NANOMATERIALS

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Carbon- and/or nitrogen-containing thin films and nanomaterials

This symposium is focused on Carbon and/or Nitrogen containing thin films and nano-materials. The objective is to provide an exchange platform for scientists, engineers and students dealing with the synthesis, characterization and application of these materials. Experimental and theoretical papers as well as industrial contributions are welcome.

Scope:

Carbon or nitrogen containing thin films and nano-materials offer a wealth of structures based on metastable phases, nanocomposites or nanosized multilayers and low-dimensional structures which allow various properties such as optical, optoelectronic, magnetic, electrical and mechanical ones. Metastable films can consist on plasma polymers, diamond-like carbon or CNx phases while nanocomposite can be tailored by adding either metallic or non-metallic elements with various Carbon or Nitrogen affinity in amorphous or crystalline matrixes. Finally, nitride and carbon-based low-dimensional structures such as flakes, tubes,… can be functionalized by appropriate chemical functionalities to be integrated in a composite material or to be used as building part in a nanomachine. The objective of this symposium is to highlight the progresses in fundamental and applied issues related to the development of these materials and to bridge the gap between science and technology. Among others, Carbon or Nitrogen containing films or composites materials consisting on nanocrystalline particles embedded in an inorganic and/or organic matrix, including plasma polymers, will be considered. On the other hand, nanolaminated structures such as MAX-phases are also in the scope of this symposium. Finally, we also aim to address Carbon and Nitrogen based low-dimensional structures unembedded or not in a matrix.

Contributions investigating plasma composition – material structure - films property – relationships by experimental and theoretical means will be considered. The foreseen contributions will belong to one of these categories: (i) films synthesis by advanced processes, such as high power impulse magnetron sputtering, atmospheric plasma processes, and hybrid techniques, (ii) mechanical, tribological, thermal, electrical, optical, optoelectronic and magnetic properties, biomedical compatibility, and correlations

between these properties and deposition parameters, structure or films' composition, (iii) process modeling and diagnostic, surface interaction and nucleation phenomena, investigation of degradation mechanisms e.g. phase and microstructure stability under different environments and coating-substrate interdiffusion, (iv) engineering-oriented contributions including automotive, chemical, electrical, optical, magnetic/optical data storage, pharmaceutical or biomedical applications, and emerging applications as in energy systems.

Hot topics to be covered by the symposium:

- Novel fabrication and synthesis routes in physical and (plasma enhanced) chemical vapor deposition.
- Advances in controlled growth of nanocomposite thin films and nanostructured materials.
- Plasma treatment and synthesis of low dimensional Nitrogen and Carbon based low dimensional structures including their characterizations.
- Diagnostics providing insight into the growth process and resulting material properties.
- Modeling of growth processes and film properties.
- Degradation mechanisms linked to phase and microstructure stability and interdiffusion.
- Multifunctional coatings with advanced applications in tribology, optics, data storage, (bio)sensing and emerging technologies.
- Development of methods for characterization of nanomaterials.
- Biomedical and pharmaceutical applications of coated materials.

List of confirmed invited speakers:

- T. Belmonte (Institut Jean Lamour, University of Lorraine, Nancy, France): Advanced processes for plasma synthesis of nanostructures.
- A. Cavaleiro (University of Coimbra, Portugal): Plasma assisted PVD processes for the fabrication of nitride and carbide functional materials.
- V. Chirita (Linköping University, Linkoping Sweden): Computational studies (DFT and MD) dedicated to thin film growth and materials properties.
- P.-L. Girard-Lauriault (McGill University, Montreal, Canada): Recent advances in Nirogen-Rich Plasma Polymer Films.
- F. Reniers (Chani, ULB, Belgium): Atmospheric pressure plasma for the synthesis of functional plasma polymer films.
- A. Manakhov (National University of Science and Technology, Moscow, Russia): Multifunctional bioactive nanostructured thin films for biomedical applications.

