

Nanofim2015
Friday 24th – Saturday 25th, 2015

Day	Time	Plenary
Friday	08:00 AM-09:00 AM	<i>Registration</i>
	09:00 AM -9:30 AM	S0: <i>Inaugural Ceremony</i>
	09:30 AM-10:10 AM	K1: <i>Keynote addressing#1</i>
	10:10 AM-10:30 AM	<i>Coffee Break#1</i>
	10:30 AM -11:10 AM	K2: <i>Keynote addressing#2</i>
	11:10 AM-12:50 PM	S1A – S1B : <i>Parallel sessions</i>
	01:00 PM-01:50 PM	<i>Lunch#1</i>
	01:50 PM-02:30 PM	K3: <i>Keynote addressing#3</i>
	02:30 PM-04:10 PM	S24 - S2B : <i>Parallel sessions</i>
	04:10 PM-04:30 PM	<i>Coffee Break#2</i>
	04:30 PM-06:30 PM	S3A – S3B: <i>Parallel sessions</i>
	08:30 PM-10:30 PM	<i>Workshop Full Supper – Bassa Marea Beach, Porto Cesareo</i>
Saturday	08:30 AM- 09:10 PM	K4: <i>Keynote addressings#4</i>
	09:10 AM-10:40 PM	S4A – S4B: <i>Parallel sessions</i>
	10:40 AM–12:00 AM	PS1: <i>Poster session & round table of exhibitors</i> <i>Coffee Break#3</i>
	12:00 AM- 12:50 PM	<i>Discussions – feedback - special issue</i>
	12:50 PM– 02:00 PM	<i>Lunch #2 and Farewell</i>

SCIENTIFIC PROGRAMME

Nanofim2015 Nanotechnology in Instrumentation and Measurement

Friday, July 24

9:00 AM – 09:30 AM *S0: Inaugural Ceremony*

Nanofim2015 Symposium presentation

Aimé Lay-Ekuakille, General Co-Chair, University of Salento, Italy

Welcome speech

Academic authorities

Civil authorities

Wen J. Li, President Elect, IEEE Nanotechnology Council, City University of Hong Kong

09:30 AM-10:10 AM *K1: Keynote addressing #1*

Chairperson: Aimé Lay-Ekuakille, University of Salento, Italy

Nanocapsules, nanomedicine, drug delivery and perspectives of a joint use with motion rehabilitation

Viviana Vergara, University of Salento, Italy

10:10 AM – 10:30 AM *Coffee break #1*

10:30 AM-11:10 AM *K2: Keynote addressing #2*

Chairperson: Wen J. Li, City University of Hong Kong, Hong Kong

Carbon Nanotube Polymer Composites for High Performance Strain Sensors

Olfa Kanoun, Technical University Chemnitz, Germany

11:10 AM-12:50 PM *S1A: Emerging technologies and measurement techniques of nanostructured and hierarchical polymeric composites*

Chairpersons: Antonio Greco, University of Salento & Francesca Lionetto, University of Salento

1. In situ reduction of graphene oxide into polymer for photovoltaic application

A. Giuri, S. Colella, A. Listorti, A. Rizzo, A. Liscio, E. Treossi, V. Palermo, S. Rella, C. Malitesta, G. Gigli, C. Esposito Corcione

2. Using ultrasound wave propagation to estimate the dispersion of nanostructures in polymers with complex molecular architectures

C. Espinoza-González, C. Ávila-Orta, G. Martínez-Colung, F. Lionetto, F. Montagna, A. Maffezzoli

3. Rapid Prototyping of hydroxyapatite polymer based nanocomposites for bone tissue engineering

C. Esposito Corcione, F. Scalera, L. Natta, F. Montagna

4. Preliminary assessment of chitosan nanoparticles for growth factor delivery

F. Scalera, F. Gervaso, M. Madaghiele, V. De Benedictis, C. Demitri

5. Graphene reinforced Chitosan-Cinnamaldehyde derivatives films: antifungal activity and mechanical properties

C. Demitri, A. S. Tarantino, A. Moscatello, V. M. De Benedictis, M. Madaghiele, A. Sannino, A. Maffezzoli

11:10 AM-12:50 PM *S1B: Optical Biosensing: from Point of Care Appl. to Intracellular Nanosensing I*
Chairpersons: A. Giannetti & F. Baldini, CNR – Institute of Applied Physics, Italy

