



CHEMISTRY MEETS INDUSTRY AND SOCIETY

A CREATIVE SHOWCASE CONFERENCE

SALERNO (GRAND HOTEL)

28-30 AUGUST 2019

Scientific Program

Thursday, August 29th 2019

<i>Centro Congressi Grand Hotel Salerno</i>	
<i>Room</i>	
<i>WS1 – Chemistry For Secure Societies</i>	
<i>Chairperson: Matteo Guidotti, CNR-ISTM, Italy</i>	
9:00-9:20	<i>Welcome Remarks</i>
9:20-9:50	<i>WS1 KN01 - Genserik Reniers - TU Delft, the Netherlands "Integrating safety and security measures to avoid chemistry-related domino effects"</i>
9:50-10:10	<i>WS1 OR01 - Lidiatta Giorno - CNR-ITM, Rende, Italy "Biocatalytic membrane reactors for organophosphates degradation"</i>
10:10-10:30	<i>WS1 OR02 - M. Maddalena Calabretta - Department of Chemistry "G. Ciamician", University of Bologna, Italy "Origami paper-based chemiluminescent biosensor for neurotoxic compounds detection using an integrated smartphone device"</i>
10:30-11:00	<i>WS1 OR03 - Gaetano Carminati - Senior Technical Expert from the National Authority for the Prohibition of Chemical Weapons, Rome "The role of the Italian National Authority"</i>
11:00-11:30	Coffee break
<i>Chairperson: Elisa Michellini, University of Bologna, Italy</i>	
11:30-12:00	<i>WS1 KN02 - Adolfo Gregori - Carabinieri, Department of Scientific Investigation (RIS), Italy "Simultaneous Determination of Gunshot Residues and Stabilizers in Forensic Samples by means UHPLC-HRMS analysis"</i>

12:00-12:20	<i>WS1 OR – Roberto Mugavero - OSDIFE, Rome, Italy “New and emerging threats and trends: cyber-security challenges in CBRNe infrastructure”</i>
12:20-12:40	<i>WS1 OR05 - Simona Ortelli - CNR-ISTEC, Faenza, Italy “Coatings based on TiO₂ nanoparticles and biomacromolecules as a new flame retardant approach for cotton fabrics”</i>
12:40-13:00	<i>WS1 OR06 - Salvatore Corrao - Italian Fire Brigade Corps, Italy “Study of an organizational model for the operational response of an Italian CBRN Module within the European Civil Protection Mechanism”</i>
13:00-15:00	Free lunch break
<i>Chairperson: Roberto Mugavero - OSDIFE, Italy</i>	
15:00-15:30	<i>WS1 KN03 - Arben Merkoçi - Inst. Català de Nanociencia i Nanotecnologia, Barcelona, Spain “Nanobiosensors for diagnostics: from health, environment to safety and security applications”</i>
15:30-15:50	<i>WS1 OR07 - Daniele Del Gaudio - Italian Army, Italy “7th CBRN defense regiment “Cremona” a special unit against CBRN events”</i>
15:50-16:20	<i>WS1 KN04 - Chiara Bisio - University of Eastern Piedmont, Alessandria, Italy “Innovative layered materials as active allies for the decontamination of toxic chemical agents”</i>
16:20-17:00	<i>WS1 Round Table with institutional representatives, coordinated by R. Mugavero</i>
17:00-17:20	<i>WS1 OR08 – Ferruccio Trifirò – Università degli Studi di Bologna, Accademia delle Scienze dell’Istituto di Bologna, Italy “How to avoid dual-use toxic substances in chemical industry”</i>
17:20-19:00	<i>WS1 Poster Session</i>
Grand Hotel Salerno	
20:00-22:00	Social banquet