- E. Neyts (University of Antwerp, Antwerp, Belgium): Modeling and simulating dynamic processes in reactive systems at the atomic and molecular scale.
- M. Quintana (University of San Luis Potosi, San Luis Potosi, Mexico): Utilization of carbon-based nanoparticles in biomedical applications.
- E. Sardella (Instituto di Metodologie Inorganiche e dei Plasmi, CNR, Bari, Italy): Polymeric films and nanomaterials.
- A. Vladescu (National Institute for Optoelectronics, Bucharest, Romania): Multifunctional coatings with advanced applications in energy-relevant fields.

Scientific committee:

G. Abadias (France), J. Baranowska (Poland), M. Braic (Romania), A. Cavaleiro (Portugal), V. Craciun (Romania), U. Cvelbar (Slovenia), A. Gonzalez-Elipe (Spain), D. Hegemann (Switzerland), P. Kelires (Cyprus), S. Konstantinidis (Belgium), O. Kylian (Czech Republic), N.B. Laidani (Italy), F. le Normand (France), E. Lewin (Sweden), C. Mitterer (Austria), F. Palumbo (Italy), P. Patsalas (Greece), I. Petrov (USA), T. Polcar (UK/Czech Republic), N. Radic (Croatia), G. Radnoczi (Hungary), K. Sarakinos (Sweden), J.M. Schneider (Germany), D. Shtansky (Russia), M. Stueber (Germany), S. Tamulevicius (Lithuania), P.-Y. Tessier (France), V.V. Uglov (Belarus), J. Vlček (Czech Republic)

Publication:

The symposium proceedings will be published in the journal ***"Thin Solid Films" (Elsevier Ltd.)*** after a standard peer-review processing.

The deadline for submissions of the proceedings in Thin Solid Films has been fixed the **15/08**. The link is as follow: http://ees.elsevier.com/tsf/default.asp

To ensure that all manuscripts are correctly identified for inclusion into the special issue, it is important that you select '**VSI: EMRS 2018 – Symposium L***'* when you reach the "Article Type" step in the submission process.

START AT	SUBJECT	View All	NUM.	ADD
12:00	*Lunch*			

START AT	SUBJECT	View All	NUM.	ADD
	C-based nanostructures I : Quintana Mildred			
13:30	Atomistic Modeling of Carbon Nanostructures: Challenges and Opportunities		**L.1.1**	☆
14:00	One-pot synthesis of composites from carbon nanotubes and quantum dots through heteroaggregation		**L.1.2**	☆
14:15	Bandgap Engineering in Graphene through interfacing nanoribbons at the surface – a DFT study.		**L.1.3**	☆
14:30	Synthesis of nitrogen-rich nanotubes and utilization to hybrid full-cell capacitors		**L.1.4**	☆
14:45	Boron, Nitrogen Co-Doped Graphene Sheets Grown by Chemical Vapor Deposition: Synthesis and Influence of Gas pressure		**L.1.5**	☆
15:00	Graphene Coating Generation by the Electrochemical and Femtosecond Laser-Assisted Reduction of Graphene Oxide		**L.1.6**	☆
15:15	Internal photoemission of electrons from monolayer graphene into SiO2		**L.1.7**	☆

START AT	SUBJECT View All	NUM.	ADD
15:30	Dynamics of nitrogen-doped graphene growth through nickel catalyst, investigated by in situ XPS	**L.1.8**	☆
15:45	Breaking the Electrical Barrier between Copper and Carbon Nanotubes	**L.1.9**	☆
16:00	*Coffee*		
16:30	Study on fabrication, characterization and performance of CNT films	**L.1.10**	☆
16:45	Fe Phthalocyanine Derivative Modified Carbon Electrodes for High Performance Oxygen Reduction Reaction	**L.1.11**	☆

Modelling : Jean-François Pierson

17:00	From Ab-Initio Design to Synthesis of Multifunctional Coatings with Enhanced Hardness and Toughness	**L.2.1**	☆
17:30	Electronic structure tuning of Graphene/VS2 heterostructures	**L.2.2**	☆

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START AT	SUBJECT	View All	NUM.	ADD
17:45	Ab Initio Study of Ambient Gases Reacting with Amorphous Carbon		**L.2.3**	☆
18:00	Electronic and vibrational properties of 3D MAX phases and 2D MXenes: from experiments to first-principles modelling		**L.2.4**	☆
18:15	Probing Local Absorption in Carbon-Metal Nanocomposites through First-Principles Calculations		**L.2.5**	☆