1. Vertical One-Dimensional Photonic Crystal Platforms for Label-Free (Bio)Sensing: Towards Drop-And-Measure Applications

G. Barillaro (invited talk)

2. Polymethylmethacrylate nanoparticles as vehicle for a molecular beacon specific for survivin mRNA in A549 Cells

B. Adinolfi, F. Baldini, A. Giannetti, S. Tombelli, C. Trono, G. Sotgiu, G. Varchi, Mario Pellegrino, Claudio Domenici

3. Total internal reflection fluorescence -based optical biochip for the detection of immunosuppressants in transplanted patients

B. Adinolfi, F. Baldini, C. Berrettoni, S. Berneschi, A. Giannetti, S. Tombelli, C. Trono, R. Bernini, I. A. Grimaldi, G. Persichetti, G. Testa, C. Kremer, C. Gärtner

4. Novel strategies for improving optical transducers based on localised and propagating plasmonics for biosensing applications

R. Rella, M.G. Manera, A. Colombelli, G. Montagna, C. de Julián Fernández, F. Albertini, A. Convertino

5. Nanodevices Based on Proteins: the Emerging Science of Proteotronics

E. Alfinito, L. Reggiani

01:00 PM – 01:50 PM *Lunch #1*

01:50 PM-02:30 PM *K3:Keynote addressing# 3*

Chairperson: Luciana Dini, University of Salento, Italy

Inorganic Nanoparticles for Theranostic Applications: State of the Art Review and Main Future Perspectives

Sergio Casciaro, CNR - Institute of Clinical Physiology, Italy

02:30 PM-04:10 PM *S2A: Optical Biosensing: from Point of Care Appl. to Intracellular Nanosensing II*

Chairpersons: G. Barillaro, University of Pisa, Italy & R. Bernini, CNR IREA, Italy

1. Label-free detection of angiogenesis biomarkers using Bloch surface waves on one dimensional photonic crystals

A. Sinibaldi, A. Anopchenko, A. Occhicone, F. Michelotti (invited talk) N. Danz, P. Munzert, S. Schmieder, F. Sonntag, R. Chandrawati, S. Rana, M. M. Stevens, L. Napione

2. Polymeric ring resonators for label-free biosensing

I.A. Grimaldi, G. Persichetti, G. Testa, R. Bernini

3. Towards an in-vitro liver lobule model

C. Cozzi, G. Polito, L. M. Strambini, G. Barillaro

4. Optically controlled drug delivery system based on Porous Silicon and Microneedles patch

P. Dardano, I. Rea, L. De Stefano, A. Calì, J. Politi

5. Glucose capped silver nanoparticles enter HeLa cells and induce S and G2/M arrest

E. Panzarini, S. Mariano, C. Vergallo, G.M. Fimia, L. Dini, A. Serra, F. Mura, M. Rossi, S. Casciaro

6. Cell elasticity change as a biomarker for cancer detection: an AFM metrological approach

A. Demichelis, C. Divieto, L. Mortati, S. Pavarelli, M.P. Sassi, G. Sassi

02:30 PM-04:10 PM *S2B: Nanotechnology for energy conversion, transportation and storage*

Chairpersons: P. Carlucci & G. Ciccarella, University of Salento, Italy

1. Experimental Setup For Investigation On Microwaves Interaction With Nanofluids

G. Colangelo, E. Favale, M. Milanese, G. Starace, A. De Risi

2. Plasma Actuation to Enhance the Flame Stabilization in a Non-Premixed Lean Microburner

S. Campilongo, M. G. De Giorgi, A. Ficarella, E. Pescini, A. Sciolti, G. Dilecce

3. Electronic equipment for managing of thermo-solar plant and for performance comparison between standard and nanofluid-based solar collectors

P. Visconti, P. Costantini, G. Colangelo, G. Cavalera

4. High performance Dye-Sensitized Solar Cells based on tailored nanostructured photoanodes

L. De Marco, R. Giannuzzi, M. Manca, D.P. Cozzoli, G. Gigli

5. Air/methane mixture ignition with Multi-Walled Carbon Nanotubes (MWCNTs) and comparison with spark ignition

A.P. Carlucci, F. Carnevale, G. Ciccarella, A. Fica, A. Ficarella, E. Filippo, D. Laforgia, F. Mussardo, L. Strafe

