.doi.org/10.1116/1.4913314>[+ VIEW DESCRIPTION](#)**Carrier transport analysis of n-ZnO:Al/p-GaN:Mg heterojunction light-emitting diodes**

Seonghoon Jeong and Hyunsoo Kim

J. Vac. Sci. Technol. B **33**, 021205 (2015); <http://dx.doi.org/10.1116/1.4913872>[+ VIEW DESCRIPTION](#)**Comparison of thermal annealing effects on electrical activation of MBE grown and ion implant Si-doped In<sub>0.53</sub>Ga<sub>0.47</sub>As**

Aaron G. Lind, Henry L. Aldridge Jr., Cory C. Bomberger, Christopher Hatem, Joshua M. O. Zide and Kevin S. Jones

J. Vac. Sci. Technol. B **33**, 021206 (2015); <http://dx.doi.org/10.1116/1.4914319>[+ VIEW DESCRIPTION](#)**Nanochannel diodes based on InAs/Al<sub>80</sub>Ga<sub>20</sub>Sb heterostructures: Fabrication and zero-bias detector properties**

Andreas Westlund, Per-Åke Nilsson, Paul Sangaré, Guillaume Ducournau, Christophe Gaquière, Ludovic Desplanque, Xavier Wallart and Jan Grahn

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Xun Li, Örjan Danielsson, Henrik Pedersen, Erik Janzén and Urban Forsberg

J. Vac. Sci. Technol. B **33**, 021208 (2015); <http://dx.doi.org/10.1116/1.4914316>[+ VIEW DESCRIPTION](#)**Asymmetrical formation of etching residues and their roles in inner-gate-recessed-channel-array-transistor**

Segeun Park, Youngwoong Son, Sangyeon Han, Ilgweon Kim and Yonghan Roh

J. Vac. Sci. Technol. B **33**, 021209 (2015); <http://dx.doi.org/10.1116/1.4914905>[+ VIEW DESCRIPTION](#)**Surface treatments to reduce leakage current in In<sub>0.53</sub>Ga<sub>0.47</sub>As p-i-n diodes**

Abhinav Gaur, Ian Manwaring, Matthew J. Filmer, Paul M. Thomas, Sean L. Rommel, Kunal Bhatnagar and Ravi Droopad

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Chu-Yeh Tien, Ping-Yu Kuei and Liann-Be Chang

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## LITHOGRAPHY

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Scott A. Skirlo, Ling Lu and Marin Soljačić

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Mihir Upadhyaya, Adarsh Basavalingappa, Henry Herbol, Gregory Denbeaux, Vibhu Jindal, Jenah Harris-Jones, Il-Yong Jang, Kenneth A. Goldberg, Iacopo Mochi, Sajan Marokkey, Wolfgang Demmerle and Thomas V. Pistor

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### **Resolution and alignment accuracy of low-temperature in situ electron beam lithography for nanophotonic device fabrication**

Manuel Gschrey, Ronny Schmidt, Jan-Hindrik Schulze, André Strittmatter, Sven Rodt and Stephan Reitzenstein

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## NANOMETER SCIENCE & TECHNOLOGY

### **Piezoelectric oscillation sensor based noncontact atomic force microscope for imaging in both ambient and liquid environments**

Jens P. Froning, Dan Xia, Shuai Zhang, Erik Lægsgaard, Flemming Besenbacher and Mingdong Dong

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