# iPlasmanano V. 2014 Program


## http://www.barcelocongresos.com.es/IPlasmaNano-V/

**Keynotes: 30 min including questions (25+5 min)**

**Regular talks: 20 min including questions (17+3 min)**

| **Sunday 28-Sept** | | | |
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| 17.00-19.00 | | Reception-registration | |
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| 19.00 | Dinner | | |

| **Monday 29-Sept** | | | |
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| 8.30-8.40 | | Opening | A. Barranco and K. Ostrikov |
| 8.40-8.50 | | | **K. Ostrikov**: Entrepreneuring plasma-nano in the hurricane of change: challenge – risk – collaboration – agility – value |
| **Session M1 –Nanostructures** (Chairman: **E. Neyts**) | | | |
| 8.50-9.20 | | **M1-1** Keynote-1 | **M. Sankaran**: Controlling gas-phase nucleation via microplasma processes for the synthesis of novel nanoparticle materials |
| 9.20-9.40 | | **M1-2** | **U. Cvelbar**: Underlying mechanisms of copper oxide nanowire growth |
| 9.40-10.00 | | **M1-3** | **O. Polonskyi**: Nanoparticles and Nanocomposite Thin Films Prepared by Gas Aggregation Source |
| 10.00-10.20 | | **M1-4** | **M. Sunkara**: Plasma processes for scalable production of nanowire based materials |
| 10.20-10.40 | | **M1-5** | **H. Ying Yang**: Synthesis 2D materials by Chemical Vapor Deposition method |
| 10.40-11.10 | Coffee break | | |
| **Session M2– Graphene, carbon and organic materials I (Chairman: J. Zheng)** | | | |
| 11.10-11.30 | | **M2-1** | **E. Tatarova**: Microwave Plasmas Applied for Synthesis of Free Standing Graphene Sheets |
| 11.30-11.50 | | **M2-2** | **K.H. Chen**: Electrochemical and Supercapacitor Applications of Microwave CVD grown Graphene Nanowalls |
| 11.50-12.10 | | **M2-3** | **S. Mao**: Vertically-oriented Graphene for Environmental Applications: Biosensors and Gas sensors |
| 12.10-12.30 | | **M2-4** | **J. Henriques**: Surface Wave Discharges Applied for Carbon Nanostructures Assembly |
| 12.30-12.50 | | **M2-5** | **K.l Bystrov**: Spontaneous synthesis of carbon nanostructures under extreme plasma fluxes |
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| 13.30-15.00 | Lunch | | |
| **Session M3–Inorganic materials I** (Chairman: **Y. Raitses**) | | | |
| 15.00-15.30 | | **M3-1** Keynote-2 | **J. P. Allain**: Self-organization and nano-patterning of III-V semiconductor systems by directed irradiation synthesis |
| 15.30-15.50 | | **M3-2** | **I. Tanyeli**: Nanostructuring of metal surfaces by low energy helium ions |
| 15.50-16.10 | | **M3-3** | **D. Ruzic**: The Formation of Nano-Fuzz in Tungsten |
| 16.10-16.30 | | **M3-4** | **M. Gordon**: Microplasma Spray Deposition of Nanostructured Films for Catalytic, Magnetic, and Energy Applications |
| 16.30-16.50 | | **M3-5** | **G. Wu**: Design and Fabrication of Temporary Surface on Biodegradable Magnesium Alloys Based on Plasma and Ion Beam Techniques |

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| 16.50-17.10 | Coffee break | | |
| **Session M4–Graphene, carbon and organic materials II** (Chairman: **T. Gries**) | | | |
| 17.10-17.30 | | **M4-1** | **E. Bertran**: Carbon Nanotubes structural evolution during water assisted plasma growth |
| 17.30-17.50 | | **M4-2** | **G. Dinescu**: Control of application-related properties of carbon nanowalls synthesized by a plasma jet |
| 17.50-18.10 | | **M4-3** | **W. J. Zhang**: Surface nanostructures of diamond and cubic boron nitride films by reactive ion etching. |
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| 19.00 | Dinner | | 1 |

