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Versatile multicharacterization platform involving tailored superhydrophobic SU-8 micropillars for the investigation of breast cancer estrogen receptor isoforms

Angelo Accardo, Emmanuelle Trevisiol, Aline Cerf, Christophe Thibault, Henrik Laurell, Melissa Buscato more...

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Pattern-generation and pattern-transfer for single-digit nano devices

Ivo W. Rangelow, Ahmad Ahmad, Tzvetan Ivanov, Marcus Kaestner, Yana Krivoshapkina, Tihomir Angelov more...

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High fidelity 3D thermal nanoimprint with UV curable polydimethyl siloxane stamps

Nachiappan Chidambaram, Robert Kirchner, Mirco Altana, Helmut Schiff

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Nanoimprint-induced orientation of localized wrinkles with SU-8

Christian Steinberg, Manuel Runkel, Marc Papenheim, Si Wang, Andre Mayer, Hella-Christin Scheer

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Impact of template stiffness during peeling release in nanoimprint lithography

Florian Chalvin, Naoto Nakamura, Takamitsu Tochino, Masaaki Yasuda, Hiroaki Kawata, Yoshihiko Hirai

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Viscosity range of UV-curable resins usable in print and imprint method for preparing sub-100-nm-wide resin patterns

Takuya Uehara, Akiko Onuma, Akira Tanabe, Kazuro Nagase, Hiroaki Ikedo, Nobuya Hiroshiba more...

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Overlay improvement in nanoimprint lithography for 1×-nm patterning

Kazuya Fukuhara, Masato Suzuki, Masaki Mitsuyasu, Toshiaki Komukai, Masayuki Hatano, Takuya Kono more...

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Flat and highly flexible composite stamps for nanoimprint, their preparation and their limits

Marc Papenheim, Andre Mayer, Si Wang, Christian Steinberg, Hella-Christin Scheer

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Deposition and etching characteristic of magnetite thin film for absorptive wire grid polarizer with 45 nm line and space pattern

Young Tae Cho, Jiyun Jeong, Ji Hoon Kim, Yun Jae Kim, Yeon Ho Jeong, Yoon Gyo Jung more...

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Induction-heated nanoimprint on soda-lime glass using sapphire molds

Jingxuan Cai, Shijie Li, Xu Guo, Haixong Ge, Wen-Di Li

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Effects of contact states on polymer pattern deformation during demolding process in nanoimprint lithography

Lijun Ma, Qing Wang, Rui Zhang, Xu Zheng, Tong Zheng

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Temperature induced color change in gold nanoparticle arrays: Investigating the annealing effect on the localized surface plasmon resonance

Vårin R. A. Holm, Martin M. Greve, Bodil Holst

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Pt-guided formation of Au nanoislands on Au nanorods and its optical properties

Jian-Bo Liu, Yu-Shi Zhang, Yue-Ping Wang, Feng-Shou Liu, Meng Wang, Wei-Yao Xu more...

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Scatterometry for nanoimprint lithography

Ruichao Zhu, Steven R. J. Brueck, Noel Dawson, Tito Busani, Praveen Joseph, Shrawan Singhal more...

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Shape positional accuracy optimization via writing order correction

Gerald G. Lopez, Steven A. Wood, Meredith G. Metzler, Stefan J. H. Stammberger, Roger S. McCay

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Mask registration and lithography platform portability for nitride fin-based field effect transistors prototyping

Jae Woo Suh, Michael E. Babb, Edward L. Principe, Harlan Rusty Harris

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Mixture of ZEP and PMMA with varying ratios for tunable sensitivity as a lift-off resist with controllable undercut

Shuo Zheng, Ripon Kumar Dey, Ferhat Aydinoglu, Bo Cui

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Noise filtering for accurate measurement of line edge roughness and critical dimension from SEM images

Dehua Li, Rui Guo, Soo-Young Lee, Jin Choi, Seom-Beom Kim, Sung-Hoon Park more...

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Analytic estimation of line edge roughness for large-scale uniform patterns in electron-beam lithography

Rui Guo, Soo-Young Lee, Jin Choi, Seom-Beom Kim, Sung-Hoon Park, In-Kyun Shin more...

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Large area three dimensional structure fabrication using multilayer electron beam lithography

Ravi K. Bonam, John G. Hartley

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Biases and uncertainties in the use of autocovariance and height–height covariance functions to characterize roughness

Chris A. Mack

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Comparative study of resists and lithographic tools using the Lumped Parameter Model

Roberto Fallica, Robert Kirchner, Yasin Ekinci, Dominique Mailly

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Source imperfection impacts on optical proximity correction

Lawrence S. Melvin III, Artak Isoyan, Chander Sawh, Jensheng Huang

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Patterning large area plasmonic nanostructures on nonconductive substrates using variable pressure electron beam lithography

Jiří Babocký, Petr Dvořák, Filip Ligmajer, Martin Hrtoň, Tomáš Šikola, Jan Bok more...

