JOURNAL PUBLICATIONS

Publications in 2013

A. Malainou, K. Tsougeni, K. Ellinas, P.S. Petrou, V. Constantoudis, E. Sarantopoulos, K. Awsiuk, A. Bernasil, A. Budkowski, A. Markou, I. Panagiotopoulos, S.E. Kakabakos, E. Gogolides, A. Tserepi

*Plasma-assisted nanoscale protein patterning on Si substrates via colloidal lithography*

V.-K.M. Kuppuswamy, V. Constantoudis, E. Gogolides, A.V. Pret, R. Gronheid

*Critical dimension uniformity and contact edge roughness in extreme ultraviolet lithography: Effect of photoacid generator, sensitiser and quencher*
Journal of Micro/ Nanolithography, MEMS, and MOEMS, 12, art. no. 023003 (2013)

N. Škoro, N. Puač, S. Lazović, U. Cvelbar, G. Kokkoris, E. Gogolides

*Characterization and global modelling of low-pressure hydrogen-based RF plasmas suitable for surface cleaning processes*

V. Constantoudis, G. Kokkoris, E. Gogolides

*Three-dimensional geometrical modeling of plasma transfer effects on line edge roughness: Comparison with experiments and rules of thumb*
Journal of Micro/ Nanolithography, MEMS, and MOEMS, 12, art. no. 041310 (2013)

K. Ellinas, K. Tsougeni, G. Boulousis, T. Speliotis, A. Tserepi, E. Gogolides

*Phosphopeptide enrichment and separation in an affinity microcolumn on a silicon microchip: Comparison of sputtered and wet-deposited TiO2 stationary-phase*
Sensors and Actuators, B: Chemical, 188, 1073-1079 (2013)

V. Constantoudis, V.-K.M. Kuppuswamy, E. Gogolides

*Effects of image noise on contact edge roughness and critical dimension uniformity measurement in synthesized scanning electron microscope images*
Journal of Micro/ Nanolithography, MEMS, and MOEMS, 12, art. no. 13005 (2013)

M.-E. Vlachopoulou, G. Kokkoris, C. Cardinaud, E. Gogolides, A. Tserepi

*Plasma etching of poly(dimethylsiloxane): Roughness formation, mechanism, control, and application in the fabrication of microfluidic structures*

D.P. Papageorgiou, K. Tsougeni, A. Tserepi, E. Gogolides

*Superhydrophobic, hierarchical, plasma-nanotextured polymeric microchannels sustaining high-pressure flows*
Microfluidics and Nanofluidics, 14, 247-255 (2013)

V. Constantoudis, G. Kokkoris, E. Gogolides

*Resist roughness plays a key role in pattern transfer (invited news and opinions paper)*
SPIE Newsroom, 10.1117/2.1201302.004738

Book Editing Chapter

Chapter: "Sidewall roughness in nanolithography: origins, metrology and device effects"
Authors: V. Constantoudis, E. Gogolides, G. P. Patsis
Journal publications 2012
A. Plasma Nanofabrication

B. Nanometerology-Characterization

C. Modeling-Simulation

D1. “Smart” Nanostructured Surfaces

D2. Microfluidics – Lab on Chip for Life Sciences

Journal Publications 2011
Micro and Nano Lithography: Simulation and Metrology

Microfluidic and Microarray Fabrication for Life Sciences


Plasma Nanoscience and Applications in wetting control and energy


2010 (7 publications)

- Kontziampasis, D., Beltsios, K., Tegou, E., Argitis, P., Gogolides, E.

Optimized surface silylation of chemically amplified epoxidized photoresists for micromachining applications


- Patsis, G.P., Drygiannakis, D., Constantoudis, V., Raptis, I., Gogolides, E.

Stochastic modeling and simulation of photoresist surface and line-edge roughness evolution


- Gogolides, E., Vlachopoulou, M., Tsougeni, K., Vourdas, N., Tserepi, A.

Micro and nano structuring and texturing of polymers using plasma processes: Potential manufacturing applications


Plasma directed assembly and organization: Bottom-up nanopatterning using top-down technology

(2010) Nanotechnology, 21 (8), art. no. 085302.

- Tsougeni, K., Papageorgiou, D., Tserepi, A., Gogolides, E.

"Smart" polymeric microfluidics fabricated by plasma processing: Controlled wetting, capillary filling and hydrophobic valving


- Marquez-Velasco, J., Vlachopoulou, M.-E., Tserepi, A., Gogolides, E.
Stable superhydrophobic surfaces induced by dual-scale topography on SU-8
  • Petropoulos, A., Kaltzas, G., Randjelovic, D., Gogolides, E.

Study of flow and pressure field in microchannels with various cross-section areas

2009 (15 publications)
  • Tsougeni, K., Vourdas, N., Tserepi, A., Gogolides, E., Cardinaud, C.
Mechanisms of oxygen plasma nanotexturing of organic polymer surfaces: From stable super hydrophilic to super hydrophobic surfaces
  • Petropoulos, A., Kontakis, K., Kaltzas, G., Gogolides, E.

Evaluation of a microfluidic sensor fabricated on polymeric material
  • Petropoulos, A., Kaltzas, G., Goustouridis, D., Gogolides, E.

A flexible capacitive device for pressure and tactile sensing
  • Kokkoris, G., Constantoudis, V., Gogolides, E.

Nanoscale roughness effects at the interface of lithography and plasma etching:
Modeling of line-edge-roughness transfer during plasma etching
  • Bayiati, P., Malainou, A., Matrozos, E., Tserepi, A., Petrou, P.S., Kakabakos, S.E., Gogolides, E.

High-density protein patterning through selective plasma-induced fluorocarbon deposition on Si substrates
  • Kokkoris, G., Panagiotopoulos, A., Goodyear, A., Cooke, M., Gogolides, E.

A global model for SF6 plasmas coupling reaction kinetics in the gas phase and on the surface of the reactor walls
  • Constantoudis, V., Christoyianni, H., Zakka, E., Gogolides, E.

Modeling of roughness evolution during the etching of inhomogeneous films:
Material-induced anomalous scaling
  • Constantoudis, V., Kokkoris, G., Xydi, P., Patsis, G.P., Gogolides, E.

Modeling of line edge roughness transfer during plasma etching
  • Kontakis, K., Petropoulos, A., Kaltzas, G., Speliotis, T., Gogolides, E.

A novel microfluidic integration technology for PCB-based devices: Application to microflow sensing
  • Vlachopoulou, M.-E., Petrou, P.S., Kakabakos, S.E., Tserepi, A., Beltsios, K., Gogolides, E.

Effect of surface nanostructuring of PDMS on wetting properties, hydrophobic recovery and protein adsorption
  • Hauguth, M., Volland, B.E., Ishchuk, V., Dressler, D., Danz, T., Rangelow, I.W., Kokkoris, G., Gogolides, E., Goodyear, A., Cooke, M.

Integrated plasma processing simulation framework, linking tool scale plasma models with 2D feature scale etch simulator
Nano-texturing of poly(methyl methacrylate) polymer using plasma processes and applications in wetting control and protein adsorption

Patsis, G.P., Drygiannakis, D., Raptis, I., Gogolides, E., Erdmann, A.

**Advanced lithography models for strict process control in the 32 nm technology node**

Argitis, P., Niakoulia, D., Douvas, A.M., Gogolides, E., Raptis, I., Vidali, V.P., Couladouros, E.A.

**Materials for lithography in the nanoscale**

Vourdas, N.E., Vlachopoulou, M.-E., Tserepi, A., Gogolides, E.

**Nano-textured polymer surfaces with controlled wetting and optical properties using plasma processing**

2008 (9 publications)

Vlachopoulou, M.E., Petrou, P.S., Kakabakos, S.E., Tserepi, A., Gogolides, E.

**High-aspect-ratio plasma-induced nanotextured poly(dimethylsiloxane) surfaces with enhanced protein adsorption capacity**

Kokkoris, G., Vourdas, N., Gogolides, E.

**Plasma etching and roughening of thin polymeric films: A fast, accurate, in situ method of surface roughness measurement**

Kokkoris, G., Goodyear, A., Cooke, M., Gogolides, E.

**A global model for C4F8 plasmas coupling gas phase and wall surface reaction kinetics**

Boulousis, G., Constantoudis, V., Kokkoris, G., Gogolides, E.

**Formation and metrology of dual scale nano-morphology on SF6 plasma etched silicon surfaces**

Vourdas, N., Tserepi, A., Boudouvis, A.G., Gogolides, E.

**Plasma processing for polymeric microfluidics fabrication and surface modification: Effect of super-hydrophobic walls on electroosmotic flow**

Tsougeni, K., Boulousis, G., Gogolides, E., Tserepi, A.

**Oriented spontaneously formed nano-structures on poly(dimethylsiloxane) films and stamps treated in O2 plasmas**


**Stochastic simulation studies of molecular resists for the 32 nm technology node**

Vlachopoulou, M.E., Dimitrakis, P., Tserepi, A., Vamvakas, V.Em., Koliopoulou, S., Normand, P., Gogolides, E., Tsoukalas, D.

**High-density plasma silicon oxide thin films grown at room-temperature**

Kokkoris, G., Tserepi, A., Gogolides, E.

**The potential of neutral beams for deep silicon nanostructure etching**
2007 (13 publications)

- Tsougeni K, Tserepi A, Boulousis G, V. Constantoudis, E. Gogolides.  
  Tunable poly(dimethylsiloxane) topography in O2 or Ar plasmas for controlling surface wetting properties and their ageing  
- Bayiati P., Tserepi A., Petrou P.S., Kakabakos S.E., Misiakos K., Gogolides E.  
  Electrowetting on plasma-deposited fluorocarbon hydrophobic films for biofluid transport in microfluidics  
- Tsougeni K., Tserepi A., Boulousis G., Constantoudis V., Gogolides E.  
  Control of nanotexture and wetting properties of polydimethylsiloxane from very hydrophobic to super-hydrophobic by plasma processing  
- Tsougeni K., Tserepi A., Gogolides E.  
  Photosensitive poly(dimethylsiloxane) materials for microfluidic applications  
- Vlachopoulou M.-E., Tserepi A., Beltsios K., Boulousis G., Gogolides E.  
  Nanostructuring of PDMS surfaces: Dependence on casting solvents  
- Bayiati P., Tserepi A., Petrou P.S., Misiakos K., Kakabakos S.E, Gogolides E,  
  Cardinaud C.  
  Biofluid transport on hydrophobic plasma-deposited fluorocarbon films  
- Drygiannakis D., Patsis G.P., Raptis I., Niakoula D., Vidali V., Couladouros E.,  
  Argitis P., Gogolides E.  
  Nanotextured super-hydrophobic transparent poly(methyl methacrylate) surfaces using high-density plasma processing  
- Vourdas N., Tserepi A., Gogolides E.  
  A novel microfabrication technology on organic substrates - Application to a thermal flow sensor  
- Kokkoris, G., Constantoudis, V., Angelikopoulos, P., Boulousis, G., Gogolides, E.  
  Dual nanoscale roughness on plasma-etched Si surfaces: Role of etch inhibitors  
- Zakka, E., Constantoudis, V., Gogolides, E.  
  Roughness formation during plasma etching of composite materials: A kinetic Monte Carlo approach  
- G. P. Patsis, M. D. Nijkerk, L. H. Leunissen, and E. Gogolides  
  Simulation of materials and processing effects on photoresist line-edge roughness  
  Vol. 2, 3-4, 134-143
- G. P. Patsis, V. Constantoudis, and E. Gogolides  
  Effects of lithography nonuniformity on device electrical behavior. Simple stochastic modeling of material and process effect on device performance  

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2006 (11 publications)


- Patsis G.P., Nijkerk M.D., Leunissen L.H.A, Gogolides E.

