International Conference Nano-M&D 2019
Scientific Programme

Tuesday, June 4th	
14:20	**Opening**
	Session 1: Nano-Materials for Sensing *(Chair: F. Rossella)*
14:30	Effect of defects and adsorbents on the performance of optoelectronic devices based on atomically thin materials. **Barbara**
14:45	Laser-irradiated 2D materials: a new path towards straintronic devices. **De Sanctis**
15:00	Electronic Detection of Oxygen Adsorption and Size-Specific Doping of Few-Atom Gold Clusters on Graphene. **Van de Vondel**
15:15	Graphene quantum dots as smart nano-carriers for cancer therapy. **Iannazzo**
15:30	Molecularly imprinted nanogels combined to plastic optical fibre: influence of the nanostructure to the sensor response. **Bossi**
15:45	Electrospun nanocomposite nanofibers in chemical sensors for gaseous compounds. **Macagnano**
16:00	Bent-Lattice Nanostructure in Crystallized Amorphous Films: from Transrotational Nanoengineering to Novel Amorphous Models. **Kolosov**
16:15	Structural Changes on Supramolecular Organization of Bitumen Induced by Advanced MWCNTs Based on Silica: Physical Chemistry Characterization. **Oliviero Rossi**
16:30	*Coffee Break*
	Session 2: Nanowires *(Chair: P. Barbara)*
17:00	Advanced field effect control of semiconductor nanowire-based devices. **Rossella**
17:15	Towards ultrafast and highly efficient optoelectronic devices based on III–V nanowires. **Joyce**
17:30	Chemical sensing with ZnO nano and microwires. **Baratto**
17:45	Hybrid Nanowire Based Quantum Networks at Atomic Scale: from growth mechanisms to properties. **Arbiol**
18:00	Bottom-up and Top-down Fabrication of GaN Nanowires in Molecular Beam Epitaxy. **Fernandez Garrido**
18:15	Synthesis, characterization and chemical functionalization of germanium nanowires. **Bosi**
18:30	Nanostructured Functional Polymers for Electrical Energy Storage. **Thelakkat**
Wednesday, June 5th	
	Session 3: 2D Materials Fabrication (I) *(Chair: M. Batzill)*
09:00	Growth and Applications of Hexagonal Boron Nitride. **Shin**
09:15	Recent Advances in the Growth of Transition Metal Dichalcogenides by Thermally Assisted Conversion. **McEvoy**
09:30	Structure and Dynamics of Alkali-Metal Intercalated Black Phosphorus. **Peterlik**
09:45	Growth and application of MoTe2, WTe2 and PtTe2 films. **Mc Manus**
10:00	Ge-based layered materials with high anisotropy. **Camilli**
10:15	Intrinsic properties of single layer molybdenum disulfide prepared by different methods. **Pollmann**
10:30	*Coffee Break*
	Session 4: 2D Materials Fabrication (II) *(Chair: H. Peterlik)*
11:00	Graphene-like silicene grown on inert graphite surface. **Scarselli**
11:15	Growth and characterization of TMD heterostructures. **Peters**
11:30	Hierarchical carbon coated 3D-CZTS nano-structural anode material for high performance LIB applications. **Chen K**
11:45	From Liquid to Solid State: highly homogeneous, smooth, and transparent WS2 – polymer films of of Liquid Exfoliated dispersions. **Szydlowska**
12:00	Bio-applications of semiconductor nanowires. **Prinz**
12:15	New Pathways in the Synthesis of 2-Dimensional Materials. **Kellici**
12:30	*Lunch Break*
	Session 5: Energy Generation/Storage *(Chair: Sergio Pagano)*
14:30	Conduction Current and Displacement Current in Electric Generators. **Zhang**