Friday, August 30th 2019

Centro Congressi Grand Hotel Salerno	
Room	
WS1 – Chemistry for Secure Societies	
<i>Chairperson: Vincenzo Vaiano, University of Salerno, Italy</i>	
9:00-9:30	<p><i>WS1 KN05 - Vasile Parvulescu - University of Bucharest, Romania</i> <i>“Photocatalysis versus plasma-coupled catalysis for the mineralization of warfare and harmful compounds”</i> Thematic Lecture offered by Molecules, an open access journal by MDPI</p>
9:30-9:50	<p><i>WS1 OR19 - Antonio Sergio - New DuPont, Italy</i> <i>“For greater good”</i></p>
9:50-10:10	<p><i>WS1 OR10 - Federico Begni - University of Eastern Piedmont, Alessandria, Italy</i> <i>“Hyper cross-linked polymers for the removal of harmful pollutants from the environment”</i></p>
10:10-10:30	<p><i>WS1 OR11 - Isacco Gualandi - University of Bologna, Italy</i> <i>“Detection of hazardous chemicals (pesticides) by electrochemical sensors”</i></p>
10:30-11:00	<p><i>WS1 KN06 - Mauro Marchetti - CNR-ICB, Sassari, Italy</i> <i>“Hypothesis of remote identification of warfare chemical agents and explosives after blast of chemical bombs”</i></p>
11:00-11:30	Coffee break
<i>Chairperson: Ernesto Salzano, University of Bologna, Italy</i>	
11:30-12:00	<p><i>WS1 KN07 - Fabiana Arduini - University of Rome Tor Vergata, Italy</i> <i>“Early and on site detection of chemical and biological warfare agents using miniaturised electrochemical biosensors”</i></p>
12:00-12:20	<p><i>WS1 OR12 - Andrei Katsev - Medical Academy Georgievsky, Simferopol, Crimea</i> <i>“Detection of the toxicity of environmental and pharmaceutical substances by luminescence biotests”</i></p>
12:20-12:40	<p><i>WS1 OR13 - Stefano Scaini - Senior Safety & Security Advisory, Italy</i> <i>“Unconventional use of High Explosives & Energetic Materials: facing the I.E.D.s Threat”</i></p>
12:40-13:00	<p><i>WS1 OR14 - Davide Janner - Politecnico di Torino - Department of Applied Science and Technology</i> <i>“Nanostructured gold surface for reliable and low-cost SERS detection of contaminants in water”</i></p>
13:00-15:00	Free lunch break
<i>Chairperson: Massimo Ranghieri, ACISMOM Military Corps, Italy</i>	

15:00-15:30	<i>WS1 OR15 - Rosalind Sankey and Carlos Rodriguez Del Rio – Elsevier “Using information solutions to understand the potential risks and control strategies of substances”</i>
15:30-16:00	<i>WS1 KN08 - Sergey Zinoviev - OPCW Senior International Cooperation Officer, The Hague, The Netherlands “Working for the Chemical Weapons Convention: interdisciplinary expertise and funding opportunities”</i>
16:00-16:20	<i>WS1 OR16 - Davide Vignola - Pollution Analytical Equipment, Italy “Detection of highly toxic chemicals, explosives and explosive taggants in the air”</i>
16:20-16:40	<i>WS1 OR17 - Stefano Marchesi - University of Eastern Piedmont, Alessandria, Italy “Bi-functional Eu(III) and Nb(V)-containing Saponite Clays for the Optical Detection and Catalytic Abatement of Chemical Warfare Agents”</i>
16:40-17:00	<i>WS1 OR20 - Gianmaria Pio - Department of Civil, Chemical, Environmental and Materials Engineering DICAM, University of Bologna, Italy “Fire security and safety of chemical warehouses”</i>
17:00-17:15	<i>Closing Remarks</i>

