



# Margarita Chatzichristidi

Lecturer of Industrial Chemistry

## Education

B. Sc. in Physics, University of Ioannina (1997)

M.Sc. in Polymer Science and Technology, U.M.I.S.T., U.K. (1999)

Ph. D. in Microelectronics, University of Athens and NCSR "Demokritos" (2004)

Post Doctoral Studies in the Development of Micro-Nano Fabrication Technology for Applications in Magnetic Devices based on Nanowires, University of Patras and NCSR "Demokritos" (2005-2006)

Post Doctoral Studies in Flexible Electronics, Cornell University, USA (2007-2008)

## Research Field of Interest

Characterization and evaluation of polymeric materials for micro- and nano-lithography, photoresists, self-assembling systems for unconventional lithographic approaches

Design, fabrication and characterization of microdevices including protein microarrays, high aspect ratio micromachining and sensors.

Patternable materials for flexible electronics.

## Teaching

### Undergraduate:

7221-Special Topics in Polymer Science

729-Physical Industrial Processes

### Graduate:

Use of Polymers in Cutting Edge Technology

## Book Authorship

### Papers 2008-2009

M. Chatzichristidi, I. Rajta, Th. Speliotis, E. Valamontes, D. Goustouridis, P. Argitis, I. Raptis "Aqueous base developable - easy stripping, high aspect ratio negative photoresist for optical and proton beam lithography" *Microsyst. Technol.* **14** 1423 (2008)

C. Christides, Th. Speliotis, M. Chatzichristidi, I. Raptis "Large asymmetries of magnetoresistance loops in Co-line structures" *Microelectron. Eng.* **85** 1382 (2008)

M. Chatzichristidi, E. Valamontes, P. Argitis, I. Raptis, J.A. van Kan, F. Zhang, F. Watt "High-aspect-ratio micro/nano machining with proton beam writing on aqueous developable - easily stripped negative chemically amplified resists" *Microelectron. Eng.* **85** 945 (2008)

P. Theodoni, P. Bayiati, M. Chatzichristidi, Th. Speliotis, V. Em. Vamvakas, I. Raptis, N. Papanikolaou "Efficient Infrared Emission from Periodically Patterned Thin Metal Films on a Si Photonic Crystal" *Microelectron. Eng.* **85** 1112 (2008)

E. Sarantopoulou, Z. Kollia, M. Chatzichristidi, A. Douvas, P. Argitis, S. Kobe, A.C. Cefalas, "Dynamics and laser processing of functional fluoride organic surfaces at VUV wavelengths", *J. Laser Micro/Nanoengineering*, **3** 24 (2008)

C. Christides, Th. Speliotis, M. Chatzichristidi and I. Raptis, "Magneto-transport properties of  $[\text{Co/Bi}]_n$  wire structures", *J. Magn. Mater.*, **320** e720 (2008)

A.A. Zakhidov, J.K. Lee, H.H. Fong, J.A. DeFranco, M. Chatzichristidi, P. Taylor, C.K. Ober and G.G. Malliaras, "Hydrofluoroethers as orthogonal solvents for the chemical processing of organic electronic materials", *Adv. Mater.* **20** 3481 (2008)

J.K. Lee, M. Chatzichristidi, A. Zakhidov, J.A. DeFranco, P.G. Taylor, H.H. Fong, G.G. Malliaras, C.K. Ober, "Acid-sensitive semiperfluoroalkyl resorcinarene: An imaging material for organic electronics", *J. Am. Chem. Soc.* **130** 11564 (2008)

E. Valamontes, M. Chatzichristidi, N. Tsirikas, D. Goustouridis, I. Raptis, J.A. van Kan, F. Watt "Realization and simulation of high aspect ratio micro/nano structures by proton beam writing" *Jpn. J. Appl. Phys.* **47**(11) 8600 (2008)

P. Theodoni, V.Em. Vamvakas, Th. Speliotis, M. Chatzichristidi, P. Bayiati, I. Raptis, N. Papanikolaou, "Efficient infrared emission from patterned thin metal films on a Si photonic crystal", *Phys. Status Solidi A* **205** (11) 2581 (2008)

P.G. Taylor, J.-K. Lee, A.A. Zakhidov, M. Chatzichristidi, H.H. Fong, J.A. DeFranco, G.G. Malliaras, and C.K. Ober, "Orthogonal Patterning of PEDOT:PSS for Organic Electronics using Hydrofluoroether Solvents", *Adv. Mater.* **21** (22) 2314 (2009)

J.K. Lee, M. Chatzichristidi, A.A. Zakhidov, H.S. Hwang, E.L. Schwartz, J. Sha, P.G. Taylor, H.H. Fong, J.A. DeFranco, E. Murotani, W.W.H. Wong, G.G. Malliaras, and C.K. Ober, "Acid-Diffusion Behaviour in Organic Thin Films and its Effect on Patterning", *J. Mater. Chem.* **19** (19) 2986 (2009)

P. Pavli, P.S. Petrou, D. Niakoula, A. M Douvas, M. Chatzichristidi, S. E Kakabakos, D. Dimotikali, P. Argitis, "Chemical binding of biomolecules to micropatterned epoxy modified surfaces for biosensing applications", *Microelectron. Eng.* **86** (4-6) 1473 (2009)

C. Christides, Th. Speliotis, M. Chatzichristidi, I. Raptis, "Large magnetoresistance in  $[\text{Co}(1\text{nm})/\text{Bi}(2.5\text{nm})]_{10}$  line structures", *Microelectron. Eng.* **86** (4-6) 1050 (2009)

Th. Speliotis, P. Athanasopoulos, M. Chatzichristidi, D. Niarchos, "Tailoring Exchange Bias in Magnetic Nanostructures", *Microelectron. Eng.* **86** (4-6) 1063 (2009)

J.-K. Lee, P.G. Taylor, A.A. Zakhidov, H.H. Fong, H.S. Hwang, M. Chatzichristidi, G.G. Malliaras, and C.K. Ober, "Orthogonal Processing: A

novel photolithographic patterning method for Organic Electronics”, *J. Photopolym. Sci. Technol.* **22**, 565 (2009)

E. Murotani, J.-K. Lee, M. Chatzichristidi, A.A. Zakhidov, P.G. Taylor, E.L. Schwartz, G.G. Malliara, and C.K. Ober, “Cross-linkable molecular glasses: low dielectric constant materials patternable in hydrofluoroethers”, *Appl. Mater. Interf.* **1** 2363 (2009)

**Contact**

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