

## Preface

This special issue collects works presented at the 11<sup>th</sup> International Symposium on Electrochemical Impedance Analysis (EIA11), held in Camogli (Italy) from the 6<sup>th</sup> to the 10<sup>th</sup> of November 2017.

The 2017 event was a valuable opportunity to widen the EIA community, traditionally located in Eastern-Europe, with new contributions from Italy, Germany, France, Spain, Portugal, Greece, Ireland, Israel, Denmark, United Kingdom and Japan. The richness of the topics presented at the Conference as well as the attention to next generation of experts being formed are well resumed in the “*Welcome Letter by the Chairs of EIA11*” following these lines.

Published papers represent some of the most interesting and advanced reports in the field of electrochemical analysis, with special attention to sustainable energy applications like fuel cells, biofuels and batteries. The bouquet is enriched by valuable contributions about electrochemical phenomena in organic systems like coatings, dyes and microbial cells.

This issue gathers the most recent developments of the Differential Resistance Analysis, a new tool for the analysis of degradation in electrochemical systems, firstly proposed by Prof. Zdravko Stoyanov, and his last manuscript, entitled “Rotating Fourier Transform - engine for Non-stationary Impedance Spectroscopy”.

Both are brilliant demonstrations of Zdravko’s constant search for innovation out of consolidated schemes, which characterized all his successful carrier and gave him perpetual fame.

We would like to thank the authors that contributed with their valuable work to this special issue and all the referees that contributed to keep high the scientific level of publications. Special thanks go to the journal staff, the Editor in Chief and Dr. Gergana Raikova for their precious support.

Finally, we wish this issue will be appealing and source of inspiration for future research.

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Guest Editors

**Antonio Barbucci, Maria Paola Carpanese**

University of Genova

Department of Chemical, Civil and Environmental Engineering



**Sabrina Presto, Massimo Viviani**

National Research Council of Italy

Institute of Condensed Matter Chemistry and Energy Technologies



## Welcome Letter by the Chairs of EIA11

The 11<sup>th</sup> International Symposium on Electrochemical Impedance Analysis (EIA11) is a new link in the well – established chain of EIA conferences held every three years. The present edition of EIA is held in the small fishermen village of Camogli, on the Ligurian coast of Italy. This event intends to bring together experts on the most recent advances and applications of Electrochemical Impedance Analysis to share knowledge, ideas, and achievements, as well as to create a friendly environment for fruitful discussions.

Maintaining the tradition of previous conferences, EIA11 aims at providing a common platform for scientists and experts from international research and industrial institutions. In addition, EIA11 encourages and educates the next generation of experts in the field of impedance analysis and more in general in its application in electrochemistry.

The symposium is enriched by a session dedicated to the Joint Programs “Fuel Cells and Hydrogen Technologies”, “Energy Storage” and “Advanced Materials and Processes for Energy Application” of the European Energy Research Alliance.

We wish to express our gratitude to the members of the Scientific Committee for their expertise and professional support, to all participants for their eager interest and valuable scientific contributions, as well as to the members of the Organizing Committee. Our gratitude is extended to the International Society of Electrochemistry, the Electrochemical division of the Italian Society of Chemistry, the Institute of Condensed Matter Chemistry and Technologies for Energy of the National Research Council and the Department of Civil Chemical and Environmental Engineering of the Genoa University. We also wish to thank Companies for sponsoring the event and supporting the participation of younger colleagues. Help from all contributors was essential for the organization of EIA11.

The Symposium is dedicated to Professor Zdravko Stoykov, who was expected to join us here and to ensure the success of EIA 11<sup>th</sup> edition with his knowledge and humor. We all lost a great scientist and friend.

His career was so successful thanks to a continuous desire to make rigorous science also enjoying like a child with a toy. We would like to remember him with a prize that will be awarded to one of the young scientists attending the symposium that is demonstrating to follow Zdravko's path.



It is our great pleasure to welcome all of you in Camogli and wish you a pleasant and fruitful stay.

Antonio Barbucci

Massimo Viviani

DICCA-University of Genoa

ICMATE-National Research Council

