

SCIENTIFIC PROGRAMME - TNT2009

Monday - September 07, 2009

08h00-09h00	REGISTRATION	
09h00-09h10	TNT2009 Opening Ceremony - Welcome and Introduction	
"Nanomagnetism" Session – Sponsored by CIC nanoGUNE (Spain) Chairman: Andreas Berger (CIC nanoGUNE, Spain)		
09h10-09h50	Stuart Parkin (IBM, USA) <i>"Racetrack Memory: a storage class memory based on current controlled magnetic domain wall motion"</i>	I
09h50-10h20	Tom Thomson (University of Manchester, UK) <i>"The Search for Tbits/in²: Understanding the Fundamentals of Nanomagnetism"</i>	K
10h20-10h50	Paulo Freitas (IST, Portugal) <i>"Spintronic devices for biomolecular and biomedical applications"</i>	K
10h50-11h20	Coffee Break - Poster Session A- Instrument Exhibition	
Chairman: Robert Baptist (CEA-MINATEC, LETI, France)		
11h20-12h00	Masakazu Aono (MANA, NIMS, Japan) <i>"Single-molecule-level control of local chemical reactions for molecular nanowiring and ultradense data storage"</i>	I
12h00-12h30	Tsuyoshi Hasegawa (MANA - NIMS, Japan) <i>"New functions achieved by an atomic switch"</i>	K
12h30-12h45	Micha Polak (University of the Negev, Israel) <i>"A Remarkable Nano-Confinement Effect on Chemical Equilibrium: From Nucleotide Dimer Formation in Molecular Cages to Deuterium Exchange Reactions on Interstellar Dust Grain Surfaces"</i>	O
12h45-13h15	Christian Joachim (CEMES-CNRS, France) <i>"From Hybrid to Mono-molecular logic gates"</i>	K
13h15-15h15	Lunch	
"Nanobiotechnology" Session – Sponsored by IBEC/UB (Spain) Chairman: Josep Samitier (IBEC/UB, Spain)		
15h15-15h45	Francois Rossi (JRC, Italy) <i>"Protein interaction with nanostructured surfaces"</i>	K
15h45-16h15	Christophe Vieu (LAAS, France) <i>"Assembling a biological nanomotor on a nano-engineered surface"</i>	K
16h15-16h45	Tomaso Zambelli (ETH Zurich, Switzerland) <i>"FluidFM: combining AFM and nanofluidics in a novel tool for single-cell experiments and beyond"</i>	K
16h45-17h00	Laura Fumagalli (IBEC/UB, Spain) <i>"Quantitative nanoscale dielectric microscopy of thin films and biomembranes at low frequencies"</i>	O
17h00-17h15	Alekber Kasumov (Universite Paris-Sud, France) <i>"Defects and Conductivity of DNAs"</i>	O
17h15-17h30	Dominique Vuillaume (IEMN-CNRS, France) <i>"A nanoparticle organic memory field-effect transistor behaving as a programmable spiking synapse"</i>	O
17h30-20h00	Coffee Break - Poster Session A- Instrument Exhibition	
21h30	WELCOME RECEPTION	

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Tuesday - September 08, 2009

Chairman: Roberto Otero (UAM, Spain)

08h30-09h00	Masahiko Hara (Tokyo Institute of Technology, Japan) <i>"AFM Studies of Single Molecular Detection and Molecular Recognition"</i>	K
09h00-09h30	Peter Grutter (McGill University, Canada) <i>"Filling of Few Electron Quantum Dots Imaged and Characterized By Scanning Force Microscopy"</i>	K
09h30-10h00	Ruben Perez (Universidad Autonoma de Madrid, Spain) <i>"Imaging, Manipulation and Chemical Identification of Individual Atoms with dynamic Force Microscopy: A theoretical perspective."</i>	K
10h00-10h15	Alain Rochefort (Ecole Polytechnique de Montreal, Canada) <i>"SPAGS-STM, a true high performance tool for in-silico imaging"</i>	O
10h15-11h00	Coffee Break - Poster Session A - Instrument Exhibition	PS

"Nanomagnetism" Session II - Sponsored by CIC nanoGUNE (Spain)

Chairman: Stuart Parkin (IBM, USA)



