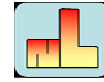


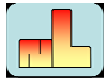
2nd Spanish Workshop on Nanolithography



Campus de la Universitat Autònoma de Barcelona, Bellaterra, Barcelona

TECHNICAL PROGRAM

Monday, November 10th, 2008		
Session 1: Electron and Ion Beam Lithography (Topic A)		
15:15 – 16:00	Plenary: “Projection mask-less patterning (PMLP): key to flexible and cost-effective nano-system fabrication” H. Loeschner. IMS. Viena.	EXHIBITION
16:00 – 16:30	Invited: “Determination of fundamental parameters governing focused electron beam induced deposition” I. Utke. ETH Zurich	
16:30 – 16:45	Oral 1: “Exploring the conduction in atomic-sized metallic constrictions created by focused-ion-beam (FIB) etching” J.M. de Teresa. ICMA-CSIC. Zaragoza.	
16:45 – 17:00	Oral 2: “Record quality factor on photonic crystal microcavities fabricated by electron-beam lithography and reactive ion etching” P.A. Postigo. IMM-CSIC. Madrid	
17:00 – 18:00	Poster session	Demonstration
18:00 – 20:00	Visits to CIN2 (ICN-CSIC), CNM, and ICMAB	equipment 1
Tuesday, November 11 th , 2008		
Session 2: Soft lithography and Self Assembly (Topics E,F)		
9:00 - 9:45	Plenary: “Generation of functional nanoparticle structures by templated self-assembly and printing” H. Wolf. IBM. Zurich.	EXHIBITION
9:45– 10:15	Invited: “FIB nanopatterning for SiGe nanostructures self-assembly on Si Substrate” I. Berbezier .IM2NP, CNRS. Marseille. France	
10:15– 10:45	Invited: Lithographically Controlled Growth of Al₂O₃ Membranes: Development of a Tool-box for 1D Nanostructures K.Nielsch. University of Hamburg. Germany.	
10:45– 11:00	Oral 3: “Nanoindentation for the directed self-assembly of oxide nanostructures grown from chemical solutions”. J. Zabaleta. ICMAB-CSIC. Madrid.	
11:00 – 11:15	Oral 4: “Quantifying ordering in self-assembly of colloidal crystals”. C. Sotomayor-Torres. ICN & ICREA. Bellaterra	
11:15 – 11:45	Poster Session & Coffee Break	
Session 3: Scanning Probe Lithography (Topic B)		
11.45 – 12:15	Invited: “Prospects and challenges of probe lithography” P. Vettiger. IBM. Zurich	EXHIBITION
12:15 – 12.45	Invited: “Dip pen nanolithography” Daniel Maspoch. CIN2 (ICN-CSIC). Bellaterra.	
12:45 – 13:00	Oral 5: “Silicon nanowire transistors with a channel width of 4 nm fabricated by atomic force microscope nanolithography” J. Martínez. IMM-CSIC. Madrid	
13:00 – 13.15	Oral 6: “Lithographically electrochemical step edge decoration” A. García. UB. Barcelona	
13.15 – 13:30	Oral 7: “Recent Instrumentation Developments for SPM-based Nanolithography” P. de Wolf. Veeco Instruments, Dourdan, France.	
13:30 -13.45	Oral 8: “Controlling the Number of Protein Entities Written by Dip-Pen Nanolithography” E. Bellido (CIN2, ICN-CSIC)	
13:45 – 14:00	Oral 9: “Instrumental advancements in Dip Pen nanolithography” Lot Oriel	
14.00 – 15:15	Lunch	



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Session 4: Nanoimprint Lithography (Topic C)		
15.15 – 15:45	Invited: “Nanoimprint lithography: challenges, components and prospects” N. Kehagias. ICN-CIN2. Bellaterra	EXHIBITION
15:45 – 16:15	Invited: “Visualization of mold filling in thermal nanoimprint” H. Schiff. PSI. Switzerland.	
16:15- 16:30	Oral 10: “Protein patterning on the micro and nanoscale by thermal nanoimprint lithography and functionalization of polymers” V. Trabaledo. Tekniker. Eibar.	
16:30 – 16:45	Oral 11: “Optical and acoustic metrology for nanoimprint lithography” T. Kehoe (ICN-CIN2). Bellaterra.	
16.45 – 17.15	Oral 12: “Novel hybrid polymer to fabricate transparent working stamps for UV-Imprint” A. Klukowska. Microresist Technology. Berlin.	
17.15 – 17:45	Posters and coffee break	Demonstration equipment 2
17.45-19.30	Poster session & exhibition	
21:00	Conference Dinner	