START AT	SUBJECT	View All	NUM.	ADD
	Bio applications : Hegemann Dirk			
08:30	PLASMA DEPOSITION OF LONG-LASTING HYDROPHILIC AND MULTIFUNCTIONAL FREE STANDING COATINGS		**L.3.1**	☆
09:00	Antibacterial thin films with tailorable release of antibacterial agents		**L.3.2**	☆
09:15	Biomedical Applications of Hexagonal Boron Nitride		**L.3.3**	☆

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START AT	SUBJECT View All	NUM.	ADD
09:30	Graphene nanoplatelets-sericin surface-modified Gum alloy for improved biological response	**L.3.4**	☆
10:00	*Coffee*		

Nitrides I : Pierson Jean-François

10:30	Influence of the Si content in SiCN:H thin films deposited by hybrid ECR and rf-PVD on their mechanical and optical properties	**L.4.1**	☆
10:45	Optimization of sputtered ultrathin TiN films for plasmonic application	**L.4.2**	☆
11:00	Nanoscale conformal films of graphitic carbon nitride deposited at room temperature, for construction of heterojunction devices	**L.4.3**	☆
11:15	*Evaluation of applicants for the student awards*		
12:00	*Lunch*		

Hard coatings : Cavaleiro Albano

START AT	SUBJECT View All	NUM.	ADD
13:30	Multifunctional Ti based carbonitride coatings for applications in severe environments	**L.5.1**	☆
14:00	Thermal stability of reactively sputtered HfTaTiVZr high-entropy nitride coatings	**L.5.2**	☆
14:15	Structure and mechanical properties of CrN/S-phase composite coatings	**L.5.3**	☆
14:30	Ultrathin DLC films and its transformation into graphitic films	**L.5.4**	☆
14:45	Micrometer thick DLC coatings on metal substrates by using HIPIMS sputtering of C target in various gas mixtures	**L.5.5**	☆
15:00	Diamond like carbon nanocomposite films with embedded copper nanoparticles deposited by magnetron sputtering for saturable absor	**L.5.6**	☆
15:15	Nanocrystalline diamond films synthesized at low substrate temperature in distributed antenna array microwave system	**L.5.7**	☆

START AT	SUBJECT View All	NUM.	ADD
15:30	Evaluation of DLC coatings for use in watch applications	**L.5.8**	☆
15:45	Optical response of hydrogenated amorphous carbon nanocomposite films with embedded metal (Ag, Cu) nanoparticles	**L.5.9**	☆
16:00	*Coffee*		

Poster session I : Graphene and carbon nanotubes / DLC and organic coatings : Pierson J-F.

16:30	The effect of multilayer PTFE/ organic silicone coatings structure on biotribological properties of their surfaces	**L.11.1**	☆
16:30	Rapid thermal annealing effect on characterizations of CNW by chemical vapor deposition	**L.11.2**	☆
16:30	Magnetic properties of aligned arrays of either carbon nanotubes or silicon nitride nanocones grown by catalytic CVD.	**L.11.3**	☆
16:30	Kinetics of ultrathin DLC transformation into graphitic films	**L.11.4**	☆

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START AT	SUBJECT View All	NUM.	ADD
16:30	Photothermal reduction of chemically exfoliated graphene oxides using intense pulsed light	**L.11.5**	☆
16:30	Scalable synthesis of highly porous graphene with turbostratic stacking by thermal process of graphene oxide sponge	**L.11.6**	☆
16:30	Strong enhancement of emission efficiency in GaN light-emitting diodes by plasmon-coupled light amplification of graphene	**L.11.7**	☆
16:30	Structural and mechanical characterization of amorphous carbon-silicon thin films deposited on stainless steel substrates	**L.11.8**	☆
16:30	Twist-controlled minimum conductivity and shot noise in bilayer graphene junction	**L.11.9**	☆
16:30	Conductivity and Surface Energy of Graphene Depending on the Surface Morphology of Cu Substrate Film Deposited by Sputtering	**L.11.10**	☆
16:30	Novel Synthesis of Size-controlled Single Crystalline Graphene Quantum dots and its photonic behavior	**L.11.12**	☆