11h00-11h30	Luis Hueso (CIC nanoGUNE, Spain) <i>"Spintronics with organic semiconductors"</i>	K
11h30-12h00	E. E. Fullerton (UCSD, USA) <i>"Spin transfer torques in high anisotropy magnetic nanostructures"</i>	K
12h00-12h30	Burkard Hillebrands (University of Kaiserslautern, Germany) <i>"Nanomagnetism - a perspective from the dynamic side"</i>	K
12h30-13h00	Claude Chappert (IEF-CNRS, France) <i>"Non volatility and GHz magnetization dynamics in magneto-electronic devices, from memory to logic"</i>	K
13h00-13h15	Xavier Batlle (Universitat de Barcelona, Spain) <i>"Exchange bias in core/shell magnetic nanoparticles: experimental results and numerical simulations"</i>	O
13h15-15h00	Lunch	
15h00-17h00	Parallel Session: "PhD" Parallel Session: Industry (SynergyS).	
17h00-18h00	Coffee Break - Poster Session A - Instrument Exhibition	PS
18h00-19h30	Parallel Session: Cataluña Research I Parallel Session: Cataluña Research II	

REMINDER: Please note that those posters corresponding to Session A must be removed today between 18:00 and 19:30

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Wednesday - September 09, 2009

Chairman: Xavier Cartoixa (Universidad Autónoma de Barcelona, Spain)

08h30-09h00	Roberto Otero (Universidad Autonoma de Madrid, Spain) <i>"Nanoscale Structure of Organic/Metal Interfaces"</i>	K
09h00-09h15	Zorica Konstantinovic (ICMAB-CSIC, Spain) <i>"Nanostructuring and self-assembly in complex oxide thin films"</i>	O
09h15-09h30	Narcís Mestres (ICMAB-CSIC, Spain) <i>"Self organization of chemical solution synthesised oxide nanostructures"</i>	O
09h30-09h45	Alessandro Coati (Synchrotron Soleil, France) <i>"Early stages of growth in the Ag/Ni(111) system"</i>	O
09h45-10h00	Jorge Lobo Checa (Centre d'Investigació en Nanociència i Nanotecnologia (CIN2), Spain) <i>"Electronic confinement and band formation originating from a supramolecular porous network"</i>	O
10h00-11h00	Coffee Break - Poster Session B - Instrument Exhibition REMINDER: Please note that those posters corresponding to Session B must be installed today before 13:00	PS

Chairman: Juan Jose Saenz (UAM, Spain)

11h00-11h40	Pedro Echenique (DIPC, Spain) <i>"Acoustic surface plasmon on a metal surface with adlayers"</i>	I
11h40-12h10	Antonio Garcia (IMM-CNM-CSIC, Spain) <i>"Intertwined effects in nanostructures with simultaneous plasmonic and magneto-optic properties"</i>	K
12h10-12h40	Vincent Reboud (Catalan Institute of Nanotechnology, Spain) <i>"Two-dimensional nanoimprinted photonic crystals for laser applications"</i>	K
12h40-12h55	Geoffroy Lerosey (LOA - Institut Langevin, France) <i>"Controlling the phase and amplitude of plasmon sources at a subwavelength scale"</i>	O
13h00-15h00	Lunch	

Chairman: Antonio Garcia (IMM-CNM-CSIC, Spain)

15h00-15h30	Yia-Chung Chang (Academia Sinica, Taiwan) <i>"Optical metrology and Nanophotonics"</i>	K
15h30-16h00	Javier Aizpurua (CFM-CSIC / DIPC, Spain) <i>"Interactions in optical nanoantennas for field-enhanced spectroscopy and microscopy"</i>	K
16h00-16h30	Niek van Hulst (ICFO - Institute of Photonic Sciences, Spain) <i>"Nanoscale Control of Single Photon Emitters by Optical Nano-Antennas and Tailored fs Pulses"</i>	K
16h30-16h45	Yutaka Wakayama (National Institute for Materials Science, Japan) <i>"Molecular nanowire with pi-stacking structure for opto-electronic applications"</i>	O
16h45-17h00	Vincenzo Palermo (ISOF, Italy) <i>"Solar cells and thin film transistors based on perylene-functionalized polymers"</i>	O
17h00-17h40	Federico Capasso (Harvard University, USA) <i>"Wave front engineering using metamaterials"</i>	I
17h40-18h30	Coffee Break - Poster Session B - Instrument Exhibition	PS

Chairman: David Jiménez (Universidad Autónoma de Barcelona, Spain)

18h30-19h00	Akira Fujiwara (NTT Basic Research Laboratories, Japan) <i>"Si-based single-electron devices"</i>	K
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19h00-19h15	Alvaro San Paulo (Instituto de Microelectrónica de Barcelona, Spain) <i>"Si nanowires for ultra-high performance nanoelectromechanical systems"</i>	O
19h15-19h30	Albert Romano-Rodriguez (Universitat de Barcelona, Spain) <i>"Nanodevices based on individual nanowires: fabrication strategy, device properties, device integration and guidelines for future work"</i>	O
21h00	CONFERENCE DINNER	
00h00	POSTER AWARDS CEREMONY	