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Investigating compositional effects of atomic layer deposition ternary dielectric Ti-Al-O on metal-insulator-semiconductor heterojunction capacitor structure for gate insulation of InAlN/GaN and AlGaN/GaN

Albert Colon, Liliana Stan, Ralu Divan, Junxia Shi

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Nanoimprint-assisted shear exfoliation plus transfer printing for producing transition metal dichalcogenide heterostructures

Da Li, Sungjin Wi, Mikai Chen, Byunghoon Ryu, Xiaogan Liang

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Influence of thermal stress on heat-generating performance of indium tin oxide nanoparticle thin films

Kyungwhan Yang, Kyoungah Cho, Sangsig Kim, Kiju Im

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Ga⁺ focused ion beam lithography as a viable alternative for multiple fin field effect transistor prototyping

Alessandra Leonhardt, Marcos Vinicius Puydinger dos Santos, José Alexandre Diniz, Leandro Tiago Manera, Lucas Petersen Barbosa Lima

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Atomic emission spectroscopy of electrically triggered exploding nanoparticle analytes on graphene/SiO₂/Si substrate

Siyang Liu, Myungji Kim, Hong Koo Kim

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Six-axis AFM in SEM with self-sensing and self-transduced cantilever for high speed analysis and nanolithography

Tihomir Angelov, Ahmad Ahmad, Elshad Guliyev, Alexander Reum, Ivaylo Atanasov, Tzvetan Ivanov
more...

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Ultralow voltage imaging using a miniature electron beam column

James Spallas, Dan Meisburger, Lawrence Muray

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Silicon nanostructures with very large negatively tapered profile by inductively coupled plasma-RIE

Asma Ayari-Kanoun, Ferhat Aydinoglu, Bo Cui, Faycal Saffih

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Fabrication process for 200 nm-pitch polished freestanding ultrahigh aspect ratio gratings

Alexander R. Bruccoleri, Ralf K. Heilmann, Mark L. Schattenburg

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Impact of parallelism on data volumes for a multibeam mask writer

Narendra Chaudhary, Yao Luo, Serap A. Savari

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Transmission electron imaging in the Delft multibeam scanning electron microscope 1

Yan Ren, Pieter Kruit

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Effect of elastic modulus of UV cured resist on demolding force

Masamitsu Shirai, Kimiaki Uemura, Kazuma Shimomukai, Takamitsu Tochino, Hiroaki Kawata, Yoshihiko Hirai

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Lithography via electrospun fibers with quantitative morphology analysis

Joshua D. Beisel, John P. Murphy, Jessica M. Andriolo, Emily A. Kooistra-Manning, Sean Nicolaysen, Orrin Boese more...

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Study of alternate hardmasks for extreme ultraviolet patterning

Anuja De Silva, Indira Seshadri, Abraham Arceo, Karen Petrillo, Luciana Meli, Brock Mendoza more...

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Materials characterization for multilayer electron beam lithography

Ravi K. Bonam, John G. Hartley

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Design, fabrication, and characterization of polymer-based cantilever probes for atomic force microscopes

Fangzhou Yu, Jiangbo Liu, Xiao Zhang, Ai-Lian Lin, Nabeela Khan, Yanbiao Pan more...

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Displacement Talbot lithography nanopatterned microsieve array for directional neuronal network formation in brain-on-chip

Sijia Xie, Bart Schurink, Erwin J. W. Berenschot, Roald M. Tiggelaar, Han J. G. E. Gardeniers, Regina Luttgé

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Development of transparent microwell arrays for optical monitoring and dissection of microbial communities

Michelle Halsted, Jared L. Wilmoth, Paige A. Briggs, Ryan R. Hansen, Dayrl P. Briggs, Andrea C. Timm more...

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Injection of 2D electron gas into a quantum-dot organic light-emitting diode structure on silicon substrate

Daud Hasan Emon, Myungji Kim, Mohammad Taghi Sharbati, Hong Koo Kim

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Crystallization of nanoscale NiTi alloy thin films using rapid thermal annealing

Huilong Hou, Reginald F. Hamilton, Mark W. Horn

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Evaluating the compressive stress generated during fabrication of Si doubly clamped nanobeams with AFM

Matteo Lorenzoni, Jordi Llobet, Federico Gramazio, Marc Sansa, Jordi Fraxedas, Francesc Perez-Murano

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Hybrid organic–inorganic perovskite composite fibers produced via melt electrospinning

John P. Murphy, Brandon M. Ross, Jessica M. Andriolo, Jack L. Skinner

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Replication of nanopits and nanopillars by roll-to-roll extrusion coating using a structured cooling roll

Swathi Murthy, Henrik Pranov, Henrik C. Pedersen, Rafael Taboryski

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Large area fast-AFM scanning with active “Quattro” cantilever arrays

Ahmad Ahmad, Nikolay Nikolov, Tihomir Angelov, Tzvetan Ivanov, Alexander Reum, Ivaylo Atanasov more...