14:45	
15:00	VACNT growth on Aluminium: towards innovative supercapacitor nanocomposite electrodes. **Pinault**
15:15	Composite nanostructures for energy harvesting. **Vomiero**
15:30	Electric transport and voltage-noise properties of granular aluminum oxide nanowires. **Barone**
15:45	Annealing Temperature Grain Size dependence in Room Temperature Sputtered Gadolinium doped Ceria thin films for SOFC applications. **Coppola**
16:00	Nanostructured materials for energy conversion. **Cavaliere**
16:15	*Coffee Break*
16:45	***POSTER SESSION***
Thursday, June 6th	
	Session 6: Transport in Composite Materials and Interfaces (I) *(Chair: P. Hurley)*
09:00	Engineering thermal boundary conductance of a metal/polymer interface. **He**
09:15	Transition metal dichalcogenides in back-gate field effect transistors. **Di Bartolomeo**
09:30	Innovative Nano-Materials and Nanoscale Devices for the end of the Roadmap. **Balestra**
09:45	Scanning probe microscopy based fabrication and characterization of sub-micron Schottky junctions on as-grown graphene/Ge(100). **Notargiacomo**
10:00	Electron-transporting perylene diimide films deposited by supersonic molecular beams. **Barra**
10:15	Microwave plasmon resonance in high-mobility hBN-encapsulated graphene. **Mele**
10:30	*Coffee Break*
	Session 7: Transport in Composite Materials and Interfaces (II) *(Chair: J. He)*
11:00	Investigating the Electronic Properties of Oxide/MoS2 Interfaces. **Hurley**
11:15	Mesoscopic Percolating Resistance Network in Reduced Graphene Oxide Thin Film. **Liscio**
11:30	Organic light-emitting transistor as nanoscale light source for optical sensing. **Toffanin**
11:45	Field-modulated Graphene/Silicon Schottky diodes fabricated in a fully CMOS-compatible process line. **Chavarin**
12:00	Novel two-dimensional material device concepts through multi-scale simulations. **Marian**
12:15	Influence of graphene particles on morphology and patterns on dewetting of thin polystyrene film. **Basu**
12:30	*Lunch Break*
14:30	***EXCURSION***
Friday, June 7th	
	Session 8: Properties and Functionalization of Layered Materials (I) *(Chair: R. Yakimova)*
09:00	Effect of disorder on the magnetic stability of MoS2 nanoribbons with zigzag edges. **Hagymasi**
09:15	Atomic-scale Engineering of 2D Materials. **Kotakoski**
09:30	Introducing Functionalities in van der Waals materials by Lattice Modifications. **Batzill**
09:45	Two-dimensional nanomaterials for artificial photosynthesis: Turning CO2 into a valuable resource. **Chen LC**
10:00	Layer and photoluminescence engineering of Molybdenite. **Ottaviano**
10:15	Ion imprinting with graphene oxide and its application in electrochemical sensing. **Filip**
10:30	*Coffee Break*
	Session 9: Properties and Functionalization of Layered Materials (II) *(Chair: L. Ottaviano)*
11:00	Non-Covalent Functionalization of Monolayer MoS2 – Tuning the Electronic Structure. **Siris**
11:15	Lithographic band structure engineering of graphene. **Jessen**
11:30	Scattering Theory of Graphene Grain Boundaries. **Romeo**
11:45	Manipulation of epitaxial graphene towards novel 2D materials. **Yakimova**
12:00	Composition and Electronic Properties of PtSe2 and other Transition-Metal Dichalcogenides Investigated by Photoelectron Spectroscopy. **Stimpel-Lindner**

12:15	Spectroscopy of inelastic processes in quantum Hall edge channels: a possible resolution to the missing energy problem. **Meir**
12:30	*Lunch Break*
	Session 10: Quantum Phenomena *(Chair: A. Liscio)*
14:30	Entanglement manipulation in hybrid TI-S nano-devices. **Braggio**
14:45	Strong proximity Josephson coupling in heterojunctions of 2D materials. **Lee**
15:00	Atomic-scale spin dynamics. **McMurtrie**
15:15	Spintronics at the interface. **Zanolli**
15:30	Stability and lifetime of magnetic skyrmions from density functional theory. **Delin**
15:45	Mechanisms of photoconductivity in atomically thin InSe and GaSe. **Frisenda**
16:00	Optical probes of defects in lead halide perovskites. **Barker**
16:15	Defects, interlayer coupling and Fermi resonance in 2D Materials. **Bendiab**
16:30	*Coffee Break*
	Session 11: Nano-Materials: Synthesis and Characterization (I) *(Chair: N. McEvoy)*
17:00	Bottom-up synthesis of atomically precise graphene quantum dots. **Narita**
17:15	
17:30	Fabrication and characterization of nanomaterial-based sensor devices using solution printing method. **Sugahara**
17:45	Laser ablation synthesis in solution and nanoalloys: a fruitful combination. **Amendola**
18:00	Advances in Properties and Synthesis of MoS2 and WS2 nanotubes. **Zak**
18:15	Nanocrystal dimers: fabrication and properties. **Striccoli**
20:00	***SOCIAL DINNER***
	Saturday, June 8th
	Session 12: Nano-Materials: Synthesis and Characterization (II) *(Chair: M. Striccoli)*
09:00	Amorphous and crystalline gallium oxide thin films by atomic layer deposition. **Dubourdieu**
09:15	Graphene Technology: synthesis, characterization and reliability-driven technological device integration. **Morandi**
09:30	Preparation of Graphene Oxide- Quantum Dot Hybrids for the Detection of Ascorbic Acid. **Kim**
09:45	Plasma-assisted Synthesis and Modification of Carbon Nanowalls for Emerging Applications. **Kondo**
10:00	The properties (and some applications) of graphene grown at high T on Co. **Amato**
10:15	Electrochemical lithiation of epitaxial graphene for rechargeable batteries. **Shtepliuk**
10:30	*Coffee Break*
	Session 13: Nanotubes and Nanowires *(Chair: A. Di Bartolomeo)*
11:00	Growing Highly Pure Semiconducting Carbon Nanotubes for Nanoelectronics by Electrotwisting the Helicity. **Jiang**
11:15	Application of low-cost MWCNT/polymer based heating elements as room temperature NIR bolometers with high signal to noise ratio. **Neitzert**
11:30	Elasto-mechanical study of MoS_2 domes by Atomic Force Microscopy and Spectroscopy. **Di Giorgio**
11:45	Analysis of zinc ions supersaturation during the growth of ZnO nanorods. **Basinova**
12:00	Functionalization of carbon nanotubes for nitroaromatic explosive detection. **Musayeva**
12:15	**Closing**