Poster List WS1

Thursday August 29 17:20-19:00	Poster Session of WS1
WS1 PO01 - <u>Tanurima Bhaumik</u> , Jayanta Mandal, Kunal Pal, Parimal Karmakar <i>“Rhodamine 6G based fluorescent chemosensors for selective detection of Al³⁺ ion: Effect of substituent and ring strain in enhancing its sensing performance.”</i>	
WS1 PO02 - <u>Amrita Saha</u> , Pravat Ghorai, Priyabrata Banerjee <i>“A Cd(II) Based Coordination Polymer Series: Fascinating Structure and Promising Nitro Aromatic Sensing Property”</i>	
WS1 PO03 - <u>Tapan Kumar Mondal</u> <i>“Development of smart fluorescence probes for efficient recognition of hazardous species and application as biomarker ”</i>	
WS1 PO04 - <u>Arunabha Thakur</u> , Sushil Ranjan Bhatta, Bijan Mondal <i>“Metal-Coordination Driven Intramolecular Twisting: A Turn-On Fluorescent-Redox Probe for Hg²⁺ Ion Sensing through the Interaction of Ferrocene Nonbonding Orbital and Dibenzylidenehydrazine</i>	
WS1 PO05 - <u>Roberto Consolo</u> , Matteo Guidotti, Raffaella Soave, Vladimiro Dal Santo, Anna Ferretti, Laura Polito, Claudio Evangelisti, Stefano Econdi <i>“A European Project for strengthening the chemical and biological waste management in Central Asia countries for improved security and safety risk mitigation ”</i>	
WS1 PO06 - <u>Matteo Guidotti</u> , Massimo C. Ranghieri, Stefano Econdi <i>“Detection, Identification and Monitoring of Chemical Warfare Agents, CWAs: a comparison between on-field and in-lab approach ”</i>	
WS1 PO07 – <u>S. Econdi</u> , C. Bisio, F. Carniato, G. Gatti, A. M. Katsev, S. L. Safronyuk, M. Guidotti <i>“Design and optimization of Prussian Blue particles for the decontamination of aqueous media from potentially radioactive caesium ”</i>	
WS1 PO08 - <u>Vincenzo Vaiano</u> , Giuseppina Iervolino, Vincenzo Palma <i>“Removal of organic pollutants from aqueous solutions by dielectric barrier discharge non-thermal plasma reactor”</i>	
WS1 PO09 - <u>Roberto Mugavero</u> , S. Abaimov <i>“CBRNe Critical Infrastructures and Cyber Security”</i>	
WS1 PO10 - <u>Antonia Lopreside</u> , Maria Maddalena Calabretta, Laura Montali, Xinyi Wan, Baojun Wang, Aldo Roda, Elisa Micheli <i>“Whole-cell biosensors and cell-free systems: new tools for rapid and sensitive detection of heavy metal and bacterial contamination in water”</i>	
WS1 PO11 - <u>Emilia Paone</u> , Angela Malara, Patrizia Frontera, Lucio Bonaccorsi, Francesco Mauriello <i>“Exploitation of Coffee Silverskin as sustainable adsorbent material for heavy metals remediation of contaminated water”</i>	
WS1 PO12 - <u>M. Martino</u> , V. Palma, C. Ruocco <i>“Ceria-coated aluminum foams as promising catalysts for the water gas shift process”</i>	
WS1 PO13 - <u>S. Marchesi</u> , F. Carniato, M. Botta, L. Marchese, M. Guidotti, C. Bisio <i>“Extraction of Lanthanide Ions from Aqueous Solutions with Synthetic Saponite Clays”</i>	
WS1 PO14 – <u>Simona Cavallini</u> , Federico Benolli, <u>Giulia Rapicetta</u> , <i>“Strengthening chemical and biological waste management in Central Asia countries for improved security and safety risk mitigation (EU CBRN CoE Project 65 - CABICHEM)”</i>	

<p>WSI PO15 - <u>Simona Cavallini</u>, <u>Beatrice Errico</u>, <u>Federico Benolli</u>, <u>Giulia Rapicetta</u>, “SYnergy of integrated Sensors and Technologies for urban sEcured environMent (SYSTEM)”</p>
<p>WSI PO16 - <u>Olga Sacco</u>, <u>Wanda Navarra</u>, <u>Vincenzo Vaiano</u> “N-Doped Semiconductors for Photocatalytic Removal of Organic Pollutants”</p>
<p>WSI PO17 - <u>Veronica Caratelli</u>, <u>Giulio Dionisi</u>, <u>Silvia Fillo</u>, <u>Nino D’Amore</u>, <u>Alfredo Sansubrina</u>, <u>Florigio Lista</u>, <u>Fabiana Arduini</u> “Antibody-free biosensors for on site botulinum neurotoxin detection”</p>
<p>WSI PO18 - <u>A. Testolin</u>, <u>V. Pifferi</u>, <u>L. Falciola</u>, <u>C. Ingrosso</u>, <u>M. Corricelli</u>, <u>A. Agostiano</u>, <u>M. Striccoli</u>, <u>M. L. Curri</u>, <u>F. Bettazzi</u>, <u>I. Palchetti</u> “An Electrochemical Approach to Understand the Enhanced Performances of Gold-Based Hybrid Nanomaterials”</p>
<p>WSI PO19 - <u>Elena Lucenti</u>, <u>Elena Cariati</u>, <u>Daniele Marinotto</u>, <u>Andrea Previtali</u>, <u>Stefania Righetto</u> “Cyclic Triimidazole Derivatives as Potential Sensors of Explosives”</p>