- Patsis G.P., Constantoudis V., Gogolides E.

- Kokkoris G., Boudouvis A.G., Gogolides E.

- Douvas A.M., Van Roey F., Goethals M., Papadokostaki K.G., Yannakopoulou K., Niakoula D., Gogolides E., Argitis P.

- Tserepi A.D., Vlachopoulou M.-E., Gogolides E.

**Nanotexturing of poly(dimethylsiloxane) in plasmas for creating robust superhydrophobic surfaces** (2006) *Nanotechnology*, 17 (15), art. no. 062, pp. 3977-3983.
- Gogolides E., Constantoudis V., Patsis G.P., Tserepi A.


- Patsis G.P., Gogolides E.

2005 (9 publications)
- Tserepi A., Gogolides E., Tsougeni K., Constantoudis V., Valamontes E.S.
  Tailoring the surface topography and wetting properties of oxygen-plasma treated polydimethylsiloxane
- Patsis G.P., Gogolides E.
  Material and process effects on line-edge-roughness of photoresists probed with a fast stochastic lithography simulator
- Sarris V., Patsis G.P., Constantoudis V., Boudouvis A.G., Gogolides E.
  A stochastic photoresist-polymer dissolution model combining the percolation and critical ionization models
- Patsis G.P., Gogolides E., Van Werden K.
  Effects of photoresist polymer molecular weight and acid-diffusion on line-edge roughness
- Vourdas N., Boudouvis A.G., Gogolides E.
  Increased plasma etch resistance of thin polymeric and photoresist films
- Constantoudis V., Gogolides E., Sarris V., Tserepi A., Diakoumakos C., Valamontes E.S.
  Fractal roughness of polymers after lithographic processing
- Vlachopoulou M.E., Tserepi A., Vourdas N., Gogolides E., Misiakos K.
  Patterning of thick polymeric substrates for the fabrication of microfluidic devices
- Patsis G.P., Gogolides E.
  Effects of model polymer chain architectures of photo-resists on line-edge-roughness: Monte Carlo simulations
- Vourdas N., Boudouvis A.G., Gogolides E.
  Plasma etch rate measurements of thin PMMA films and correlation with the glass transition temperature

2004 (11 publications)
- Patsis G.P., Constantoudis V., Gogolides E.
  Effects of photoresist polymer molecular weight on line-edge roughness and its metrology probed with monte carlo simulations
- Eon D., Cartry G., Fernandez V., Cardinaud C., Tegou E., Bellas V., Argitis P., Gogolides E.
  Surface segregation of photoresist copolymers containing polyhedral oligomeric silsesquioxanes studied by x-ray photoelectron spectroscopy
- Kokkoris G., Tserepi A., Boudouvis A.G., Gogolides E.
Simulation of SiO2 and Si feature etching for microelectronics and micro electromechanical systems fabrication: A combined simulator coupling modules of surface etching, local flux calculation, and profile evolution
- Bayiati P., Tserepi A., Gogolides E., Misiakos K.

Selective plasma-induced deposition of fluorocarbon films on metal surfaces for actuation in microfluidics
- Constantoudis V., Patsis G.P., Leunissen L.H.A., Gogolides E.

Line edge roughness and critical dimension variation: Fractal characterization and comparison using model functions
- Constantoudis V., Patsis G.P., Gogolides E.

Photoresist line-edge roughness analysis using scaling concepts
- Tegou E., Bellas V., Gogolides E., Argitis P., Eon D., Cartry G., Cardinaud C.

Polyhedral oligomeric silsesquioxane (POSS) based resists: Material design challenges and lithographic evaluation at 157 nm
- Gogolides E., Boukouras C., Kokkoris G., Brani O., Tserepi A., Constantoudis V.

Si etching in high-density SF6 plasmas for microfabrication: Surface roughness formation
- Tegou E., Bellas V., Gogolides E., Argitis P.

Polyhedral oligomeric silsesquioxane (POSS) acrylate copolymers for microfabrication: Properties and formulation of resist materials

Line edge roughness investigation on chemically amplified resist materials with masked helium ion beam lithography
- N. Vourdas, V. Bellas, E. Tegou, O. Brani, V. Constantoudis, P. Argitis, A. Tserepi, E. Gogolides

Oxygen plasma modification of polyhedral oligomeric silsesquioxane (POSS) containing copolymers for micro and nano fabrication,

2003 (11 publications)
- Sarantopoulou E., Kolliia Z., Kočevar K., Mušević I., Kobe S., Dražić G., Gogolides E., Argitis P., Cefalas A.C.

The challenges of 157 nm nanolithography: Surface morphology of silicon-based copolymers
- Patsis G.P., Constantoudis V., Tserepi A., Gogolides E., Grozev G., Hoffmann T.

Roughness analysis of lithographically produced nanostructures: Off-line measurement and scaling analysis
- Raptis I., Niakoula D., Tegou E., Bellas V., Gogolides E., Argitis P., Papadokostaki K.G., Ioannidis A.

Resist process issues related to the glass transition changes in chemically amplified resist films

- Patsis G.P., Constantoudis V., Tserepi A., Gogolides E.

Quantification of line-edge roughness of photoresists. I. A comparison between off-line and on-line analysis of top-down scanning electron microscopy images
- Tserepi A., Tsamis C., Gogolides E., Nasiopoulou A.G.

Dry etching of porous silicon in high density plasmas
- Constantoudis V., Patsis G.P., Tserepi A., Gogolides E.

Quantification of line-edge roughness of photoresists. II. Scaling and fractal analysis and the best roughness descriptors
- Tserepi A., Tsamis C., Kokkoris G., Gogolides E., Nasiopoulou A.G.

Fabrication of suspended thermally insulating membranes using frontside micromaching of the Si substrate: Characterization of the etching process
- Tserepi A., Gogolides E., Constantoudis V., Cordoyiannis G., Raptis I., Valamontes E.S.

Surface roughness induced by plasma etching of Si-containing polymers
- Tserepi A., Cordoyiannis G., Patsis G.P., Constantoudis V., Gogolides E., Valamontes E.S., Eon D., Peignon M.C., Cartry G., Cardinaud Ch., Turban G.

Etching behavior of Si-containing polymers as resist materials for bilayer lithography: The case of poly-dimethyl siloxane
- Gogolides E., Argitis P., Couladouros E.A., Vidali V.P., Vasilopoulou M., Cordoyiannis G., Diakoumakos C.D., Tserepi A.

Photoresist etch resistance enhancement using novel polycarbocyclic derivatives as additives
- Patsis G.P., Glezos N., Gogolides E.

Monte Carlo simulation of gel formation and surface and line-edge roughness in negative tone chemically amplified resists
2002 (7 publications)
- Bellas V., Tegou E., Raptis I., Gogolides E., Argitis P., Iatrou H., Hadjichristidis N., Sarantopoulou E., Cefalas A.C.
  Evaluation of siloxane and polyhedral silsesquioxane copolymers for 157 nm lithography
  - Eon D., De Poucques L., Peignon M.C., Cardinaud Ch., Turban G., Tserepi A., Cefalas A.C., Sarantopoulou E., Gogolides E.

- Surface modification of Si-containing polymers during etching for bilayer lithography
  - Constantoudis V., Gogolides E., Tserepi A., Diakoumakos C.D., Valamontes E.S.

- Roughness characterization in positive and negative resists
  - Cefalas A.C., Sarantopoulou E., Argitis P., Gogolides E.

- He2 60-90 nm photon source for investigating photodissociation dynamics of potential X-UV resists
  - Kokkoris G., Gogolides E., Boudouvis A.G.

2001 (5 publications)
- Constantoudis V., Gogolides E., Patsis G.P., Tserepi A., Valamontes E.S.
  Characterization and simulation of surface and line-edge roughness in photoresists
  - Sarantopoulou E., Cefalas A.C., Argitis P., Gogolides E.

- Photoresist material for 157-nm photolithography
  - Tserepi A., Valamontes E.S., Tegou E., Raptis I., Gogolides E.

- Surface and line-edge roughness in plasma-developed resists
  - Patsis G.P., Gogolides E.

- Simulation of surface and line-edge roughness formation in resists
  - Kokkoris G., Gogolides E., Boudouvis A.G.

- Simulation of fluorocarbon plasma etching of SiO2 structures

2000 (4 publications)
- Gogolides E., Vauvert P., Kokkoris G., Turban G., Boudouvis A.G.
Etching of SiO2 and Si in fluorocarbon plasmas: A detailed surface model accounting for etching and deposition
  • Patsis G.P., Tserepi A., Raptis I., Glezos N., Gogolides E., Valamontes E.S.

Surface and line-edge roughness in solution and plasma developed negative tone resists: Experiment and simulation
  • Cefalas A.C., Sarantopoulou E., Gogolides E., Argitis P.

Absorbance and outgasing of photoresist polymeric materials for UV lithography below 193 nm including 157 nm lithography
  • Kokkoris G., Gogolides E., Boudouvis A.G.

SiO2 and Si etching in fluorocarbon plasmas: coupling of a surface model with a profile evolution simulator

1999 (2 publications)
  • Cefalas A.C., Sarantopoulou E., Argitis P., Gogolides E.

Mass spectroscopic and degassing characteristics of polymeric materials for 157 nm photolithography
  • Gogolides E., Vauvert P., Courtin Y., Kokkoris G., Pelle R., Boudouvis A., Turban G.