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Nanofluidic flow assisted assembly of dispersed plasmonic nanostructures into shallow nanochannel sensors

Hongsuk Nam, Jeong Seop Yoon, Hiroto Izuoka, Bo-Ram Oh, Katsuo Kurabayashi, Wenjie Wan more...

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Reconstructing focused ion beam current density profile by iterative simulation methodology

Eddie Chang, Kevin Toula, Valery Ray

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Novel electron monochromator for high resolution imaging and spectroscopy

Marian Mankos, Khashayar Shadman, Vladimir Kolarik

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Extraction of bulk and interface trap densities in amorphous InGaZnO thin-film transistors

Chan-Yong Jeong, Hee-Joong Kim, Jong In Kim, Jong-Ho Lee, Hyuck-In Kwon

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Embedded silicon carbide “replicas” patterned by rapid thermal processing of DNA origami on silicon

Michelle A. Pillers, Marya Lieberman

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Electromigration behavior of Cu metallization interfacing with Ta versus TaN at high temperatures

Shabnam Mardani, Hans Norström, Ulf Smith, Fredrik Gustavsson, Jörgen Olsson, Shi-Li Zhang

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Massive Ta diffusion observed in Cu thin films but not in Ag counterparts

Shabnam Mardani, Hans Norström, Fredrik Gustavsson, Tomas Nyberg, Daniel Primetzhofer, Klaus Leifer more...

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Review Article: FePt heat assisted magnetic recording media

Dieter Weller, Gregory Parker, Oleksandr Mosendz, Andreas Lyberatos, Dmitriy Mitin, Nataliia Y. Safonova more...

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Modified photoluminescence and photodetection characteristics of chemically grown SnO coated ZnO nanoneedles

Sayan Bayan, Sheo K. Mishra, Biswarup Satpati, Rajneesh K. Srivastava, Rajesh Kumar Shukla, Purushottam Chakraborty

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Influence of hydrogen passivation on the luminescence of Si quantum dots embedded in Si₃N_x

Carolyn C. Cadogan, Lyudmila V. Goncharova, Peter J. Simpson, Peter H. Nguyen, Zhiqiang Q. Wang, Tsun-Kong Sham

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Energetic Cs⁺ ion interaction with common microelectronic materials —An investigation of a future FIB candidate source

Yariv Drezner, Yuval Greenzweig, Amir Raveh

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Electrical characterization of a gate-recessed AlGaIn/GaN high-electron-mobility transistor with a p-GaN passivation layer

Kuang-Po Hsueh, Feng-Tso Chien, Li-Yi Peng, Chih-Wei Yang, Hou-Yu Wang, Kai-Di Mai more...

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Optical constants of germanium and thermally grown germanium dioxide from 0.5 to 6.6eV via a multisample ellipsometry investigation

Timothy Nathan Nunley, Nalin S. Fernando, Nuwanjula Samarasingha, Jaime M. Moya, Cayla M. Nelson, Amber A. Medina more...

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Electrical transport properties of nickel chromium alloy films

Zhaoguo Li, Liping Peng, Jicheng Zhang, Xinming Wang, Jia Li, Yuechuan Luo more...

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Aluminum-based contacts for use in GaSb-based diode lasers

Thanh-Nam Tran, Saroj Kumar Patra, Magnus Breivik, Bjørn-Ove Fimland

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Influence of ambient gas pressure and carbon adsorption on dark current emission from a cathode

Maykel Márquez-Mijares, Bruno Lepetit, Didier Lemoine, Khaled Almaksour, Mike J. Kirkpatrick, Philippe Dessante more...

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Electron beam lithography patterned hydrogen silsesquioxane resist as a mandrel for self-aligned double patterning application

Vishal U. Desai, John G. Hartley, Nathaniel C. Cady

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Plasma and photon interactions with organosilicon polymers for directed self-assembly patterning applications

Laurent Azarnouche, Stephen M. Sirard, William J. Durand, Gregory Blachut, Emir Gurer, Diane J. Hymes more...

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CSAR 62 as negative-tone resist for high-contrast e-beam lithography at temperatures between 4 K and room temperature

Arsenty Kaganskiy, Tobias Heuser, Ronny Schmidt, Sven Rodt, Stephan Reitzenstein

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Experimental constructions of binary matrices with good peak-sidelobe distances

Jerod Michel

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Multifield sub-5 nm overlay in imprint lithography

Paras Ajay, Anshuman Cherala, Bailey A. Yin, Euclid E. Moon, R. Fabian Pease, S. V. Sreenivasan

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Dmitry E. Sviridov, Vladimir I. Kozlovsky

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