START AT	SUBJECT View All	NUM.	ADD
16:30	Investigation of graphene influence on the performance of electrochromic devices	**L.11.13**	☆
16:30	Spectroscopic Manifestation of Intravalley Double Electron-Phonon Resonance Processes in Single- and Bilayer Graphene Systems	**L.11.14**	☆
16:30	CNW/W particles hybrid materials synthesized by plasma techniques	**L.11.15**	☆
16:30	Printability of functional inkjet inks onto commercial inkjet substrates and a taylor made pigmented coated paper	**L.11.16**	☆
16:30	Electrochemical properties of nitrogen-doped graphene for environmental sensors	**L.11.17**	☆
16:30	Effects of additives on atmospheric pressure glide arc applied to the modification of polymers	**L.11.18**	☆
16:30	Nanoscale wettability of plasma deposited carbon nanowall layers, by Scanning Polarization Force Microscopy	**L.11.19**	☆

START AT	SUBJECT View All	NUM.	ADD
16:30	Highly selective and ultrasensitive electrochemiluminescent aptasensor based on β-cyclodextrin/graphitic carbon nitride composit	**L.11.20**	☆
16:30	Molecularly imprinted Electrochemical sensor for brucine based on PoPD/SWNTs composite film	**L.11.21**	☆
16:30	Dielectric thin films for organic transistor technologies	**L.11.22**	☆
16:30	Numerical investigation on deformation-induced damages of graphene in transfer process	**L.11.24**	☆
16:30	Mesoporous carbon films fabrication by Matrix-Assisted Pulsed Laser Evaporation	**L.11.25**	☆
16:30	Synthesis and characterization of materials with combined antifouling and antimicrobial activity	**L.11.26**	☆
16:30	Influences of nitrogen doping on compressive behaviors of open-tip carbon nanocones	**L.11.27**	☆
16:30	Short pulse plasma assisted WCN diffusion barrier for Cu Through Silicon Vias	**L.11.28**	☆

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START AT	SUBJECT	View All	NUM.	ADD
16:30	Influence of deposition parameters on morphology and properties of (C,N)-alloyed stainless steel coatings		**L.11.29**	☆

START AT	SUBJECT	View All	NUM.	ADD

Nitrides II : Vladescu Alina

08:30	Atmospheric pressure plasma for the synthesis of functional plasma polymer films	**L.6.1**	☆
09:00	APCVD growth of multilayered hexagonal boron nitride on Ni-Cu alloys	**L.6.2**	☆
09:15	Novel high-doped BN nanosheets. Electronic and optical engineering.	**L.6.3**	☆
09:30	Critical Layer Thickness Determination Of GaN Thin Films On Sapphire Grown By Hollow-Cathode Plasma-Assisted Atomic Layer Deposi	**L.6.4**	☆
09:45	Tetragonal lattice distortions in multicomponent carbide and nitride thin films	**L.6.5**	☆

START AT	SUBJECT	View All	NUM.	ADD
10:00	*Coffee*			
10:30	Macrostress control in flexible Ti(Al,V)N films		**L.6.6**	☆
10:45	Radiation Induced Effects in Highly Stressed Nanocrystalline ZrN Thin Films		**L.6.7**	☆
11:00	FeCrC amorphous alloys thin films deposited by magnetron sputtering		**L.6.8**	☆
11:15	New nickel nitride (Ni2N) synthesised by reactive magnetron sputtering		**L.6.9**	☆
11:30	In-situ solid lubricant formation on W or Mo based carbide and nitride coatings in lubricated tribo contacts		**L.6.10**	☆
11:45	Optoelectronic properties of GaNAsBi/GaAs strained structures		**L.6.11**	☆
12:00	*Lunch*			