SiO2 and Si etching in fluorocarbon plasmas: A detailed surface model coupled with a complete plasma and profile simulator

1998 (5 publications)
  • Tserepi A., Gogolides E., Cardinaud C., Rolland L., Turban G.

Highly anisotropic silicon and polysilicon room-temperature etching using fluorine-based high density plasmas
  • Tegou E., Gogolides E., Argitis P., Boudouvis A., Hatzakis M.

Silylation of epoxy functionalised photoresists for optical, E - beam lithography and micromachining applications
  • Tegou E., Gogolides E., Argitis P., Raptis L., Meneghini G., Cui Z.

Silylation and dry development of chemically amplified resists SAL601, AZPN114, and epoxidised resist (EPR1) for high resolution electron-beam lithography
  • Argitis P., Vasilopoulou M.A., Gogolides E., Tegou E., Hatzakis M., Kollia Z., Cefalas A.C.

Etch resistance enhancement and absorbance optimization with polyaromatic compounds for the design of 193 nm photoresists
  • Gogolides E., Vauvert P., Rhallabi A., Turban G.

Complete plasma physics, plasma chemistry, and surface chemistry simulation of SiO2 and Si etching in CF4 plasmas
1997 (4 publications)

- Grigoropoulos S., Gogolides E., Tserepi A.D., Nasiopoulos A.G.
  Highly anisotropic silicon reactive ion etching for nanofabrication using mixtures of SF6/CHF3 gases
  - Gogolides E., Vauvert P., Turban G.

- A complete plasma physics, plasma chemistry, and surface chemistry simulator used for deposition and etching of thin films
  - Gogolides E.

- A synthetic approach to RF plasma modeling verified by experiments: Demonstration of a predictive and complete plasma simulator
  - Tegou E., Gogolides E., Hatzakis M.

- Thermal analysis of photoresists in aid of lithographic process development

1996 (6 publications)

- Metsi E., Gogolides E., Boudouvis A.
  Instabilities and multiple steady states of radio-frequency discharges in CF4
  - Gogolides E., Tzevelekis D., Grigoropoulos S., Tegou E., Hatzakis M.

- Wet silylation and oxygen plasma development of photoresists: A mature and versatile lithographic process for microelectronics and microfabrication
  - Mantzaris N.V., Gogolides E., Boudouvis A.G.

- A comparative study of CH4 and CF4 rf discharges using a consistent plasma physics and chemistry simulator
  - Rhallabi A., Gogolides E., Turban G.

- Modelling of plasma surface interactions
  - Mantzaris N.V., Gogolides E., Boudouvis A.G., Rhallabi A., Turban G.

- Surface and plasma simulation of deposition processes: CH4 plasmas for the growth of diamondlike carbon
  - Gogolides E., Tegou E., Beltsios K., Papadokostaki K., Hatzakis M.

- Thermal and mechanical analysis of photoresist and silylated photoresist films: Application to AZ 5214™

1995 (7 publications)

  Light emission from silicon nanostructures produced by conventional lithographic and reactive ion etching techniques,
  - Mantzaris, N.V.; Boudouvis, A.; Gogolides, E.,
Radio-frequency plasmas in CF4: self-consistent modeling of the plasma physics and chemistry,
  • Nasiopoulos, A.G.; Grigoropoulos, S.; Gogolides, E.; Papadimitriou, D.

Visible luminescence from one- and two-dimensional silicon structures produced by conventional lithographic and reactive ion etching techniques,
  • Gogolides E., Grigoropoulos S., Nasiopoulos A.G.

Highly anisotropic room-temperature sub-half-micron Si reactive ion etching using fluorine only containing gases
  • Gogolides E., Tzevelekis D., Yannakopoulos K., Hatzakis M.

New method which increases the Si content in wet silylation, and its relation to the thermal effects during O2 plasma development
  • Nasiopoulos A.G., Grigoropoulos S., Canham L., Halimaoui A., Berbezier I.,
    Gogolides E., Papadimitriou D.

Sub-micrometre luminescent porous silicon structures using lithographically patterned substrates
  • Gogolides E., Mary, David, Rhallabi, Ahmed, Turban, Guy

RF plasmas in methane: Prediction of plasma properties and neutral radical densities with combined gas-phase physics and chemistry model

1994 (5 publications)
  • Gogolides E., Stathakopoulos, M., Boudouvis A.

Modelling of radio frequency plasmas in tetrafluoromethane (CF4): The gas phase physics and the role of negative ion detachment
  • Gogolides E., Yannakopoulos K., Traverse A., Nasiopoulos A.G., Tsois E.,
    Hatzakis M.

Characterization of a positive-tone wet silylation process with the AZ 5214TM photoresist
  • Gogolides E., Buteau C., Rhallabi A., Turban G.

Radio-frequency glow discharges in methane gas: modelling of the gas-phase physics and chemistry
  • Gogolides E., Baik K.H., Yannakopoulos K., Van den hove L., Hatzakis M.

Lithographic evaluation of a new wet silylation process using safe solvents and the commercial photoresists AZ 5214ETM
  • Gogolides, E.; Tzevelekis, D.; Tsoi, E.; Hatzakis, M.; and others.

Quarter-micron lithography with a wet-silylated and dry-developed commercial photoresist,

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  • Gogolides E., Yannakopoulos K., Nasiopoulos A.G., Tsois E., Hatzakis M.
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1992 (4 publications)
- Gogolides E., Sawin H.H., Brown R.A.

**Direct calculation of time-periodic states of continuum models of radio-frequency plasmas**
- Gogolides, E.; Sawin, H.H

**Continuum modeling of radio-frequency glow discharges. I. Theory and results for electropositive and electronegative gases,**
  - Gogolides, E.; Sawin, H.H

**Continuum modeling of radio-frequency glow discharges. II. Parametric studies and sensitivity analysis,**
  - Gogolides, E.; Tsoi, E.; Nassiopoulos, A.G.; Hatzakis, M

**Wet silylation and dry development with the AZ 5214 photoresist,**

1989 (2 publications)
- Gogolides E., Sawin H. H.

**n+-polysilicon etching in CCl4/He discharges: Characterization and modeling**
  - Gogolides, E.; Nicolai, J.-P.; Sawin, H.H

**Comparison of experimental measurements and model predictions for radio-frequency Ar and SF6 discharges,**
Line-edge roughness effects on transistor performance: the role of the gate-width design (poster)
Vassilios Constantoudis, George P. Patsis, Evangelos Gogolides

Line Width Roughness effects on device performance: The role of the gate width design
Constantoudis, V., Gogolides, E., Patsis, G.P.

Evolution of resist roughness during development: Stochastic simulation and dynamic scaling analysis
Constantoudis, V., Patsis, G.P., Gogolides, E.

Evolution of resist roughness during development: Stochastic simulation and dynamic scaling analysis
Constantoudis, V., Patsis, G.P., Gogolides, E.

Is the resist sidewall after development isotropic or anisotropic? Effects of resist sidewall morphology on LER reduction and transfer during etching
Constantoudis, V., Kokkoris, G., Gogolides, E., Pargon, E., Martin, M.

Line width roughness effects on device performance: The role of the gate width design
Constantoudis, V., Gogolides, E., Patsis, G.P.

The Line Edge roughness (LER) problem: From Lithography-to Plasma Etching-to Device Operation (oral invited)
E. Gogolides, V. Constantoudis, G. Kokkoris
3rd workshop on Plasma Etch and Strip in Microelectronics (PESM 2010), 4-5 March 2010, Grenoble, France

Mechanisms inducing periodic holes or dots on plasma etched surfaces (oral)
G. Kokkoris, V. Constantoudis, E. Gogolides
3rd workshop on Plasma Etch and Strip in Microelectronics (PESM 2010), 4-5 March 2010, Grenoble, France

Plasma Directed Assembly and Organization: Bottom-up Nanopatterning Using a Top-down Technology
D. Kontziampasis, N. Vourdas, G. Kokkoris, V. Constantoudis, A. Goodyear, A. Tserepi, M. Cooke, E. Gogolides
3rd workshop on Plasma Etch and Strip in Microelectronics (PESM 2010), 4-5 March 2010, Grenoble, France

Micro-fabricated TiO2-ZrO2 Affinity Chromatography Micro-Columns on Polymeric or Silicon Substrates for Phosphopeptide Analysis (oral)
Lab-on-a-Chip European Congress, 25-26 May 2010, Dublin, Ireland

Protein Patterning Through Selective Plasma-induced Modification of Silicon Oxide and Glass Substrates (oral)
A. Tserepi, A. Malainou, E. Gogolides, P. S. Petrou, S. E. Kakabakos
Advances in Microarray Technology, 25-26 May 2010, Dublin, Ireland

Line Width Roughness Effects on Device Performance: The Role of the Gate Width Design (oral)
V. Constantoudis, E. Gogolides, G. Patsis

Evolution of Resist Roughness During Development: Stochastic Simulation and Dynamic Scaling Analysis (oral)
V. Constantoudis, G. Patsis, E. Gogolides

K. Tsougeni, D. Papageorgiou, A. Tserepi, E. Gogolides
Lab-on-a-Chip European Congress, Dublin, Ireland, May 24-25 2010

Protein and DNA Patterning on Plasma-modified Polymeric Surfaces for Bioanalytical Applications (poster)
K. Tsougeni, M.-E. Vlachopoulou, P. Petrou, S. Kakabakos, A. Tserepi, E. Gogolides
“Advances in Microarray Technologies”, Dublin, Ireland, May 24-25 2010

Protein Patterning Through Selective Plasma-induced Modification of Silicon Oxide and Glass Substrates (oral)
A. Tserepi, A. Malainou, E. Gogolides, P. Petrou, S. Kakabakos
“Advances in Microarray Technologies”, Dublin, Ireland, May 24-25 2010

Micro-fabricated TiO2-ZrO2 Affinity Chromatography Micro-Columns on Polymeric or Silicon Substrates for Phosphopeptide Analysis (oral)
Lab-on-a-Chip European Congress, Dublin, Ireland, May 24-25 2010

Plasma Directed Assembly and Organization: Effect of Plasma Processing Conditions on Order and Nanodot Dimensions (poster)
D. Kontziampasis, G. Kokkoris, V. Constantoudis, A. Smyrnakis, A. Zeniou, E. Gogolides
The 54th International Conference on Electron, Ion and Photon Beam technology and Nanofabrication (EIPBN), Anchorage, Alaska, June 1-4,2010