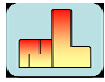
Wednesday, November 12th, 2008

Session 5: Emerging Nanopatterning Methods (Topics D)		
9:00 - 9:45	Plenary: “Stencil lithography” Juergen Brugger. EPFL. Lausanne.	EXHIBITION
9:45– 10:15	Invited: “Structure and assembly of metal-organic molecules investigated by STM” Pietro Gambardella. CIN2 (ICN-CSIC) and ICREA. Bellaterra.	
10:15 – 10:45	Oral 13: “Nanoscale deposition of single-molecule magnets onto SiO₂ patterns” . R. Garcia. IMM-CSIC. Madrid.	
10:45 – 11:00	Oral 14: “Lithography guided growth of Si nanowires for the fabrication of nanoelectromechanical systems” A. San Paulo. IMB-CSIC. Bellaterra.	
11:00 – 11:15	Oral 15: “Template directed synthesis of La_{0.3}Sr_{0.7}MnO₃ nanostructures grown by chemical solution deposition” A. Carretero (ICMAB-CSIC). Bellaterra	
11:15 – 11:45	Poster Session	

Session 6: Resists (Topic G)		
11.45 – 12:15	Invited: “New pyrrol functional polymethacrylates and block copolymers for nanolithography” D. Mecerreyes. CIDETEC. San Sebastián	

Session 7: Electron and Ion beam lithography II (Topic A)		
12.15 – 12:30	Oral 16: “Nanofabrication processes in magnetic oxide thin films” LL. Balcells. ICMAB-CSIC. Bellaterra	EXHIBITION
12:30 – 12:45	Oral 17: “Magnetization reversal processes of epitaxial Fe nanowires prepared by different lithographic techniques” . E. Paz. IMM-CSIC. Madrid	
13:00 – 13.15	Oral 18: “Focused ion beam machining of complex patterns and large volumes” O. Wilhelmi. FEI. Eindhoven	
13.15 – 13:30	Oral 19: “Fabrication of interdigitated nano-electrodes” I. Fernández-Cuesta. IMB-CSIC.	
13:30 – 13.45	Oral 20: “Magnetic properties of cobalt nanodeposits created by focused electron beam deposition” . A. Fernández-Pacheco. INA. Zaragoza.	
13.45 – 14:00	Oral 21: “Applications of ion beam lithography in a two-beam SEM/FIB system” F. Pérez-Willard. Zeiss. Oberkochen	





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13.45 – 15:15	Lunch	
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Session 8: Tutorials		
15:15-19:00		Demonstration equipment 3

POSTERS

Electron and ion beam lithography

Transport in nano rings and wires in graphene and III-V's.

M. Amado

Universidad de Salamanca, 37008 Salamanca, Spain

TEM sample preparation of superconducting materials by FIB: a Focused Insight from Barcelona

A. Benedetti

ICMAB, CSIC, Bellaterra, Barcelona, Spain

Growing up magnetic nanostructures by EBL using double layer resist method and characterization by AFM and magneto optical SNOM.

A. Hierro-Rodríguez,

Departamento de Física, Universidad de Oviedo, Av. Calvo Sotelo, 33007 Oviedo, Spain.

Superconducting properties of W-based focused-ion-beam-induced nanodeposits

M.R. Ibarra

Instituto de Ciencia de Materiales de Aragón, Universidad de Zaragoza-CSIC, Facultad de Ciencias, Zaragoza, 50009, Spain

Single-nanowire based sensing devices

Roman Jimenez-Diaz

EME/XaRMAE/IN2UB, Departament d'Electrònica, Universitat de Barcelona, C/ Martí i Franquès 1, Barcelona, E-08028, Spain

Fine control of charged beam induced deposition

J.Llobet

Centre Nacional de Microelectrònica (CNM-IMB CSIC)

Structural and transport properties of Pt nanodeposits created by focused-electron/ion-beam-induced deposition

R. Córdoba

Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, 50009, Spain

Transport properties of individual Bi nanowires contacted by Dual Beam

N. Marcano

Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza 50009, Spain

Three dimensional nano-patterned devices for vertical transport measurements in YBCO thin films

A. Palau

Institut de Ciència de Materials de Barcelona-CSIC, 08193 Bellaterra, Spain

Flux Line Lattice and Nanopattern Defects Interaction in $YBa_2Cu_3O_{7-d}$ Superconductors

R.F. Luccas

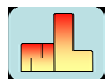
Institut de Ciència de Materials de Barcelona, C.S.I.C., Campus de la UAB, 08193 Bellaterra, Spain.