Plasma and polymers : Snyders Rony

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START AT	SUBJECT View All	NUM.	ADD
13:30	Recent Advances in Nitrogen-Rich Plasma Polymer Films	**L.7.1**	☆
14:00	High hardness and water-repellent plasma polymer fluorocarbon thin film deposited by mid-range frequency sputtering	**L.7.2**	☆
14:15	The substrate temperature: a key parameter for tuning the mechanical properties of plasma polymer films	**L.7.3**	☆
14:30	Nanoscopic Conformality and Penetration Depth of Plasma Polymerization onto Electrospun Polycaprolactone Nanofibrous Mat	**L.7.4**	☆
14:45	Highly stabilized amine-functional plasma polymer films thanks to a well-defined vertical gradient nano-architecture	**L.7.5**	☆
15:00	Atomic structure, bonding and morphology of carbyne-containing films: Raman and XPS study	**L.7.6**	☆
15:15	Carbon based planar structures with alternating properties obtained by sequential PECVD/PVD techniques	**L.7.7**	☆

START AT	SUBJECT	View All	NUM.	ADD
15:30	Preparation and photocatalysis properties of uniform MoS2 nanosheets in-situ grown on the surface of graphene thin film		**L.7.8**	☆
16:00	*Coffee*			
16:30	*Plenary*			
17:45	*Awards*			

START AT	SUBJECT	View All	NUM.	ADD
	C-based nanostructures II : Sardella Eloisa			
08:30	Moleculary designed carbon based architectures: A rout towards smart self-assembled materials		**L.8.1**	☆
09:00	Study of anisotropic transport in as-grown and quasi-free-standing epitaxial graphene by terahertz cavity-enhanced optical Hall		**L.8.2**	☆
09:15	Nitrogen-doped carbon nanomaterials for gas sensing and catalysis: a spectroscopic point of view		**L.8.3**	☆

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START AT	SUBJECT	View All	NUM.	ADD
09:30	Nanocarbon shapes matter. A journey to functional composites.		**L.8.4**	☆
09:45	Graphene oxide quantum dots obtained by unfolding fullerene		**L.8.5**	☆
10:00	*Coffee*			
10:30	Highly stretchable organic-inorganic hybrid electrodes prepared by co-sputtering for stretchable and wearable electronics		**L.8.6**	☆
10:45	Charge-transfer between Graphene and Carbon nanodots or small molecules		**L.8.7**	☆
11:00	Tunable Diode Characteristics of Graphene via Al2O3 and DUV irradiations		**L.8.8**	☆
11:15	Carbon nanotubes synthesis using natural limonite laterite as catalyst source		**L.8.9**	☆
11:30	Ultra rapid and ultra efficient microwave synthesis and processing of graphene and MAX phases		**L.8.10**	☆

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START AT	SUBJECT View All	NUM.	ADD
11:45	Holey carbon nanotube-based membrane and its potential application for nanofiltration	**L.8.11**	☆
12:00	*Lunch*		

Composites : Jajickova Lenka

13:30	Ag-containing nanocomposite coatings deposited by magnetron sputtering”	**L.9.1**	☆
14:00	Magnetron sputtered high-temperature Hf-B-Si-X-C-N (X = Y, Ho, Mo, Zr, Ta) films with controlled properties	**L.9.2**	☆
14:15	Nanoscale characterization of mechanical and corrosion wear mechanisms of advanced nanocomposite and biotribological coatings	**L.9.3**	☆
14:30	Deposition and study of superhard multilayer CrN/MoN films for their physical and mechanical properties enhancement.	**L.9.4**	☆
14:45	Mechanical properties and crystallization behavior of nanocarbon/polyamide 6 composites	**L.9.5**	☆

START AT	SUBJECT View All	NUM.	ADD
15:00	Surface Wettability of GO/Acrylic and FLG/Acrylic Nanocomposite Coatings on 3D-Printed PLA Surfaces	**L.9.6**	☆
15:15	Room temperature growth of ZnSnN2 thin films for photovoltaic applications	**L.9.7**	☆
15:30	Green synthesis of silver nanoparticle-reduced graphene oxide composite as SERS and luminescent “turn-off” sensors	**L.9.8**	☆
15:45	METAL OXIDE ANCHORED GRAPHENE-GOLD NANOPARTICLE HYBRID ELECTRODES FOR ENERGY APPLICATIONS	**L.9.9**	☆
16:00	*Coffee*		
	Poster session II : Composites / Nano / Nitrides / Thin films : Zajickova Lenka		
16:30	Engineering Metal–Organic Framework-Derived N-doped Carbon Nanorods towards High-Performance Supercapacitors	**L.12.1**	☆
16:30	Characterization of porous Si:C and SiO2:C layers by EPR technique	**L.12.2**	☆