Micro-fabricated TiO2-ZrO2 Affinity Chromatography Micro Columns on Poly(methyl methacrylate) (PMMA) substrates for Phosphopeptide Analysis (oral)
K. Tsougeni, E. Gogolides
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010

High-density patterning of proteins on substrates for applications in lab-on-a-chip devices and microarrays (poster)
A. Malainou, A. Tserepi, P. Petrou, S. Kakabakos, E. Gogolides
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010

“Mesh-assisted” colloidal lithography and plasma etching: A route to large-area, uniform, ordered nano-pillar production on versatile substrates (poster)
K. Ellinas, A. Malainou, A. Zeniou, A. Tserepi, E. Gogolides
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010
Amphiphobic, Plasma Nanotextured Polymer Surfaces (poster)
A. K. Gnanappa, K. Ellinas, A. Tserepi, E. Gogolides
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010

Superhydrophobic Surfaces for Water Immersion Lithography (poster)
A. K. Gnanappa, E. Gogolides, F. Evangelista, M. Riepen
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010

Contact Edge Roughness: Characterization and Modeling (poster)
Vijaya-Kumar M.K., V. Constantoudis, E. Gogolides
36th International Conference on Micro & Nano Engineering, GENOA (Italy), 19-22 September 2010

Plasma Directed Assembly and Organization: Formation of polymeric nanodots and silicon nanopillars (oral)
A. Smyrnakis, D. Kontziampasis, A. Zeniou, E. Gogolides
63rd Gaseous Electronics Conference & 7th International Conference on Reactive Plasmas, October 4-8, 2010, Paris, France

2009 (19 presentations/publications in international conference proceedings)

Line-edge roughness transfer during plasma etching: Modeling approaches and comparison with experimental results
Vassilios Constantoudis, George Kokkoris, Panayota Xydi, Evangelos Gogolides, Erwine Pargon, MichaeI Martin
Proceedings of SPIE -Advanced Lithography- The International Society for Optical Engineering, San Jose, California, USA, 22-27 February 2009, 7273-177, art. no. , (2009)

Noise-free estimation of spatial Line Edge/Width Roughness parameters
Vassilios Constantoudis, Evangelos Gogolides
Proceedings of SPIE -Advanced Lithography- The International Society for Optical Engineering, San Jose, California, USA, 22-27 February 2009, 7272-177, art. no. , (2009)

A multi-scale computational framework for plasma etching processes: Application to the investigation of surface kinetics on the reactor walls (oral)
G. Kokkoris, A. Goodyear, M. Cooke, E. Gogolides

Modeling of Line Edge Roughness Transfer during Plasma Etching (oral)
G. Kokkoris, V. Constantoudis, P. Xydi, G. P. Patsis, E.Gogolides

Plasma-Directed, Organized Nanodot Formation on Polymeric Surfaces (oral)
D. Kontziampasis, N. Vourdas, G. Boulouis, V. Constadoudis, A. Tserepi, E. Gogolides

Oxygen Plasma Nanotexturing of PS surfaces for Fabrication of DNA Arrays (poster)
K. Tsougeni, P. Petrou, A. Tserepi, S. Kakabakos, E. Gogolides

Plasma-Induced Nanotexturing of Polymers for the Fabrication of Protein and DNA Arrays (poster)
K. Tsougeni, M.E. Vlachopoulou, P. Petrou, S. Kakabakos, A. Tserepi, E. Gogolides

Plasma Etching Technology for Fabrication and Surface Modification of Plastic Microfluidic Devices (oral)
M.-E. Vlachopoulou, K. Tsougeni, K. Kontakis, N.Vourdas, A. Tserepi, E. Gogolides
The role of gate width in transistor performance: Effects of sidewall roughness (poster)
V.Constantoudis, G.P.Patsis, E.Gogolides
ESSDERC 2009, 14-18 September 2009, Athens, Greece

Protein patterning on plasma-modified PDMS and PMMA surfaces for bioanalytical applications (poster)
M-E. Vlachopoulou, K. Tsougeni, K. Tserepi, E. Gogolides, P. Petrou, S. Kakabakos
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Stable superhydrophobic surfaces induced by dual-scale topography on SU-8 (poster)
M-E. Vlachopoulou, J.M. Velasco, A. Tserepi, E. Gogolides
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Plasma etched nano-pillar arrays on polymer surfaces using colloidal lithography: Dual scale robust super hydrophobic and super hydrophilic wetting behaviour (poster)
K. Ellinas, A. Tserepi, E. Gogolides
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Pressure drop on water flow in PMMA microfluidics with controllable wetting characteristics (poster)
D. Papageorgiou, K. Tsougeni, A. Tserepi, E. Gogolides
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Plasma-Directed Organized Nanodot Formation on Polymeric Surfaces (poster)
D. Kontziampasis, E. Gogolides, V. Constantoudis, N. Vourdas, M. Cooke, A. Goodyear
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Detailed Resist Film Modelling in Stochastic Lithography Simulation for Line-Edge Roughness Quantification (oral)
G. Patsis, D. Drygiannakis, E. Gogolides, I. Raptis
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Simulation of Shot Noise effect on CD and LER of Electron Beam Lithography in 32nm Designs (poster)
G. Patsis, N. Tsikrikas, D. Drygiannakis, E. Gogolides, I. Raptis
MNE 2009, 28 September - 1 October 2009, Ghent, Belgium (2009)

Micro-fabricated TiO2-ZrO2 Affinity Chromatography Micro-Column on PMMA for Phosphopeptide Analysis
IMA 2009, 4 - 8 October 2009, Athens, Greece (2009)

Protein Arrays on SF6 Plasma Nanostructured PDMS Surfaces
Vlachopoulou M-E, Tserepi A, Gogolides E, Petrou P, Kakabakos S
IMA 2009, 4 - 8 October 2009, Athens, Greece (2009)

Protein Patterning Through Selective Plasma–Induced Modification of Glass Substrates
A. Malainou, A. Tserepi, P.S. Petrou, S.E. Kakabakos, E. Gogolides
IMA 2009, 4 - 8 October 2009, Athens, Greece (2009)

2008 (29 presentations/publications in international conference proceedings)

Fractal dimension of line-width roughness and its effects on transistor performance (oral)
V. Constantoudis, E. Gogolides

Electron-Beam-Patterning Simulation and Metrology of Complex Layouts on Si/Mo Multilayer Substrates (poster)
G. P. Patsis, D. Drygiannakis, N. Tsikrikas, I. Raptis, E. Gogolides

**Plasma etching as a method for fabrication of polymeric microfluidics and microarrays, and control of their properties (poster)**
Lab-on-a-Chip World Congress, 7-8 May 2008, Barcelona, Spain

**High density protein patterning through selective plasma-induced fluorocarbon deposition on Si substrates (poster)**
P. Bayiati, E. Matrozos, A. Tserepi, P. S. Petrou, S. E. Kakabakos, A. Malainou, E. Gogolides
10th World Congress on Biosensors, 14-16 May 2008, Shanghai, China

**High-Aspect-Ratio Plasma Induced Nanotexturing of Polymers (PDMS, PMMA, PEEK,…) for protein adsorption applications (poster)**
M.E.Vlachopoulou, K.Tsougeni, P.Petrou, S.Kakabakos, A.Tserepi, E.Gogolides
EIPBN (The Fifty Second International Conference on electron, ion and photon beam technology and nanofabrication): 27-29 May 2008, Portland

**High-Aspect-Ratio Plasma Induced Nanotexturing of Polymers (PDMS, PMMA, PEEK,…) for protein adsorption applications (poster)**
M.E.Vlachopoulou, K.Tsougeni, P.Petrou, S.Kakabakos, A.Tserepi, E.Gogolides
Nano2Life Annual Meeting, 25-27 June 2008, Heraklion, Crete, Greece

**Microfluidics and microarrays on smart, plasma processed, polymeric substrates (oral invited)**
E.Gogolides, A. Tserepi, N. Vourdas, K. Tsougeni, M.E. Vlachopoulou, S. Kakabakos, P. Petrou
Nano2Life Annual Meeting, 25-27 June 2008, Heraklion, Crete, Greece

**Plasma-Induced Nanotexturing of Polymers and application in protein adsorption (oral)**
M.E.Vlachopoulou, K.Tsougeni, P.S.Petrou, S.E.Kakabakos, A.Tserepi, E.Gogolides
ISPPBA (1st International Symposium on Plasma Processing and Biomedical Applications), 27-29 August 2008, Milos Island, Greece

**Selective plasma modification of patterned Si and glass substrates for the fabrication of high-density biomolecular micro-arrays (oral)**
P. Bayiati, A. Malainou, E. Matrozos, A. Tserepi, P. S. Petrou, S. E. Kakabakos, E. Gogolides
ISPPBA (1st International Symposium on Plasma Processing and Biomedical Applications), 27-29 August 2008, Milos Island, Greece

**A novel microfluidic integration technology for PCB-based devices: Application to microflow sensing (poster)**
K. Kontakis, A. Petropoulos, G. Kaltsas, T. Speliotis, E. Gogolides
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

**Effect of surface nanostructuring of PDMS on wetting properties, hydrophobic recovery and protein adsorption (poster)**
M.-E.Vlachopoulou, P.S.Petrou, S.E.Kakabakos, A.Tserepi, K.Beltsios, E.Gogolides
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

**Nanotexturing of polymeric surfaces using plasma processes and applications in wetting control and in protein adsorption (oral)**
K. Tsougeni, P. S. Petrou, A. Tserepi, S. E. Kakabakos, E. Gogolides
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

**Fabrication of Polymeric Microfluidic Devices and Control of their Surface Properties by Plasma Processing (oral)**
K. Tsougeni, N. Vourdas, K. Kontakis, A. Tserepi and E. Gogolides
6th International Symposium on Nanomanufacturing, 12-14 November 2008,
Vouliagmeni, Athens

Plasma-based fabrication of PDMS microfluidic devices of controlled surface roughness (oral)
M.E. Vlachopoulou, A. Tserepi, G. Boulousis, E. Gogolides
Microflu’08 (1st European Conference on Microfluidics) : December 10-12, 2008,
Bologna, Italy

Fabrication, Surface Modification and Characterization of Polymeric Microfluidic Devices Using Plasma Etching and Plasma Processing Technology (oral)
K. Tsougeni, D. Papageorgiou, K. Kontakis, N. Vourdas, A. Tserepi, E. Gogolides
Microflu’08 (1st European Conference on Microfluidics) : December 10-12, 2008,
Bologna, Italy