| **Tuesday 30-Sept** | | | |
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| **Session T1– Inorganic Materials II-Silicon** (Chairman: **S. Xiao**) | | | |
| 8.30-9.00 | | **T1-1** **Keynote-3** | **L.C. Chen**: Si nanotips produced by ECR plasma-enhanced CVD and their hybrids: from antireflection to plasmon management |
| 9.00-9.20 | | **T1-2** | **E. Gogolides**: Polymeric and Silicon nanowire arrays by plasma nanotexturing and plasma etching. How tall can they get before bundling? |
| 9.20-9.40 | | **T1-3** | **H. Vach**: Coherent Gigahertz and Terahertz Emission from Plasma-born Aromatic Silicon Nanocrystals |
| 9.40-10.00 | | **T1-4** | **V. Svrcek**: Advanced plasma technologies towards direct-bandgap silicon |
| 10.00-10.20 | | **T1-5** | **J. Benedikt**: Atmospheric Pressure Microplasma Jets for the Generation of Silicon Nanoparticles |
| 10.20-10.40 | Coffee break | | |
| **Session M2–Plasma discharges (Pulsed laser, atmospheric, etc.)** (Chairman: **I. Tamyeli**) | | | |
| 10.40-11.10 | | **M2-1** **Keynote-4** | **M. Chaker**: Nanomaterials and thin film synthesis based on pulsed laser deposition |
| 11.10-11.30 | | **M2-2** | **J. Lunney**: Pulsed laser deposition of metal nanoparticle films |
| 11.30-11.50 | | **M2-3** | F. do Nascimento: A new compact atmospheric pressure plasma for processing of materials |
| 11.50-12.10 | | **T2-4** | **Y. Raitses**: Synergy of Plasma and Material Processes in Atmospheric Pressure Carbon Arcs |
| 12.10-12.30 | | **T2-5** | **T. Gries**: Alkali-assisted growth of metal oxide nanowires by atmospheric pressure microwave afterglow |
| 12.30-12.50 | | **T2-6** | **A. Bogaerts**: Plasma conversion of greenhouse gases in value-added chemicals: a modeling point of view |
| 13.30-15.00 | Lunch | | |
| **Session M3– Graphene, carbon and organic materials III-Biomaterials (**Chairman: **K. Bystrov)** | | | |
| 15.00-15.30 | | **T3-1** **Keynote-5** | **G. Amaratunga**: Plasma deposited carbon nanotube arrays for photonics |
| 15.30-15.50 | | **T3-2** | **Endre Szili**: Following the plasma delivery of reactive oxygen species into synthetic tissue and cell models |
| 15.50-16.10 | | **T3-3** | **T. Kaneko**: Physical and Chemical Effects of Helium Plasma Jet on Gene Transfection Efficiency |
| 16.10-16.30 | | **T3-4** | **K. Vasilev**: Nanoengineered plasma polymer films for biomaterial applications |
| 16.30-16.50 | | **T3-5** | **J.M. Martín-Martínez**: Incidence of surface treatment of polymers with atmospheric and low-pressure plasmas on adhesion : Incidence on biomedical applications |
| 16.50-17.10 | Coffee break | | |
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| 19.00 | Dinner | | 16 |

| **Wednesday 1-Oct.** | | | |
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| **Session W1–Title Plasma Discharges** (Chairman: **R. di Mundo**) | | | |
| 8.30-9.00 | | **W1-1** **Keynote-6** | **A. Ng**: Nanoplasma in Warm Dense Matter research |
| 9.00-9.30 | | **W1-2** **Keynote-7** | **M. Hori**: Radical-Controlled Plasma Nanoprocesses towards Global Innovations |
| 9.30-9.50 | | **W1-3** | **D. Go**: Electron-initiated interactions at the interface of plasmas and liquids |
| 9.50-10.10 | | **W1-4** | **T. Belmonte**: Synthesis of nanoparticles of aluminium by spark discharges in liquid nitrogen, water and heptane: a comparative study. |
| 10.10-10.30 | Coffee break | | |
| **Session M2–Applications I** (Chairman: **S. Mao**) | | | |
| 10.30-11.00 | | **W2-1** **Keynote-8** | **R. Hatakeyama**: Novel-Concept Solar Cell Using Plasma-Functionalized SWNTs Thin Films |
| 11.00-11.20 | | **W2-2** | **J. Zheng**: Binary nanocomposites by plasma processing and their applications in energy storage |
| 11.20-11.40 | | **W2-3** | **D. Mariotti**: Nanoscience to nanotechnology: the role of atmospheric pressure plasmas in photovoltaics |
| 11.40-12.00 | | **W2-4** | **S. Xiao**: Low-temperature plasma processing for Si photovoltaics |
| 12.00-12.20 | | **W2-5** | **S. Coulombe**: Plasma-assisted synthesis of nanomaterials and nanostructures for energy applications |
| 12.20-12.40 | | **W2-6** | **J. Margot**: Plasma patterning of advanced oxides: achievements and applications to photonics |
| 12.40- | | **iPlasmanano business meeting** | |
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| 13.30-15.00 | Lunch | | 11 |
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| 17.00 | Social visit, coast panoramic, etc. | | |
| 21:00 | Conference Dinner | | |

| **Thursday 2-Oct.** | | | |
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| **Session M1–Fundamentals** (Chairman: **F. Reniers**) | | | |
| 9.00-9.30 | | **Th1-1** **Keynote-9** | **T. Fennel**: Ultrafast nanoplasma dynamics in clusters |
| 9.30-9.50 | | **Th1-2** | **H. Kersten**: Correlation of nanoparticle growth with discharge parameters for a novel particle collection concept |
| 9.50-10.10 | | **Th1-3** | **E. Neyts**: Nanoscale Perspectives on Plasma Catalysis |
| 10.10-10.30 | | **Th1-4** | **G. Kokkoris**: Investigation of nanoscale roughening of plasma treated surfaces by a multiscale modeling framework |
| 10.30-10.50 | Coffee break (hotel check-out) | | |
| **Session M2–Applications II** (Chairman: **E. Tatarova**) | | | |
| 10.50-11.10 | | **Th2-1** | **F. Reniers**: Atmospheric pressure plasma synthesis of metal nanoparticles |
| 11.10-11.30 | | **Th2-2** | **H. Puliyail**: Improving the vapor detection properties of polyaniline composites by plasma surface modifications |
| 11.30-11.50 | | **Th2-3** | **R. Di Mundo**: Assessing fakir state robustness of superhydrophobic plasma generated randomly nano-rough surfaces |
| 11.50-12.10 | | **Th2-4** | **M. Jacob**: RF Plasma polymerised thin films from natural precursors |
| 12.10-12.30 | | Conference closing.<br>Chair: A. Barranco and K. Ostrikov<br>**iPlasmanano VI** | |
| 13.20-15.00 | Box lunch and departure 9 | | |