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START AT	SUBJECT View All	NUM.	ADD
16:30	Color changing pH sensor based on silica film with chemically immobilized indicator dye	**L.12.3**	☆
16:30	Cost-saving preparation and magnetic behavior of nano-Ni@C composite material	**L.12.4**	☆
16:30	Preparation and Magnetic Properties of Carbon Coated Nano-Co Particles	**L.12.5**	☆
16:30	Synthesis of ?-Si3N4 submicron-rods and nanowires from Si(NH)2 powers synthesized by liquid-liquid phase method	**L.12.6**	☆

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START AT	SUBJECT	View All	NUM.	ADD
16:30	Modeling of nitrogen and hydrogen stress assisted diffusion in plasma nitrided austenitic stainless steel		**L.12.7**	☆

Authors : Arvaidas Galdikas, Teresa Moskalioviene
Affiliations : Physics Department, Kaunas University of Technology, Studentu 50, LT-51368 Kaunas, Lithuania.

Resume : The present work studies the internal stress assisted hydrogen and nitrogen diffusion in austenitic stainless steel (ASS) taking place during plasma nitriding using various mixtures of nitrogen and hydrogen. A systematic model for nitrogen transport in ASS that takes into account the hydrogen actions at steel surface and bulk, hydrogen and nitrogen adosbtion and diffusion with concentration dependent diffusion coefficient and stress interaction is proposed. It is shown, that the stress effect on the nitrogen flux should be considered in nitrided ASS because they are subjected to the large internal stress induced by the lattice expansion when hydrogen and nitrogen atoms intrude in the steel matrix. The variation of stress changes the diffusion force, which is the gradient of chemical potential, and affects the interstitials distribution and, consequently, have effects on the nitriding kinetics. Moreover, although these results are obtained from the ASS-nitrogen-hydrogen system, our conclusions can be extended to the diffusion problem of other interstitials in metal alloys. Finally, it was shown, that the addition of hydrogen in H2-N2 mixture flux with concentrations in the range ~ (30 ? 40) % enhances nitrogen penetration into steel due to the hydrogen actions at steel surface. The obtained theoretical results are qualitatively consistent with the available experimental data.

START AT	SUBJECT View All	NUM.	ADD
16:30	Electrical and optical properties of (Zr,Y)N thin films for plasmonic applications	**L.12.8**	☆
16:30	Engineering Metal–Organic Framework-Derived Carbon Submicrorods towards High-Performance Supercapacitors	**L.12.9**	☆
16:30	Light-emitting nano-BN fabricated by direct catalyst-free synthesis under concentrated light	**L.12.10**	☆
16:30	Nitrogen-doped anatase {001}TiO2 hierarchical nanosheets spheres for highly efficient photocatalytic Hydrogen evolution	**L.12.11**	☆
16:30	Microwave vaporization and ionization of the metal/carbon wires with high boiling point	**L.12.12**	☆
16:30	Effect of deformation on phases formation and properties of surface layers in Fe-based alloys under diffusion of N and C	**L.12.14**	☆
16:30	Lanthanum cobaltite LaCoO3 and LaCoO(3-x)Nx produced by magnetron co-sputtering as selective layer for thermal solar collector	**L.12.15**	☆