Nano texturing / Patternning of Polymers with Plasmas: A Versatile Tool for Nanomanufacturing (oral invited)
E. Gogolides, A. Tserepi, N. Vourdas, K. Tsougeni, M.E. Vlachopoulou, G. Boulousis
1st International Conference from Nanoparticles & Nanomaterials to Nanodevices & Nanosystems, 16-18 June 2008, Halkidiki, Greece

Modeling of roughness evolution during the etching of inhomogeneous films: Material-induced anomalous scaling (oral)
V. Constantoudis, H. Christogianni, H. Zakka and E. Gogolides
International Conference in Statistical Physics SigmaPhi 2008, 14-18 July 2008,
Kolympari - Chania, Greece

Integrated plasma processing simulation framework, linking tool scale plasma models with 2D feature scale etch simulator
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

Modeling of line edge roughness transfer during plasma etching
V. Constantoudis, G. Kokkoris, P. Xydi, G. P. Patsis, E. Gogolides
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

Periodic nano-structuring of polymers using plasma processes: Towards plasma-directed polymer self-assembly? (poster)
N. Vourdas, D. Kontziampasis, G. Boulousis, V. Constantoudis, A. Tserepi, E. Gogolides
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

Coupling Reaction Kinetics of Gas Phase, Reactor Wall, and Wafer Surface in C4F8 and SF6 Plasmas with Global Models (oral)
G. Kokkoris, E. Gogolides, A. Goodyear, M. Cooke

Nano-Column Formation on Polymers Using Plasma Processes and Application in Wetting and Optical Properties Control (oral)
K. Tsougeni, M. E. Vlachopoulou, N. Vourdas, A. Tserepi, E. Gogolides
6th International Symposium on Nanomanufacturing, 12-14 November 2008,
Vouliagmeni, Athens

Micro- and Nano- Structuring of Polymers Using Plasma Processes and Potential Manufacturing Applications (oral invited)
E. Gogolides, A. Tserepi, N. Vourdas, M. Vlachopoulos, K. Tsougeni, V. Constantoudis, G. Boulousis, D. Kontziampasis
6th International Symposium on Nanomanufacturing, 12-14 November 2008,
Vouliagmeni, Athens
Polymer Nano-Texturing and Stochastic Nano-Patterning Using Plasma Processing (oral invited)
E. Gogolides, A. Tserepi, N. Vourdas, M.-E. Vlachopoulos, K. Tsougeni, and D. Kontziampasis
The AIChE Annual Meeting, 16-21 November 2008, Philadelphia, PA

Coupling Gas Phase and Surface Reaction Kinetics In C4F8 and SF6 Plasmas Used for Si and SiO2 Etching (oral)
G. Kokkoris, E. Gogolides, A. Goodyear, and M. Cooke
The AIChE Annual Meeting, 16-21 November 2008, Philadelphia, PA

Plasma-deposited fluorocarbon films as hydrophobic layers for electrowetting on dielectric based droplet transport (oral)
P. Bayiati, A. Tserepi, D. Goustouridis, K. Misiakos, E. Gogolides
Microflu'08 (1st European Conference on Microfluidics) : December 10-12, 2008, Bologna, Italy

Fractal dimension of Line Width Roughness and its effects on transistor performance (oral)
V. Constantoudis and E. Gogolides
SPIE conference: Advanced Lithography 2008, 24-29 February 2008, San Jose, California, USA

Advanced lithography models for strict process control in the 32nm technology node (oral)
G. P. Patsis, D. Drygiannakis, I. Raptis, E. Gogolides, A. Erdmann
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

A new imaging approach based on a thermally developable, etch resistant molecular material (poster)
Th. Manouras, A. M. Douvas, N. Vourdas, E. Gogolides, P. Argitis
34th International Conference on Micro and Nano Engineering 2008, 15-18 September 2008 Athens, Greece

2007 (21 presentations/publications in international conference proceedings)

Simulation of the combined effects of polymer size, acid diffusion length and EUV secondary electron blur on resist line-edge roughness
D. Drygianakis1, M. D. Nijkerk2, G. P. Patsis1, G. Kokkoris1, I. Raptis1, L. H. A. Leunissen3, and E. Gogolides1
paper 6519-36 SPIE Advances in Resist Materials and Processing Technology XXIV, February 26-28, 2007 (poster)

Stochastic simulation of material and process effects on the patterning of complex layouts
D. Drygianakis1, N. Tsikrikas1, G. P. Patsis1, G. Kokkoris, I. Raptis1, E. Gogolides
paper 6518-115, SPIE Metrology Inspection and Process Control for Microlithography XXI, February 26-March 1, 2007 (poster)

Correlation length and the problem of Line Width Roughness
V. Constantoudis, G. P. Patsis, and E. Gogolides
paper 6518-57, SPIE Advances in Resist Materials and Processing Technology XXIV, February 26-28, 2007 (oral)

Plasma processing for fabrication and modification of pmma microfluidics
N. Vourdas, K. Kontakis, A. Tserepi, E. Gogolides
EIPBN-2007, Denver Colorado, USA, May 29 - June 1, 2007, PO-5

Modeling of deep Si nano-structure etching by neutral beams
G. Kokkoris, A. Tserepi, E. Gogolides
16th International Colloquium on Plasma processes, June 4-8 2007, Toulouse, France.

Modelling of nano-roughness formation during plasma etching of silicon surfaces
Nanoplasma – nanoscale plasma etching: simulation of the profile evolution of high aspect ratio features
Plasma Etching and Stripping in Microelectronics (PESM07), Leuven, Belgium, 10-11 September 2007

Plasma etching of thin and ultra-thin polymeric films probed with in situ spectroscopic ellipsometry
N. Vourdas, G. Kokkoris, E. Gogolides
Plasma Etching and Stripping in Microelectronics (PESM07), Leuven, Belgium, 10-11 September 2007

Plasma processing in microfluidics fabrication
N. Vourdas, K. Kontakis, A. Tserepi, E. Gogolides
Micro&Nano Engineering 2007 (MNE07), Copenhagen, Denmark, 23-26 September 2007

Etching performance of thin polymeric and photoresist films
N. Vourdas, G. Kokoris, E. Gogolides
AVS07, Seattle, USA, 14-19 October 2007

Protein patterning through selective fluorocarbon plasma-induced deposition on silicon
P. Bayiati, A. Tserepi, P. S. Petrou, S. E. Kakabakos, E. Matrozos, E. Gogolides
11th International Conference on Miniaturized Systems for Chemistry and Life Sciences, 7 - 11 October 2007, Paris, France

Mechanisms of nano-roughness formation and evolution in plasma etching: application to si etching (poster)
G. Kokkoris, V. Constantoudis, G. Mpoulousis, P. Angelikopoulos, E. Gogolides
1st International Workshop on Plasma Etch and Strip in Microelectronics, September 10-11, Leuven, Belgium

Polymeric and molecular glass resist models for stochastic lithography simulation (invited talk)
G. P. Patsis, D. Drygiannakis, I. Raptis, E. Gogolides
5th IISB Lithography Simulation Workshop, September 28 – 30, 2007 in Hersbruck, Germany

High density plasma silicon oxide thin films grown at room temperature
M.-E. Vlachopoulou, P. Dimitrakis, A. Tserepi, V. Em. Vamvakas, S. Koliopoulou, P. Normand, E. Gogolides, D. Tsoukalas
Micro&Nano Engineering 2007 (MNE07), Copenhagen, Denmark, 23-26 September 2007

Oriented spontaneously formed nanostructures on poly(dimethylsiloxane) films and stamps treated in o2 plasmas (poster)
K. Tsougeni, G. Boulousis, E. Gogolides, A. Tserepi
Micro&Nano Engineering 2007 (MNE07), Copenhagen, Denmark, 23-26 September 2007

Plasma processing in fabricating nano-textured, super-hydrophobic polymeric coatings
N. Vourdas, M.-E. Vlachopoulou, A. Tserepi, E. Gogolides
EURO-INTERFINISH 2007, Athens, Greece, 18-19 October 2007

Processing for polymeric microfluidic fabrication: electrokinetic studies in pmma
N. Vourdas, A. Tserepi, P.S. Petrov, S.E. Kakabakos, E. Gogolides
5th International Conference on Instrumental Methods of Analysis (IMA07), Rio, Patras, Greece, September 30-October 4 2007
A method for biomolecular microarray fabrication via selective fluorocarbon plasma-induced deposition
P. Bayiati, A. Tserepi, P. S. Petrou, S. E. Kakabakos, E. Matrozos, E. Gogolides
5th International Conference on Instrumental Methods of Analysis (IMA07), Rio, Patras, Greece, September 30-October 4 2007

Control of nano-topography and wetting properties of polymers: application in pmma and pdms
N. Vourdas, M.-E. Vlachopoulou, A. Tserepi, E. Gogolides
Third International Conference on Micro- Nanoelectronics, Nanotechnology and MEMs, Athens, Greece, 18 – 21 November 2007

Hydrophobic plasma deposited fluorocarbon films as a means for biofluid transport and selective adsorption of biomolecules on lab-on-a-chip devices
P. Bayiati, A. Tserepi, P. S. Petrou, S. E. Kakabakos, E. Matrozos, D. Goustouridis, K. Misiakos, E. Gogolides
Third International Conference on Micro- Nanoelectronics, Nanotechnology and MEMs, Athens, Greece, 18 – 21 November 2007

Plasma nanostructuring of pdms surfaces and its effects on protein adsorption (poster)
Maria-Elena Vlachopoulou, Panagiota Petrou, S. Kakabakos, A.Tserepi, E.Gogolides
Third International Conference on Micro- Nanoelectronics, Nanotechnology and MEMs, Athens, Greece, 18 – 21 November 2007

2006 (12 presentations/publications in international conference proceedings)

Modeling of Roughness Evolution and Instability during Si Plasma Etching
P. Angelikopoulos, V. Constantoudis, G.Kokkoris, G. Mpoulousis, P. Xidi, E. Gogolides
53rd AVS Symposium, San Francisco, November 12-17, 2006

Super-hydrophobic transparent polymer surfaces fabricated by plasma etching and deposition
N. Vourdas, M.-E. Vlachopoulou A. Tserepi, E. Gogolides
53rd AVS Symposium, San Francisco, November 12-17, 2006

Electrowetting-based fluidic transport on hydrophobic fluorocarbon films deposited in plasma
P. Bayiati, A. Tserepi, P. S. Petrou, K. Misiakos, S. E. Kakabakos, E. Gogolides, C. Cardinaud
5th International Electrowetting Meeting, 31 May- 2 June 2006, University of Rochester, New York, USA

Biofluid transport on hydrophobic plasma deposited fluorocarbon films
P. Bayiati, A. Tserepi, P. S. Petrou, S. E. Kakabakos, K. Misiakos, E. Gogolides, C. Cardinaud
32nd International Conference on Micro- and Nano-Engineering, 17-20 September 2006, Barcelona, Spain

Photosensitive Poly-dimethylsiloxane (PDMS) materials for Microfluidic Applications
K. Tsougeni,A. Tserepi, E. Gogolides
32nd International conference of Micro- and Nano- Engineering, Barcelona Spain, Sept. 2006

A novel process for irreversible bonding of PDMS and PMMA substrates
M.E. Vlachopoulou, A. Tserepi, K. Misiakos
32nd International Micro and Nanoengineering, Sept. 2006, Barcelona Spain, Sept 2006

Nanostructuring of PDMS surfaces: Dependence on casting solvents
M.E. Vlachopoulou, A. Tserepi, K. Beltsios, G. Boulousis, E. Gogolides
32nd International Micro and Nanoengineering, Sept. 2006, Barcelona Spain, Sept 2006

Line-width roughness analysis of EUV resists after development in homogenous CO2 solutions using CO2 compatible salts (CCS) by a three-parameter model
Constantoudis, V., Gogolides, E., Patsis, G.P., Wagner, M., DeYoung, J., Harbinson, C.
Integrated simulation of Line-Edge Roughness (LER) effects on Sub-65 nm transistor operation: From lithography simulation, to LER metrology, to device operation

Patsis, G.P., Constantoudis, V., Gogolides, E.


