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Editor Jefe:

M. Olga Guerrero Pérez
Universidad de Málaga

Editores:

Carolina Belver Coldeira
Universidad Autónoma de Madrid

Raúl Berenguer Betrián
Universidad de Alicante

Tomás García Martínez
Instituto de Carboquímica (CSIC)

Manuel J. Pérez Mendoza
Universidad de Granada

Fabián Suárez García
Instituto Nacional del Carbón (CSIC)

Editorial



Carbon Conference (Madrid, 1-6 July 2018)

I would like to thank the members of the Spanish Coal Group for their excellent work at the CARBON 2018. The work of all the members of the Executive Committee, Local Organizing Committee and members of the Scientific Committees has made possible the success of our conference. Thank you very much to everyone. I am very proud of all of you. Moreover, I would like to thank all the participants for attending our conference and especially the authorities that assisted to the inauguration table, Mrs Menéndez, President of the Spanish National Research Council, Mrs Villegas, General Director of the Spanish State Research Agency, Mr Garesse, Rector of Universidad Autónoma de Madrid, Mr Carrasco, Vicepresident of Spanish Carbon Group and Program Committee Chair. Also other authorities like the presidents of the Local Organizing Committee, Mr. Gillarranz and Mr. Rodríguez, presidents of the Carbon associations, the vicepresidents of Spanish National Research Council and members of the Carbon community in general as well as our sponsors.

We were lucky enough to organize

Carbon 1994 in Granada, Andalusia, and Carbon 2003 in Oviedo, Asturias. This year we have brought the Carbon 2018, conference in Madrid the capital of the country.

Since the First Carbon meeting in 1953 in Buffalo USA, where only four papers were presented, the Carbon family has grown a lot and this week we will have the chance to attend more than 800 presentations. We have received 706 participants from 55 different countries of all continents, more than 200 being students.

The motto chosen for this edition was "Bonded by Carbon", which symbolized the organizers' desire that once again the carbon scientific community have found the opportunity to share knowledge and experiences in the conference and to build new collaborations.

Plenary lectures have been delivered by Research Prof. Menéndez, from the Spanish National Research Council, Prof. Cazorla from the University of Alicante, Prof. Gotgosi, from Drexel University, USA, Prof. Prato, Università di Trieste, Italy and Prof. Cheng from the Shenyang National Laboratory for Materials Science, China.

Prof. Menéndez talked about the “State of the art and future perspectives of traditional carbon materials and new carbon forms”. She has emphasized the recent discovery of new carbon forms such as graphene presages a revolution in the field, although she has mentioned that this expected tendency is still only observed at a scientific level. An interesting and detailed discussion of the worldwide evolution at an industrial and scientific level of traditional carbon materials and the new carbon forms has been presented.

Professor Cazorla plenary focused on “The surface (electro) chemistry of carbon materials about the role of oxygen and nitrogen heteroatoms”. He has summarized all they have learnt about Surface Electrochemistry of carbon materials, focusing in O and N functionalities, paying special attention to: electrical conductivity, wettability, electroactivity and reactivity with the electrolyte and the solvent.

Professor Gotgosi talked about “Transformative synthesis of carbon based materials from graphene to nanotubes and Mxenes”. His plenary provided fundamental insights and describe approaches to realizing non-equilibrium carbon materials via solid state transformation of carbides. Examples of electrochemical energy storage applications were presented. Professor Prato plenary focused on the “Synthesis, Properties and Applications of functionalized Carbon Nanoforms”. He presented the organic functionalization of various types of nanocarbons, including carbon nanotubes, fullerenes and, more recently, graphene and carbon nanodots. The chemical functionalization represents an important and versatile tool for tuning the chemical and physical properties of carbon nanostructures (CNS).

Professor Cheng talked about the “Graphene Materials: Fabrication and Use in Electrochemical Energy Storage”. They have fabricated different types of graphene materials, such as graphene oxide (GO), reduced GO, graphene nanosheets, graphene films and single crystal domains, and 3D graphene networks, and from them they have prepared various graphene -based hybrid electrode materials by mechanical mixing, coating, hydrothermal deposition, and in-situ synthesis. These hybrid electrode materials showed desirable electrochemical properties in terms of long cycling life, good high rate capability, and high reversible capacity.

This conference has also included an awards ceremony, where the merit of our colleagues will be acknowledged by different associations. What's more 3 satellite courses have been organized. As well as that, the participants have the opportunity to present their communications to be published in one of the special issues of the journal: Carbon, Electrochimica Acta and Nanomaterials.

I hope our participants had experienced an unforgettable week in Madrid and we hope they had time to discuss and interact with one another, as well as to visit the city.



María Jesús Lázaro

President of the Spanish Group of Carbon

Chair of the Carbon 2018 Conference