6. CVD Diamond Cathode for High Temperature Solar Cells in Solar Concentrating Systems

A. Bellucci, P. Calvani, M. Girolami, S. Orlando, V. Valentini, and D. M. Trucchi

04:10 PM – 04:30 PM *Coffee break #2*

04:30 PM – 06:30 PM *S3A: Nanotheranostics, medical Imaging and Biomedical Applications*

Chairpersons: S. Casciaro & F. Conversano, CNR - IFC, Italy

1. Halloysite Clay Nanotubes as Carriers for Curcumin Delivery

C. Dionisi, N.A.N. Hanafy, C. Nobile, S. Leporatti, M.L. De Giorgi, R. Rinaldi, S. Casciaro, Y.M. Lvov

2. High frequency ultrasound and photoacoustic imaging for tissue characterization in vivo

C. Avigo, N. Di Lascio, C. Kusmic, F. Faita, L. Menichetti, Paolo Armanetti, G. Bocci, T. Di Desidero

3. Comparative Assessment of the MRI Enhancement Power of Novel Nanosystems Through Theoretical Simulations

R. Franchini, E. Casciaro, F. Conversano, S. Casciaro, A. Lay-Ekuakille

4. A Dual Frequency Ultrasound Technique for the Improved Detection of Bimodal Nanosized Contrast Agents

F. Conversano, R. Franchini, P. Pisani, A. Greco, M. Di Paola, and S. Casciaro

5. Ultrasound Signal Enhancement of Halloysite Clay Nanotubes at Medical Diagnostic Frequencies

S. Casciaro, F. Conversano, P. Pisani, A. Greco, E. Casciaro, M. Di Paola, R. Franchini, A. Lay-Ekuakille, S. Leporatti, G. Gigli

6. Highly Improved Cytocompatibility of Halloysite Nanotubes through Polymeric Surface Modification

M. Di Paola, P. Pisani, F. Conversano, E.A. Sbenaglia, S. Casciaro, S. Leporatti

7. Effective Targeting of Hepatocellular Carcinoma through Glypican-3 Ligand Peptide Functionalization of Silica Nanoparticles

M. Di Paola, F. Conversano, E.A. Sbenaglia, S. Casciaro, A. Quarta, G. Gigli, L. Dini

04:30 PM – 06:30 PM *S3B: Semiconductor Nanowires: from Controlled Self-Assembly to Device Fabrication*

Chairpersons: P. Prete, CNR - IMM Italy & N. Lovergine, University of Salento, Italy

1. Surface-mediated electrical transport in single GaAs nanowires

I. Miccoli, F. Edler, H. Pfnür, C. T., P. Prete, N. Lovergine

2. Cytocompatible SiC/SiO_x nanowires for X-ray-excited photodynamic therapy

F. Rossi, F. Ravanetti, E. Bedogni, P. Lagonegro, F. Fabbri, T. Rimoldi, S. Pinelli, R. Alinovi, G. Benecchi, A. Cacchioli, L. Cristofolini, F. Bigi, G. Salviati

3. Flat top formation in self-assisted GaAs nanowires

C. Somaschini, A. Fedorov, S. Bietti, D. Scarpellini, S. Sanguinetti

4. MOCVD growth and thermal analysis of Sb₂Te₃ thin films and nanowires

M. Longo, S. Cecchi, S. Selmo, C. Wiemer, J.-L. Battaglia, A. Saci, A. Kusiak

5. Structural characterization of GaAs-based nanowires through transmission electron microscopy

M. Scuderi, P. Prete, I. Miccoli, N. Lovergine, C. Spinella, G. Nicotra

08:30 PM – 22:30 PM *Workshop Full Supper at Bassa Marea Beach (Porto Cesareo City, Jonian Sea)*

Saturday, July 25

8:30 AM-9:10AM S4: *Keynote addressing #4*

Chairperson: Helen Asemota, University of West Indies, Jamaica

Low Cost Diamond-Like-Carbon (DLC) Thin Films: Nanotechnology Transfer from Academia to Industry

E. Williams, Syntranguard LLC, North Carolina, USA

9:10 AM– 10:40 AM S4A: *Technology of Nanostructured Carbon Based Materials and Sensing*