Monolithic silicon optoelectronic devices for protein and DNA detection

Misiakos, K., Petrou, P., Kakabakos, S.E., Vlachopoulos, M., Tserepi, A., Gogolides, E.


Anomalous scaling behaviour in the kinetic roughening of etched surfaces

V. Constantoudis, P. Xydi, G. Kokkoris, H. Zakka, P. Angelikopoulos, G. Boulousis and Evangelos Gogolides

Dynamic Days Conference, Crete, Greece September 27-29 2006

Effects of Lithography Nonuniformity on Device Electrical Behavior. Simple Stochastic Modeling of Material and Process Effect on Device Performance

G. P. Patsis, V. Constantoudis, and E. Gogolides,

Poster 11th International Conference on Computational Electronics IWCE: 25-27 May 2006, Technical University of Wien Austria

2005 (19 presentations/publications in international conference proceedings)

Characterization and modeling of Line Width Roughness (LWR)

Constantoudis, V., Gogolides, E., Roberts, J., Stowers, J.K.


Characterization and Modeling of Line Width Roughness (LWR)

V. Constantoudis, E. Gogolides


Invited Panel Presentation: Metrology – Characterization and Simulation of Line Edge Roughness

E. Gogolides, V. Constantoudis, G.P. Patsis

SEMATECH Workshop on Resist Line Edge Roughness (27th February 2005)

Electron-beam lithography simulation for EUV mask applications

Patsis, G.P., Glezos, N.


Plasma Etching Fabrication Of Pmma-Based Microfluidic Devices For Bioanalytical Applications


Effects of model polymer chain architectures on the self-affine-characteristics of dissolving photopolymer films

G.P. Patsis, N. Tsikrikas, E. Gogolides

In Proceedings of 3rd International Symposium on Nanofacturing (ISNM), Limassol-Cyprus, November 3-5, 2005

Combined Metrology and Simulation of imprinted photopolymer lines/ spaces.

G.P. Patsis, N. Tsikrikas, V. Constantoudis, E. Gogolides

In Proceedings of 3rd International Symposium on Nanofacturing (ISNM), Limassol-Cyprus, November 3-5, 2005

Mechanisms of Nano-Roughness Formation on Plasma Etched surfaces
Design of PDMS surfaces with controlled nano-texturing and wettability
Tserepi, K. Tsougeni, G. Boulousis, V. Constantoudis, E. Gogolides
In Proceedings of 3rd International Symposium on Nanofacturing (ISNM), Limassol-Cyprus, November 3-5, 2005

Molecular resists based on novel polycarbocycle derivatives
MNE 2005

Effects of model polymer chain architectures and molecular weight of photoresists on line-edge roughness. Monte Carlo Simulations
G.P. Patsis, E. Gogolides
MNE 2005

Micro- and nano-structuring of polydimethylsiloxane for production of superhydrophobic surfaces
M.E. Vlachopoulou, A. Tserepi, P. Bayiati, E. Gogolides
MNE 2005

Monolithic silicon optoelectronic transducers and elastomeric fluidic modules for bio-spotting and bio-assay experiments
MNE 2005

Line Edge nano-roughness nad surface nano-texture resulting from patterning processes: A blessing or a curse? (Invited presentation)
E. Gogolides, V. Constantoudis, G.P. Patsis, A. Tserepi
MNE 2005

Material and processing impact on thermal propeties of thin resist films for high resolution lithography
J.H. Tortai, S. Marceau, G. Karadimos, N. Vourdas, E. Gogolides, I. Raptis, K. van Werden
MNE 2005

Simulation of deep etching of silicon structures for MEMS fabrication
G. Kokkoris, P. Papassimakis, E. Gogolides, and A. Tserepi
International Conference on micro and nano-Engineering (MNE) 2005, Vienna, Austria, September 19-22.

Simulation of deep reactive ion etching of silicon (Bosch process)
G. Kokkoris, P. Papassimakis, E. Gogolides, and A. Tserepi
15th International Colloquium on Plasma Processes (CIP 05), Grenoble, France, June 6 – 9, 2005.

Mechanisms of roughness formation during plasma etching
V. Constantoudis, G. Kokkoris, A. Tserepi, and E. Gogolides
15th International Colloquium on Plasma Processes (CIP 05), Grenoble, France, June 6 – 9, 2005.

Fractal structures in nanoelectronics
V. Constantoudis, G.P. Patsis, A.Tserepi, K.Tsougeni, G.Boulousis, E.Valamontes and E. Goggolides

2004 (10 presentations/publications in international conference proceedings)

Toward a complete description of linewidth roughness: a comparison of different methods for vertical and spatial LER and LWR analysis and CD variation
Vassilios Constantoudis, George P. Patsis, Leonardus H. Leunissen, Evangelos Gogolides

Effects of different processing conditions on line-edge roughness for 193-nm and 157-nm resists
Monique Ercken, Leonardus H. Leunissen, Ivan Pollentier, George P. Patsis, Vassilios Constantoudis, Evangelos Gogolides

Material origins of line-edge roughness: Monte Carlo simulations and scaling analysis
George P. Patsis, Vassilios Constantoudis, Evangelos Gogolides

Determining the impact of statistical fluctuations on resist line-edge roughness
(Invited talk)
L.H.A. Leunissen, M. Ercken, G. P. Patsis
Micro and Nanoengineering (MNE), Roterdam (2004)

Increased plasma etch resistance of thin polymeric and photoresist films
N. Vourdas, E. Gogolides, A.G. Boudouvis

Line Width Roughness (LWR) metrology, characterization, and simulation: Developing the software tools for understanding, describing, and predicting LER
E. Gogolides, V. Constantoudis, G. P. Patsis
EUVL Workshop 2004, Roterdam, 23/9/04 (Poster).

Effects of polymer chain architecture on film surface and line edge roughness. Monte Carlo Simulations
G. P. Patsis, and E. Gogolides
Microfabrication, Microsystems and Nanotechnology (MNN), Athens, 2004. (Poster).

Plasma etch rate measurements of thin pmma films and correlation with the glass transition temperature
N. Vourdas, A.G. Boudouvis, E. Gogolides
2nd Conference on Microelectronics, Microsystems and Nanotechnology (MMN2004), Athens, Greece, November 15-17, 2004

Patterning of thick polymeric substrates for the fabrication of microfluidic devices
M.E. Vlachopoulou, A. Tserepi, N. Vourdas, E. Gogolides and K. Misiakos
2nd Conference on Microelectronics, Microsystems and Nanotechnology (MMN2004), Athens, Greece, 15-17 November, 2004

Electrowetting of plasma-deposited hydrophobic films as a means for fluid transport in microfluidics
A. Tserepi, P. Bayiati, K. Misiakos, E. Gogolides

2003 (16 presentations/publications in international conference proceedings)

Application of critical ionization model in photopolymer dissolution for the simulation of line edge roughness formation
G. P. Patsis, V. Sarris, and E. Gogolides
157 n.m. Lithography Symposium Belgium, (2003)

Characterization of the quantification of the spatial aspects of line edge roughness
V. Constandoudis, G. P. Patsis and E. Gogolides
157 n.m. Lithography Symposium Belgium, (2003)

A software for quantification of line-edge roughness of photoresists from top-down SEMimage based on scaling and fractal concepts
V. Constandoudis, G. P. Patsis and E. Gogolides

**Polyhedral oligomeric silsesquioxane (POSS) based resist materials for 157-nm lithography**
Evangelia Tegou, Vassilios Bellas, Evangelos Gogolides, Panagiotis Argitis, Kim R. Dean, David Eon, Gilles Cartry, Christophe Cardinaud
Proc. SPIE Vol. 5039, p. 453-461, Advances in Resist Technology and Processing XX;
Theodore H. Fedynysyn; Ed. Jun 2003

**Photoresist line-edge roughness analysis using scaling concepts**
Vasilios Constantoudis, George P. Patsis, Evangelos Gogolides

**Oxygen plasma modification of polyhedral oligomeric silsesquioxane copolymers (POSS-copolymers) for nanolithographic applications**

**Resist plasma etching for 157nm Lithography**

**Selective deposition of fluorocarbon films on surfaces in high density plasmas**
A. Tserepi, P. Bayiati, E. Gogolides, K. Misiakos

**Characterization of the Spatial Aspects of Line Edge Roughness**
V. Constantoudis, G. P. Patsis and E. Gogolides
International SEMATECH Symposium on EUVL lithography, Antwerp Belgium 2003

**Application of critical ionization model in photopolymer dissolution for the simulation of line edge roughness formation**
G. P. Patsis, V. Sarris, and E. Gogolides
International SEMATECH Symposium on EUVL lithography, Antwerp Belgium 2003

**Line Edge Roughness (LER) Investigation on Chemically Amplified Resist (CAR) Materials with Masked Helium Ion Beam Lithography**
S. Eder-Kapl, H. Loeschner, M. Zeininger, O. Kirch, G. P. Patsis, V. Constantoudis, and E. Gogolides
MNE 2003

**Si etching in high-density SF$_6$ plasmas for microfabrication: Surface roughness formation**
E. Gogolides, C. Boukouras, G. Kokkoris, O. Brani, A. Tserepi, V. Constantoudis
MNE 2003