3D micro and nanostructuring of an epoxy based resist by electron beam lithography

G. Rius

Instituto de Microelectrònica de Barcelona. Centro Nacional de Microelectrònica (CNM-IMB, CSIC)





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Electron and ion beam-based patterning for the fabrication of nanodevices

G. Rius

Institut de Microelectrònica de Barcelona (CNM-IMB, CSIC)

The FIB lift-out method for TEM analysis of Fe(001) thin films

S. Sangiao

Instituto de Nanociencia de Aragón, Zaragoza, 50009, Spain

Micro and nanolithography techniques at the Parc Científic de Barcelona and the possibility to interact with biological structures at different size scales

M.J. López-Bosque

Nanotechnology Platform, Parc Científic de Barcelona,

Baldiri Reixac 10-12, 08028 Barcelona, Spain

Specimen preparation with dual beam system for transmission electron microscopy of various semiconductor heterostructures

P. Štrichovanec

Instituto de Nanociencia de Aragón, Universidad de Zaragoza, Zaragoza, 50009, Spain

Electron beam lithography for the fabrication of magnetic nanowires and nanoconstrictions

J. Vincenc Oboña

Inst. Universitario de Nanociencia de Aragón, Pedro Cerbuna 12, 50009 Zaragoza, Spain

Scanning probe lithography

2D Parallel Dip-Pen Nanolithography

Carlos Carbonell

Nanostructured Functional Materials Group, Centro de Investigación en Nanociencia y Nanotecnología (CIN2, ICN-CSIC), Campus UAB, 08193, Bellaterra.

Site control of InAs quantum dots on GaAs(001) substrates patterned by local oxidation atomic force microscopy nanolithography

J. Herranz

Instituto de Microelectrónica de Madrid, C/Isaac Newton 8 (PTM) 28760 Tres Cantos, Spain

Local contact surface potential on switched states $La_{1-x}Sr_xMnO_{3-y}$ thin films by scanning Kelvin probe force microscopy

C. Moreno

Institut de Ciència de Materials de Barcelona ICMAB-CSIC, 08193 Bellaterra

Nanostructuring of polymers using AFM

G. Rius

Instituto de Microelectrónica de Barcelona (CNM-IMB, CSIC) Bellaterra, España

Electro-Nanopatterning in Two Different Substrates: Si (100) and Azo Containing Polymer

I. Zalakain

'Materials + Technologies' Group, Dept. of Chemical and Environmental Engineering, Univ. Of Basque Country (EHU / UPV), Plaza Europa 1, 20018, Donostia- San Sebastian, (Spain)

Nanoimprint lithography

V-groove plasmonic waveguides fabricated by NanoImprint Lithography

I. Fernandez-Cuesta

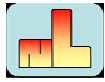
Centro Nacional de Microelectrónica (CNM-IMB, CSIC)

Nanofluidic device fabricated by nanoimprint lithography for DNA stretching applications

S. Merino

Fundación Tekniker. Eibar. 20600 Spain





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Overview on nanoimprinted polymeric photonic crystals

V. Reboud

Catalan Institute of Nanotechnology, Campus de Bellaterra, Edifici CM7, ES 08193 – Barcelona, Spain

Embossing an array of perfectly ordered pillars in cyclo olefin copolymer for liquid chromatography applications

X. Illa

EME / IN²UB, Electronics Department, Universitat de Barcelona, Martí i Franquès 1, 08028 Barcelona, Spain

Development of a UV-NIL process for photosensitive PEG

I. Obieta

Fundación Inasmet, Pº Mikeletegi 2, 20009 San Sebastián, Spain

Self assembly and soft lithography

Gas-phase soft-lithography for direct patterning of silanes at the nanometre scale

A. Chamorro-García

Departamento de Micro- y Nanosistemas, Instituto de Microelectrónica de Barcelona (CNM-IMB, CSIC)
Campus UAB 08193, Bellaterra, Barcelona

Following the selective growth of MOFs on patterned substrates by Scanning Force Microscopy

C. Munuera

Institut de Ciència de Materials de Barcelona (CSIC), Cerdanyola, Spain

Combined Scanning Probes investigation of SAM-based heterogeneously functionalized surfaces

M. Paradinas

Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)
Bellaterra 08193, Barcelona, Spain

pH-Responsive molecular fluorescent nanoarrays fabricated by nanolithographic techniques

Alberto Martínez-Otero

Instituto Catalán de Nanotecnología, Edificio CM7, Campus UAB, 08193 Cerdanyola del Vallés, Spain

Patterning polymeric structures with 2 nm resolution at 3 nm half-pitch in ambient conditions

Ricardo García

Instituto de Microelectrónica de Madrid, CSIC. Isaac Newton 8, 28760 Tres Cantos, Madrid

Parallel local oxidation of silicon surfaces by rigid and soft stamps

Nuria S. Losilla

Instituto de Microelectrónica de Madrid, CSIC. Isaac Newton 8, 28760 Tres Cantos, Madrid

Boron delta doping layers as templates for deposition of Ge quantum dots on Si

I.C. Marcus

Institut de Ciència de Materials de Barcelona (ICMAB)
Consejo Superior de Investigaciones Científicas (CSIC)
Bellaterra 08193, Barcelona, Spain

Templates development in Si homoepitaxy by MBE

M. Alonso

Instituto de Ciencia de Materiales de Madrid (CSIC). Cantoblanco, E-28049 Madrid, Spain.

Resists

Hydrogen Silsesquioxane for e-Beam Lithography on Au Layer

F. Torres

Instituto de Microelectrónica de Madrid CSIC, C/ Isaac Newton 8, 28760 Tres Cantos, Madrid.

