

Report on the 3rd International Symposium on Enhanced Electrochemical Capacitors - ISEECap2013, 3-7 June, Taormina (Italy)

The 3rd International Symposium on Enhanced Electrochemical Capacitors ISEECap2013 was held from 3 to 7 June 2013 in Taormina (Italy). ISEECap has a biennial frequency and this edition followed the first meeting held in 2009 in Nantes, France (ISEECap2009) and the second in 2011 held in Poznan, Poland (ISEECap2011).

Taormina is one of the most known touristic resort in Sicily due to the heritages of Greeks, Romans, Byzantines, Saracens and Normans who selected this place for living because of its favorable position, mild climate and magic atmosphere. After the second world war, Taormina was consecrated as one of the most beautiful city of Sicily.

This edition of the international conference was organized by the Institute of Advanced Energy Technologies “Nicola Giordano” of the National Research Council (CNR-ITAE) in cooperation with the COST Action MP1004. 142 attendees coming from 24 countries across the five continents were registered for ISEECap2103. The scientific program of the conference consisted of 4 Tutorials, 1 Plenary lecture, 7 Keynote talks, 45 Oral presentations and 72 Posters. The program was formed of 9 consecutive sessions; the first session of ISEECap2013 began on 3rd June with a short opening introduction by the Conference chairman, Dr. Pietro Staiti, followed by the 4 tutorials given by recognized scientists on specific fundamental topics. The regular scientific program began on 4th June with an opening address by Dr. Pietro Staiti, after that a presentation of CNR-ITAE (the host Institution) by Prof. Gaetano Cacciola, Director and continued with the plenary lecture presented by Prof. Francois Béguin from Poznan University of Technology (Poland) entitled “Development of high performance AC/AC capacitors in environmental friendly protic electrolytes”. Each session started with a keynote lecture of a highly esteemed expert in a particular topic of electrochemical capacitors. The scientific sessions were devoted to the main topics regarding supercapacitors, namely: (a) metal oxides and pseudocapacitors; (b) carbon materials; (c) modeling and electrolytes; (d) characterization of asymmetric and hybrid devices; (e) systems and applications; (f) fundamental studies; (g) materials and hybrid devices; (h) new materials and electrolytes.

On 4th June (Tuesday afternoon), in parallel to the poster session 1, the meeting of WG1/Core Group/Think Tank of the COST Action MP1004 was chaired by Dr. Dalik Sojref. On 6th June a colourful Gala dinner - during which typical Sicilian dishes were served - was held in the old town of Taormina with a superb view on the bay of Giardini Naxos and Volcano Etna. During the Gala dinner two grants for the “Best Posters” presented at ISEECap2013 and sponsored by

the International Society of Electrochemistry (ISE) - Division 3: Electrochemical Energy Conversion and Storage were given by Prof. Elzbieta Frackowiak to Clarisse Péan from CNRS-Université Paris 06, Paris, France for the poster “Molecular dynamics simulations of supercapacitors determination of single-electrode capacitances with complex electrode geometries” and to Paula Ratajczak (Poznan University of Technology, Poznan, Poland) for the poster “New insights on stability of high voltage supercapacitors utilizing tobacco-based carbons”. Pictures of the young researchers receiving their awards are shown below.

The conference represented a multidisciplinary approach to different topics covering the fundamental and applied aspects of new materials, development of electrodes, synthesis of innovative liquids, gels and solid electrolytes, polymer electrolytes/ionic liquids. Original approaches on the development of asymmetric and hybrid supercapacitors were reported in many oral and poster presentations. Experimental and theoretical studies of properties, basic characteristics of electrical double-layer formation and mechanisms of charge migration, interactions and redox reactions at electrochemical interfaces were also highlighted. A dedicated session was devoted to the development and applications of supercapacitor devices. A consistent number of oral talks was oriented to the use of hybrid power systems for mobile, stationary and grid application as well as others were dedicated to the development of technologies for micro and solid-state supercapacitors. A surprising aspect was the active participation of about 14 attendees coming from small and medium enterprises as well as from large companies. The conference was sponsored by Biologic Science Instruments (France), Etrera (European commission), Sovema Battery Manufacturing Equipment (Italy) and Autolab-Metrohm Italia. A special thank is due to the members of International Advisory Board for their fruitful contribution in organizing the meeting and in the reviewing process and to all participants for their excellent scientific contributions. Sincere thanks also to the local organizing Committee, composed by Pietro Staiti, Francesco Lufrano, Gaetano Squadrito, Vincenzo Baglio, Antonino Brigandi, Orazio Di Blasi and Massimiliano Lo Faro, for their efforts in realizing the success of the event.

Dr Pietro Staiti

Chairman of ISEECap2013