Chairpersons: G. Cicala & A. Massaro, CNR Nanotech, Italy

1. The use of nanodiamonds in the seeding of CVD diamond and in heterogeneous catalysis

J.G. Buijnsters (*invited*), S.A.C. Carabineiro, A.M.T. Silva, L.M. Pastrana-Martínez, S. Morales-Torres, J.L. Faria, J.L. Figueiredo

2. Local Electrical Current and Voltage of Self-Assembled Nanodiamond Pillars

A. Massaro, G.S. Senesi, L. Velardi, G. Cicala, A. Valentini, D. Marzulli

3. Synthetic single crystal diamond diodes for radiotherapy dosimetry

M.D. Falco, Marco Marinelli, G. Prestopino, C. Verona and G. Verona-Rinati

4. Exploring CVD techniques for the growth of novel carbon nanostructures

M. L. Terranova, S. Gay, M. Angjellari, E. Tamburri, S. Orlanducci

5. Nanodiamonds and Conducting Polymers: a new paradigm for multifunctional nanomaterials

E. Tamburri, G. Reina, T. Lavecchia, S. Orlanducci, M.L. Terranova, D. Passeri, R. Matassa, M. Rossi

9:10 AM – 10:40 AM S4B: *Composite materials*

Chairpersons: F. Spano, EMPA, Switzerland & S. Urooj, Gautam Buddha University, India

1. AFM Laser Texturing on Chitosan/Au nanocomposite Materials for Lithography Technique

F. Spano, R.M. Rossi, A. Massaro, A. Lay-Ekuakille

2. Nanofilled polyethylene terephthalate fibers for the production of hierarchical polymer based composites

A. Greco, F. Lionetto, A. Maffezzoli

3. Active polymer nanocomposites: application in thermoplastic polymers and in polymer foams

C. Rosato, P. Scopece, P. Schiavuta, M. Scatto, F. Felling, A. Tinti

4. Electrochemical Investigation and Characterization of vague MnO₂ nanomaterial for Energy Conservation in Supercapacitors

S. Urooj, S. Ghosh

5. Analysis of Electrochemical Characteristics of Fabricated Polyaniline Nanomaterial for Super capacitors and storage Devices

S. Urooj, S. Sharma

10:40 AM – 11:10 AM *Coffee break #3*

10:40 AM – 11:30 AM *PSI: Poster session*

Chairperson: F. Li, Shanghai University, China & G. Verona-Rinati, University of Rome II, Italy

1. Nanostructured Al-doped ZnO coatings on PLA films for food packaging applications

D. Valerini, L. Tammaro, F. Di Benedetto, L. Capodieci, R. Terzi, A. Rizzo

2. Smart poly(lactic acid)-functionalized films with cardanol-based nanovesicles obtained from renewable resources for food packaging application

C. Massaro, F. Cosentino, R. Terzi, T. Marciandò, L. Capodieci, E. Bloise, G. Mele

3. Analytical characterization of silver-nanoparticle antimicrobial coatings for fiordilatte cheese

B. Introna, G. De Benedetto, A. Genga, A. Pennetta, S. Rella, T. Siciliano, and C. Malitesta

4. WO₃ Nanograined Chemosensor: a model of the sensing behavior

T.A. Addabbo, F. Bertocci, A. Fort, M. Mugnaini, V. Vignoli

5. Diamond Films for Electrical and Electronic Circuitry

A.Lay-Ekuakille, G. Cicala, A. Massaro, L. Velardi, G.S. Senesi

6. Nanocircuits for a Bio-Implantable System in EEG Signal Acquisitions

A.Lay-Ekuakille, G. Griffo, G. Cicala, A. Massaro, G. Gigli, F. Conversano, S. Casciaro

7. Evaluation of Molecular Oscillation for Nanonetworks Based on Quorum Sensing

F. Li, L. Lin, C. Yang, M. Ma

8. Ion Implantation in thermoplastic polymers

F. Di Benedetto, A. D'Amore, M. E. Mosca, M. Massaro, G. Cassano, L. Capodieci, C. Esposito, L. Tapfer

11:30 AM – 12:30 PM Round table of Exhibitors

Chairperson: G. Andria, Polytechnic of Bari, Italy

12:30 PM – 01.15 PM Special Issue, feedback and nanofim2016

01:15 PM – 02:15 PM *Lunch #2*

02:15 PM – 02:45 PM *Farewell*

A. Lay-Ekuakille, S. Casciaro, G. Andria

Announcement updates

Poster surface: 80 cm large, 120 cm height

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