**Polyhedral oligomeric silsesquioxane (POSS) acrylate copolymers for microfabrication: properties and formulation of resist materials**
E. Tegou, V. Bellas, E. Gogolides and P. Argitis
MNE 2003

**Simulation of SiO$_2$ and Si feature etching for microelectronics and MEMS fabrication: a combined simulator coupling modules of surface etching, local flux calculation, and profile evolution**
G. Kokkoris, A. Tserepi, A. G. Boudouvis, and E. Goggolides
AVS 2003

28
Selective Plasma-induced Deposition of Fluorocarbon Films on Metal Surfaces for actuation in microfluidics
P. Bayiati, A. Tserepi, E. Gogolides, K. Misiakos
AVS 2003

2002 (7 presentations/publications in international conference proceedings)

Analysis of top-down SEM images of Resists for Line-Edge Roughness (LER)
Calculations : What are the best descriptors of LER Based on Scaling and Fractal Analysis?
V. Constantoudis , G.P. Patsis, Grozev, Hoffmann, and E. Gogolides
International SEMATECH Symposium on 157nm Lithography 2002

New Silsesquioxane and Siloxane Based Resist Copolymers for 157 nm Lithography
Vasilios BELLAS, Evangelia TEGOU, Ioannis RAPTIS, Evangelos GOGOLIDES and Panagiotis ARGITIS, Evangelia SARANTOPOULOU , Constantinos CEFALAS, David EON, Gilles CARTRY and Christophe CARDINAUD
International SEMATECH Symposium on 157nm Lithography 2002

Fabrication of suspended membranes for thermal sensors using high-density plasma etching
Angeliki Tserepi, C. Tsamis, Evangelos Gogolides, A. G. Nasiopoulou

Resist process issues related to the glass transition changes in thin conventional and chemically amplified resist films
MNE 2002

Resist process issues related to the glass transition temperature changes in chemically amplified resist films
MNE 2002

Roughness analysis of lithographically produced nanostructures: off-line measurement and scaling analysis
G. P. Patsis, V. Constantoudis, A. Tserepi, and E. Gogolides, Grozdan Grozev, and T. Hoffmann
MNE 2002

Evaluation of new siloxane and silsesquioxane copolymers for 157nm lithography
EIPBN 2002

2001 (4 presentations/publications in international conference proceedings)

Plasma etching of Si-containing polymers for 193-157 nm lithography
A.Tserepi, G. Cordoyiannis, E.S.Valamontes, I. Raptis E. Gogolides, D. Eon, M.C. Peignon, Ch. Cardinaud, and G. Turban

Roughness Characterization in positive and negative resists
V. Constantoudis, E. Gogolides, A. Tserepi et al.
MNE 2001

Surface modification of Si-Containing polymers during etching for bilayer lithography
D. Eon, L. de Poucques, M.C. Peignon, Ch. Cardinaud, G. Turban, A. Tserepi, G. Cordoyiannis, E.S. Valamontes, I. Raptis, E. Gogolides
MNE 2001

He$_2$ 60-90 photon source for investigating photodissociation dynamics of potential X-UV resists
A.C. Cefalas, E. Sarantopoulou, P. Argitis, E. Gogolides
MNE 2001

2000 (11 presentations/publications in international conference proceedings)

Ultra fine resolution analysis assisted by chemically amplified resists (Invited)
P. Argitis, E. Sarantopoulou, E. Gogolides, A. C. Cefalas

Surface and line-edge roughness in plasma-developed resists
Tserepi, E. S. Valamontes, E. Tegou, I. Raptis and E. Gogolides
MNE 2000, Jena, Germany

Simulation of surface and line-edge roughness formation in resists
G. P. Patsis and E. Gogolides
MNE 2000

Simulation of fluorocarbon plasma etching of SiO2 structures
G. Kokkoris, E. Gogolides and A. G. Boudouvis
MNE 2000

Surface and line-edge roughness in solution and plasma developed negative tone resists: Experiment and simulation
Patsis, G.P.; Tserepi, A.; Raptis, I.; Glezos, N.; Gogolides, E.; Valamontes, E.S
EIPBN 2000, Santa Clara.

Epoxidized novolac resist (EPR) for high-resolution negative- and positive-tone electron beam lithography
Evangelia Tegou, Evangelos Gogolides, Panagiotis Argitis, Ioannis Raptis, George P. Patsis, Nikos Glezos, Zoilo C. Tan, Kim Y. Lee, Phuong T. Le, Yautzung Hsu, Michael Hatzakis

Simulation of the formation and characterization of roughness in photoresists
G. P. Patsis, V. Constantoudis, and E. Gogolides
1st Microelectronics Microsystems and Nanofabrication Conference, Athens 2000

Simulation of Si and SiO$_2$ feature etching in fluorocarbon plasmas
George Kokkoris, Evangelos Gogolides and Andreas G. Boudouvis
1st Microelectronics Microsystems and Nanofabrication Conference, Athens 2000

F$_2$ laser (157 nm) lithography: materials and processes

F$_2$ laser (157 nm) lithography: materials and processes
Microelectronics, Micromachining and Nanofabrication Conference, November 20-22nd, Athens 2000

Photoresist polymeric materials for 157 nm photolithography
Sarantopoulou E., Cefalas A.C., Gogolides E., Argitis P.
1999 (3 presentations/publications in international conference proceedings)

**Absorbance and Outgasing of Photoresist Polymeric Materials and Nylon 6.6 for 157 nm Lithography (invited)**
Cefalas, E. Sarantopoulou, E. Gogolides, P. Argitis
Interface '99 Proceedings, 14-16 November 1999, San Diego, California, USA, pp 197-205, 1999

**Absorbance and outgasing of photoresist polymeric materials for UV lithography below 193 nm including 157 nm lithography**
Cefalas, A.C.; Sarantopoulou, E.; Gogolides, E.; Argitis, P.
MNE 1999, Rome, Italy

**SiO2 and Si etching in fluorocarbon plasmas: coupling of a surface model with a profile evolution simulator**
Kokkoris, G.; Gogolides, E.; Boudouvis, A.G.
MNE 1999

1998 (2 presentations/publications in international conference proceedings)

**SiO2 and Si etching in fluorocarbon plasmas: a detailed surface model coupled with a complete plasma and profile simulator**
E. Gogolides, P. Vauvert, Y. Courtin, G. Kokkoris, R. Pelle, A. Boudouvis, and G. Turban
MNE 1998

**Positive-tone e-beam lithography with surface silylation of negative-tone commercial photoresists SAL 601 and AZPN 114 and EPR**
E. Tegou, E. Gogolides, P. Argitis and Z. Cui,
MNC 1998, Japan

1997 (6 presentations/publications in international conference proceedings)

**Etch Resistance Enhancement and absorbance optimization with polyaromatic compounds for the design of 193nm Photoresists**
Argitis, M.A. Vasilopoulou, E. Gogolides, E. Tegou, M. Hatzakis, Z. Kollia, and A.C. Cefalas
MNE 1997

**Silylation of Epoxy functionalised Photoresists for Optical, E-beam Lithography and Micromachining applications**
E. Tegou, E. Gogolides, P. Argitis, A. Boudouvis, and M. Hatzakis
MNE 1997

**Complete Plasma Physics, Plasma Chemistry and Surface Chemistry Simulation of SiO2 and Si etching in CF4 plasmas**
E. Gogolides, P. Vauvert, A. Rhallabi, and G. Turban
MNE 1997

**Highly Anisotropic Silicon and Polysilicon room-temperature etching using fluorine-based high density plasmas**
Tserepi, E. Gogolides, C. Cardinaud, L. Rolland, and G. Turban
MNE 1997

**A synthetic approach to RF plasma modeling verified by experiments: demonstration of a predictive and complete plasma simulator (Invited Paper)**
Gogolides, E.
Dry Process Symposium 1997

**A complete plasma physics, plasma chemistry and surface chemistry simulator used for deposition and etching of thin films (Invited talk)**
1996 (6 presentations/publications in international conference proceedings)

Thermal and Thermomechanical Analysis of micrometer thick photoresist films for microelectronic process development
E. Tegou, E. Gogolides, M. Hatzakis

Surface Silylation and oxygen plasma etching of epoxidised novolac photoresists for microlithographic applications
E. Gogolides, E. Tegou, A. Armaou, P. Argitis, A. Boudouvis, M. Hatzakis

Radio Frequency (RF) plasmas used for the fabrication of submicron structures: Experiments and modelling (Invited paper)
E. Gogolides, E.

A synthetic and consistent approach in modeling Plasma Physics, Plasma Chemistry and Surface interactions
E. Gogolides

Thermal analysis of photoresists in aid of lithographic process development
Tegou, E.; Gogolides, E.; Hatzakis, M.
MNE 1996

Wet silylation and oxygen plasma development of photoresists: A mature and versatile lithographic process for microelectronics and microfabrication
EIPBN 1996

1995 (2 presentations/publications in international conference proceedings)

Highly anisotropic silicon reactive ion etching for nanofabrication with flourine only containing gases
Grigoropoulos, S.; Gogolides, E.; Nasiopoulos, A.G.

Thermal and mechanical analysis of photoresist and silylated photoresist films:
application to AZ 5214™
Gogolides, E.; Tegou, E.; Beltsios, K.; Papadokostaki, K.; and others.
MNE 1995

1994 (3 presentations/publications in international conference proceedings)
A new method which increases the Si content in wet silylation, and its relation to the
thermal effects during O\textsubscript{2} plasma development
Gogolides, E.; Tzevelekis, D.; Yannakopoulou, K.; Hatzakis, M.
MNE 1994

Highly anisotropic room-temperature sub-half-micron Si reactive ion etching using
fluorine only containing gases
Gogolides, E.; Grigoropoulos, S.; Nassiopoulos, A.G.
MNE 1994

CH\textsubscript{4} discharge simulation
E. Gogolides, H.H. Sawin, and others
Gaseous Electronics Conferences 1994

1993 (1 presentations/publications in international conference proceedings)

Lithographic evaluation of a new wet silylation process using safe solvents and the
commercial photoresist AZ 5214E
Gogolides, E.; Baik, K.H.; Yannakopoulou, K.; Van den hove, L.; and others.
MNE 1993

1992 (2 presentations/publications in international conference proceedings)

Wet silylation and dry development with the AZ 5214 photoresist
Gogolides, E.; Tsoi, E.; Nassiopoulos, A.G.; Hatzakis, M.
EIPBN 1992

Continuum modeling of plasma processes
Sawin H. H., Gogolides E.