START AT	SUBJECT View All	NUM.	ADD
16:30	Direct liquid injection chemical vapor deposition of porous tungsten oxycarbide thin films	**L.12.16**	☆
16:30	Application of CAG-functionalised spread-tow carbon fibre electrodes in fuel cells and redox flow batteries	**L.12.17**	☆
16:30	Conductive polymer/carbon composite thin films obtained by pulsed electron beam deposition technique	**L.12.18**	☆
16:30	Wide-angle Gradient-index Antireflective Coating for Polymer Eyeglasses Lens	**L.12.19**	☆
16:30	Nitrogen doped multifunctional carbon encapsulated Fe/Fe3C nanostructures synthesized by one-step pyrolysis	**L.12.20**	☆
16:30	Synthesis by laser pyrolysis and characterization of highly N doped Carbon nanopowders	**L.12.21**	☆
16:30	Optical anisotropy studies of GaN on Si (100) grown by hollow-cathode plasma-assisted atomic layer deposition	**L.12.22**	☆

START AT	SUBJECT View All	NUM.	ADD
16:30	Fabrication of functional thin films by sputtering method using powder target	**L.12.23**	☆
16:30	Corrosion and tribological behaviour of carbonitride based coatings in saline solution	**L.12.24**	☆
16:30	Atmospheric pressure plasma deposition of antimicrobial coatings using ZnO nanoparticles embedded in organosilicon films deposited on textile surfaces	**L.12.25**	☆
16:30	Comparative study on structural and optical properties of GaN grown on (001) and (113) GaAs substrates	**L.12.26**	☆
16:30	Effect of N and Bi resonant states on the band structure and absorption coefficient of GaAs1-x-yNxBiy/GaAs strained quantum well	**L.12.27**	☆
16:30	Characterization of Carbon Nanoparticles Preparation by Gliding Arc Discharge	**L.12.28**	☆
16:30	Study of Palladium-Nickel Alloy/Reduced Graphene Oxide Hybrid filled EVA Polymer Nanocomposites for EMI Shielding Applications	**L.12.29**	☆

START AT	SUBJECT	View All	NUM.	ADD
16:30	Characterization of (Zr,Ti)CN coatings for biomedical applications		**L.12.30**	☆
16:30	Tunable electrical, optical and structural properties of (Y,In)N/Si thin films prepared by reactive RF magnetron sputtering		**L.12.31**	☆
16:30	Investigation of stainless steel alloyed TiSiC coatings prepared in C2H2 atmosphere by cathodic arc method		**L.12.32**	☆
16:30	Synthesis and nanomechanical properties of hydrogenated amorphous carbon films with metal (Ag, Ti) nanoparticles		**L.12.33**	☆
16:30	Enhancing electrical conductivity of MWCNT/epoxy composites with graphene nanoplatelets		**L.12.34**	☆

START AT	SUBJECT	View All	NUM.	ADD

Nanomaterials : Mitu Bogdana

START AT	SUBJECT	View All	NUM.	ADD
08:30	Advanced processes for plasma synthesis of nanostructures		**L.10.1**	☆
09:00	Hierarchical Multi-shelled Zn-Co Bimetallic Oxide Hollow Nanospheres @ N-doped Carbon for High Performance Lithium-Ion Batteries		**L.10.2**	☆
09:15	Fabrication and luminescent property of carbon nanodots directly grown on silicon-based substrates without any metal catalysis		**L.10.3**	☆
09:30	N-doped TiO2-based photoanode by combining reactive magnetron sputtering and ion implantation for dye-sensitized solar cells app		**L.10.4**	☆
09:45	Fabrication of π -conjugated carbon-like polymeric nanospheres through morphological stabilization of ß-lactoglobulin		**L.10.5**	☆
10:00	*Coffee*			
10:30	Growth of Metal Oxide Nanostructures on Graphene Nanosheets		**L.10.6**	☆

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START AT	SUBJECT View All	NUM.	ADD
10:45	Dislocation structure and microstrain changes during spinodal decomposition of single crystal c-(Ti,Al)N thin films	**L.10.7**	☆
11:00	C-enhanced nano-engineered chalcogenide phase-change materials for improved resistive phase-change memories	**L.10.8**	☆
11:15	Influence of catalyst precursor and nitrogen doping on pyrolyzed multifunctional carbon structures	**L.10.9**	☆
11:30	Surface modification of nanomaterials for gaining antibacterial properties and enhanced biocompatibility	**L.10.10**	☆
12:00	*Closing*		

Symposium organizers

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EUROPEAN MATERIALS RESEARCH SOCIETY