SCIENTIFIC PROGRAMME - TNT2009		
Thursday - September 10, 2009		
Chairman: Stephan Roche (CIN2, Spain & CEA-INAC, France)		
13h00-13h40	Sumio Iijima (Meijo University, Japan) <i>"Nanoscience and nanotechnology of nano-carbon materials"</i>	I
13h40-14h10	Jean-Christophe Charlier (University of Louvain, Belgium) <i>"Ab initio Quantum Transport in Carbon Nanostructures"</i>	K
14h10-14h40	Marc Bockrath (CalTech, USA) <i>Title to be confirmed</i>	K
14h40-15h10	Coffee Break - Poster Session B - Instrument Exhibition	
Chairman: Jose-Luis Costa Kramer (IMM-CSIC, Spain)		
15h10-15h50	Uzi Landman (Georgia Institute of Technology, USA) <i>"Small is different: emergent physics and chemistry at surfaces and interfaces"</i>	I
15h50-16h20	Michael R. Berman (Air Force Office of Scientific Research, USA) <i>"Toward an Understanding of the Reactivity and Properties of Nanoparticles"</i>	K
16h20-16h50	Herve Dietsch (University of Fribourg, Switzerland) <i>"Synthesis and Characterization of Functionalized Nanoparticles and their Use in Nanocomposites with Tailored Properties"</i>	K
16h50-17h20	Christoph Weder (Case Western Reserve University, USA) <i>"Mechanically adaptive polymer nanocomposites"</i>	K
17h20-17h50	Constantine Yannouleas (Georgia Inst. of Tech, USA) <i>"Artificial few-electron single and molecular quantum dot in low magnetic fields: Electronic spectra, spin configurations, and Heisenberg cluster"</i>	K
17h50-18h05	Ben Ern� (Utrecht University, Netherlands) <i>"Quantifying Colloidal Nanoparticle Interactions in Liquid Environment by Cryogenic Electron Microscopy"</i>	O
18h05-19h30	Coffee Break - Poster Session B - Instrument Exhibition	
REMINDER: Please note that those posters corresponding to Session B must be removed today between 18:00 and 19:30		

SCIENTIFIC PROGRAMME - TNT2009

Friday - September 11, 2009

"Nanotubes & Graphene " Session – Sponsored by GDR-I (France)

Chairman: Jean-Christophe Charlier (University of Louvain, Belgium)



08h30-09h00	Vincent Derycke (CEA Saclay, France)	K
	<i>"Dynamic Performances of Carbon Nanotube Transistors and Programmable Devices for Adaptive Architectures"</i>	
09h00-09h30	Annick Loiseau (LEM - ONERA, France)	K
	<i>"Optical properties of individual Boron Nitride Nanotubes"</i>	
09h30-09h45	Cristina Gomez-Navarro (Universidad Autonoma de Madrid, Spain)	O
	<i>"Chemically derived graphene: electronic and mechanical properties"</i>	
09h45-10h00	Ernesto Joselevich (Weizmann Institute of Science, Israel)	O
	<i>"Self-Organization of Complex Carbon Nanotube Patterns Directed by Crystal Surfaces"</i>	
10h00-10h15	Zhao Wang (EMPA, Switzerland)	O
	<i>"Deformation of nanotubes/graphene by a transverse electric field"</i>	
10h15-10h30	Douglas Galvao (State University of Campinas, Brazil)	O
	<i>"The Discovery of the Smallest Metal Nanotube with a Square Cross-Section"</i>	
10h30-11h00	Coffee Break	

"Nanotubes & Graphene " Session II – Sponsored by GDR-I (France)

Chairman: Annick Loiseau (LEM - ONERA, France)



11h00-11h15	Francesco Mercuri (University of Perugia, Italy)	O
	<i>"Modeling of low-dimensional carbon nanostructures: an efficient approach based on chemical criteria"</i>	
11h15-11h45	Stephen Purcell (Université Claude Bernard Lyon1, France)	K
	<i>"Growing a Carbon Nanotube Atom by Atom: "And Yet it Does Turn""</i>	
11h45-12h15	Toshiaki Enoki (Tokyo Institute of Technology, Japan)	K
	<i>"Unconventional electronic and magnetic structures of edge states in nanographene"</i>	
12h15-12h45	Kazuhito Tsukagoshi (NIMS, Japan)	K
	<i>"Band-gap modulation in gated bilayer graphene"</i>	
12h45-13h15	Adrian Bachtold (CIN2(CSIC-ICN), Spain)	K
	<i>"Nanotube and Graphene ElectroMechanics"</i>	
13h15-13h45	Andrea C. Ferrari (University of Cambridge, UK)	K
	<i>"Nanotube and Graphene-Based Polymer Optoelectronics"</i>	
13h45-14h00	CLOSING REMARKS & TNT2010 ANNOUNCEMENT	