

Preface

The 4th International Conference on Materials and Applications for Sensors and Transducers, Bilbao, Spain, hosted about 130 oral and poster papers and more than 100 participants. IC-MAST as an international annual conference which tries to meet the needs for various types of sensors, particularly those ones which may be manufactured by low cost methods (i.e. hybrid sensors, smart specialization devices, particular applications not necessarily requiring integrated micro-nano technologies), covering all types of materials and physical effects, appears to be a necessity. IC-MAST has been established as a high quality international conference by:

- I. Gathering together multinational researchers from all over the world, working in different materials for sensors and transducers and technical applications of sensors, but also in some cases in the management of the data coming from sensors and transducers; the careful selection of the conference place (like Aegean Sea, Budapest, Prague, Bilbao etc) allows for enjoying the local hospitality and sightseeing
- II. Emphasizing in hybrid sensors and smart specialization devices produced by inexpensive methods, without excluding of course micro-nano technology, from all kinds of solid state, liquid and gaseous materials, as well as in particular transducer applications (design and development, as well as use of sensing data)
- III. Publishing the conference proceedings in the form of 4-page papers in a compact volume of Key Engineering Materials which has a certain large impact in CPSI, while long versions of complete research articles are subject of publication in Sensor Letters and the Journal of Optoelectronics and Advanced Materials, both ISI Journals
- IV. Innovatively implementing the Virtual Paper Concept, allowing for large impact of research works presented in the conference by authors who either have no time or no funding support for visiting a conference; this year more than 15 virtual papers are presented in the 4th IC MAST, following a standardized procedure via the our robust and reliable Conference Site (www.icmast.net)
- V. Allowing for lengthy technical and managerial discussions in terms of sensor, material and instrumentation development; furthermore, the different research groups gathered together are offered the particular advantage of arranging and concluding research proposals and projects, otherwise not having a visible possibility of such realization

The 4th IC-MAST organizing committee is proud that the Conference Keynote Speaker was **Dr. Ioanna Giouroudi**, Vienna University of Technology, Austria.

We are also proud for the invited speakers of the conference:

- **Dr. Galina Kurlyandskaya**, University of the Basque Country, Spain
- **Prof María Vallet-Regí**, Universidad Complutense de Madrid, Spain
- **Dr Christophe Dolabdjian**, University of Caen Basse-Normandie, France

- **Prof Senentxu Lanceros-Méndez**, University of Minho, Portugal
- **Prof Masaaki Futamoto**, Chuo University, Japan
- **Dr. Harvey Amorín**, Instituto de Ciencia de Materiales de Madrid. CSIC, Spain
- **Dr. Jose M. G. Merayo**, DTU Space, Technical University of Denmark, Denmark.

The IC-MAST 2014 organizers believe that the target of the Conference has been successfully met by enhancing knowledge in sensors by all participants, accelerating the achievement of results and optimizing the under design products, in a quite friendly way! Therefore, participants made an appointment for the next year in Mykonos island, Greece, where the 5th International MAST Conference will be realized!

The Conference Chairmen



Evangelos Hristoforou
National TU of Athens



Dimitrios Vlachos
University of Peloponnese

Conference details

4th International Conference on Materials and Applications for Sensors and Transducers, June 8-11, 2014, Bilbao Spain

Chairmen

Jon Gutierrez, University of the Basque Country

José Manuel Barandiarán, BCMAN, Basque Center for Materials, Applications and Nanostructures

E. Hristoforou, National Technical University of Athens, School of Mining and Metallurgy Engineering

D.S. Vlachos, University of Peloponnese, Department of Computer Science and Technology

Scientific Committee

- **Spyridon Diplas**, Sintef Oslo, Norway
- **Mihai Popescu**, Editor-in-Chief, Journal of Optoelectronics and Advanced Materials
- **Peter Svec**, Slovak Academy of Sciences
- **Horia Chiriac**, National Institute for R&D in Technical Physics, Iasi, Romania
- **Roberto Germano**, Promete, Naples, Italy
- **Ioannis Raptis**, NCSR “Demokritos”, Athens, Greece
- **Raffaele Battaglia**, Novaetech Srl
- **Christophe Dolabdjian**, University of CAEN, France
- **Pavel Ripka**, Czech Technical University, Czech Republic
- **Saci Messaadi**, Université de Batna, Algeria
- **Nico Avdelidis**, TWI, UK
- **Faramarz Hossein-Babaei**, K.N. Toosi University of Technology, Iran
- **Dimitris Kouzoudis**, University of Patras, Greece, Editor-in-Chief, Sensor Letters
- **Ajay Sood**, Indian Institute of Science, India
- **Valiyaveetil, S.**, National University of Singapore
- **Carlos, L.D.**, Department of Physics and CICECO, University of Aveiro, Portugal
- **Qifeng Zhang**, University of Washington
- **Jiujun Zhang, Dr., Prof.**, National Reserach Council of Canada, Vancouver, Canada
- **Yong Zhang**, Department of Bioengineering, National University of Singapore
- **Francesco Stellacci**, Ecole Polytechnique Fédérale de Lausanne, Switzerland
- **Horowitz, Gilles**, CNRS - Ecole Polytechnique, France
- **Wang, E.**, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences

- **Dr. Zhigadlo, N.D.**, Laboratory for Solid State Physics, ETH Zurich, Switzerland
- **Chunyi Zhi**, City University of Hong Kong, Hong Kong
- **Mei, Yongfeng**, Fudan University, Shanghai China
- **Woo Lee**, Korea Research Institute of Standards and Science
- **Dr. Vladimir Sivakov**, Institute of Photonic Technology, Jena, Germany
- **Velonia, K.**, Department of Materials Science and Technology, University of Crete
- **Dediu, Valentin Alek**, ISMN-CNR, Italy
- **Anthopoulos, T.**, Imperial College London
- **Morent, Rino**, Applied Physics - Ghent University
- **Papakonstantinou, P.**, University of Ulster, School of Engineering, Engineering Research Institute
- **Athouël, Laurence, Dr.**, IMN-CNRS, University of Nantes, France
- **Gascon, J.**, Catalysis Engineering / Delft University of Technology
- **C.N.R. Rao**, Jawaharlal Nehru Centre for Advanced Scientific Research, India
- **Jon Gutiérrez**, Universidad del País Vasco UPV/EHU, Spain
- **Damianos Sakas**, University of Peloponnese, Greece