1988-1991 (5 presentations/publications in international conference proceedings)

Continuum modeling of plasma processes
Sawin, Herbert H.; Gogolides, Evangelos

Continuum modeling of RF glow discharges
Sawin, H.H.; Gogolides, E.
(Dry Processing for Submicrometer Lithography, Santa Clara, CA, USA, 12-13 Oct.

Comparison of experimental measurements and model predictions for radio-frequency
Ar and SF\textsubscript{6} discharges
Gogolides, E.; Nicolai, J.-P.; Sawin, H.H.
AVS 1988
Gaseous Electronics Conferences 1988, 1989 E. Gogolides, H.H. Sawin
PRESENTATIONS IN GREEK CONFERENCES/PROCEEDINGS SINCE 2003

2010 (1 presentation/publication in Greek Conference Proceedings)

Micro-fabricated TiO2-ZrO2 affinity chromatography chip on poly(methyl methacrylate) (PMMA) substrates for phosphopeptide analysis
K. Tsougeni, P. Zerefos, A. Tserepi, A. Vlahou, S. Garbis, E. Gogolides
7th Aegean Analytical Chemistry Days (AACD2010), Mytilene, Lesvos, 29 September - 03 October 2010

2009 (1 presentation/publication in Greek Conference Proceedings)

The role of gate width in transistor performance: Effects of gate sidewall roughness (oral)
V. Constantoudis, G.P. Patsis, E. Gogolides

2008 (3 presentations/publications in Greek Conference Proceedings)

Monte Carlo modeling of micro and nano-roughness evolution during the etching of inhomogeneous films: Material origins of anomalous scaling behavior (oral)
V. Constantoudis, H. Christogianni, H. Zakka and E. Gogolides

Wetting, Optical Property and Protein adsorption Control of Polymer Surfaces by Plasma Nanotexturing (poster)
7th Hellenic Polymer Conference: September 28 – October 1 2008, Ioannina, Greece

Periodic nanodot formation on polymers with plasmas: Towards plasma-directed polymer self-assembly? (poster)
D. Kontziampasis, N. Vourdas, G. Boulousis, V. Constantoudis, A. Tserepi, E. Gogolides
7th Hellenic Polymer Conference: September 28 – October 1 2008, Ioannina, Greece

2007 (4 presentations/publications in Greek Conference Proceedings)

Διεργασίες πλάσματος για την κατασκευή νανο-δομημένων, υπέρ-υδρόφοβων πολυμερικών επιφάνειων
Ν. Βούρδας, Μ.-Ε. Βλαχοπούλου, Α. Τσερέπη, Ε. Γογγόλιδης
6ο Πανελλήνιο Επιστημονικό Συνέδριο Χημικής Μηχανικής, Αθήνα, 31 Μαΐου-2 Ιουνίου 2007, σελ. 225-228

Nano-textured polymer surfaces with controlled wetting and optical properties using plasma processing
N. Vourdas, M.-E. Vlachopoulou, A. Tserepi, V. Constantoudis, G. Boulousis, E. Gogolides
4th International Workshop on Nanosciences & Nanotechnologies (NN07), Thessaloniki, Greece, 16-18 July 2007

Evaluation of polymers containing ketal or ecetal groups in the backbone as candidate photoresist components
T. Manouras, A.M. Douvas, V.P. Vidali, M. Chatzichristidi, N. Vourdas, E. Gogolides, E.A. Couladouros, P. Argitis
Νανοτραχύτητα κατά την εγχάραξη με πλάσμα επιφανειών $\text{Si}$ και πολυμερών: θεωρία, πείραμα και εφαρμογές
Μ. Βλαχοπούλου, Ν. Βούρδας, Γ. Κόκκορης, Β. Κωνσταντούδης, Γ. Μπουλούσης, Α. Τσερέπη, Ε. Γογγόλιδης
XXIII Πανελλήνιο Συνέδριο Φυσικής Στερεάς Κατάστασης και Επιστήμης των Υλικών, Αθήνα (2007)

2006 (8 presentations / publications in Greek Conference Proceedings)

Fabrication of super-hydrophobic, water repellent pmma surfaces by plasma processes
N. Vourdas, A. Tserepi, E. Gogolides
6th Panhellenic Conference on Polymers, ELEP, Patras, Hellas, 3-5 November 2006

Thermal characterization of thin supported polymer films via interferometry and spectroscopic ellipsometry
N. Vourdas, G. Karadimos, D. Goustouridis, E. Gogolides, A.G. Boudouvis, K. Beltsios, I. Raptis
6th Panhellenic Conference on Polymers, ELEP, Patras, Hellas, 3-5 November 2006

A novel microfabrication technology for plastic sensors formation
XXII Πανελλήνιο Συνέδριο Φυσικής Στερεάς Κατάστασης & Επιστήμης Υλικών, Πάτρα, 24-27 Σεπτεμβρίου 2006

Control of Poly(dimethylsiloxane) surface wetting properties from very hydrophilic to super-hydrophobic by tuning surface topography in $\text{O}_2$ plasmas
Katerina Tsougeni, Angeliki Tserepi, George Boulouis and Evangelos Gogolides
6ο Πανελλήνιο Συνέδριο Πολυμερών, Πάτρα 3-5 Νοεμβρίου 2006

Surface Silylation of Epoxidized Polymers for Micromachining Applications
D. Kontziampasis, K. Beltsios, E. Tegou, E. Gogolides
6ο Πανελλήνιο Συνέδριο Πολυμερών, Πάτρα 3-5 Νοεμβρίου 2006

Stochastic modeling of roughness formation during etching of composite materials
E. Zakka, V. Constantoudis, E. Gogolides
XXII Πανελλήνιο Συνέδριο Φυσικής Στερεάς Κατάστασης & Επιστήμης Υλικών, Πάτρα 2006

Πολυαιμεθυμηκές στικλέκον ως δομικό και λειτουργικό υλικό χρωματογραφικής μικροτήτης
Α.Μαλαίνου, Μ.Ε Βλαχοπούλου, Α Τσερέπη, Σ. Χαντζανδρούλης
XXII Πανελλήνιο Συνέδριο Φυσικής Στερεάς Κατάστασης & Επιστήμης Υλικών, Πάτρα 2006

Metallization using an epoxy resist and lift-off process for microsystem fabrication
D. Kontziampasis, E. Gogolides
XXII Πανελλήνιο Συνέδριο Φυσικής Στερεάς Κατάστασης & Επιστήμης Υλικών, Πάτρα 2006.

2005 (4 presentations / publications in Greek Conference Proceedings)

Plasma Treatment Of Polymers For Bioanalytics (in greek)
N. Vourdas, A. Tserepi, M. Vlachopoulou, E.Gogolides

New Nanocomposite materials. Thermomechanical characterization and morphology studies after $\text{O}_2$ plasma treatment
Mechanisms of roughness formation during plasma etching
V. Constantoudis, A. Tserepi, G. Boulosis, P. Papasimakis and E. Gogolides
Proceedings of 2nd Panhellenic Conference on Solid Physics and Material Science, Nicosia, August 2005

Nanoscale Roughness measurements (Μετρήσεις τραχύτητας στην νανοκλίμακα)
V. Constantoudis, G. Patsis, E. Gogolides
1st Panhellenic Conference on Metrology, Athens, November 2005

2004 (5 presentations / publications in Greek Conference Proceedings)

Characterization of the roughness of structures and surfaces through SEM and AFM images
V. Constantoudis, G.P. Patsis, E. Gogolides, A. Tserepi, E. Valamontes, and O. Brani

Modification of the morphology of Si-contained polymer surfaces after plasma treatment
A. Tserepi, V. Constantoudis, G. Cordoyiannis, E. Valamontes, N. Vourdas and E. Gogolides

Fractal structures in nanoelectronics (poster) Βραβείο καλύτερου poster
V. Constantoudis, E. Gogolides, and others
Conference “Complexity in Science and Society” Patras, July 2004

Fractal polymer surfaces after lithographic processing
V. Constantoudis et al.
XX Panhellenic Conference on Solid State and Materials Science”, Ioannina September 2004

Profile evolution during SiO2 and deep Si feature etching
G. Kokkoris, A. G. Boudouvis, and E. Gogolides

2003 (4 presentations / publications in Greek Conference Proceedings)

Profile evolution with the level-set method: application to the etching of structures in microelectronics and micromechanics
G. Kokkoris, E. Gogolides, A.G. Boudouvis

Simulation of dissolution of copolymers of acrylic acid in basic solutions with stochastic models
V. A. Sarris, G. Patsis, E. Gogolides, A.G. Boudouvis

Characterization of the roughness of structures and surfaces from SEM and AFM images
G. P. Patsis, V. Constantoudis, and E. Gogolides

Modification of the surface morphology of Si-containing polymers by means of plasma processing in O2 plasmas
Mevlidi Tserepi, V. Constantoudis, G. Cordoyiannis, E. Valamontes, N. Vourdas, and E. Gogolides

1992-2002 (many more than 12 presentations / publications in Greek Conference Proceedings, complete records are NOT available)

Μελέτη μορφοκλασματικών χαρακτηριστικών επιφανειακής τραχύτητας φωτοπολυμερών
Β. Κωσταντούδης, Γ. Π. Πάτης και Ε. Γογγολίδης
Πανελλήνιο Συνέδριο Πολυπλοκότητας και μη Γραμμικής Δυναμικής, Πάτρα (2002)
(OΜΙΛΙΑ)

Μελέτη επιφανειών με θεωρίες κλιμάκωσης
Β. Κωσταντούδης, Γ. Π. Πάτης και Ε. Γογγολίδης
Πανελλήνιο Συνέδριο Πολυπλοκότητας και Κρίσιμων Φαινομένων, Πάτρα (2001)
(OΜΙΛΙΑ)

Πολυβινυλική αλκοόλη, οξίζος εστέρας της πολυβινυλικής αλκοόλης και
συμπολυμερεία αυτών ως φωτοευαίσθητα πολυμερή υλικά Μικρολιθογραφίας με
αυξήμενη αντοχή στο πλάσμα
Ε.Τέγου, Ε. Γογγολίδης, Π. Αργείτης, Κ. Κεφαλάς, Α. Μπουντουβής
2ο Πανελλήνιο Επιστημονικό Συνέδριο Πολυπλοκότητας και Μη Γραμμικής Δυναμικής, Θεσσαλονίκη 27-29 Μαίου 1999, σελ. 733-736.

Κατεργασία εποξειδωμένων Πολυμερών με πλάσμα οξυγόνου για εφαρμογές στην
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