

Preface

The present issue collects a number of works presented at the 2nd National Congress on Fuel Cells, CONAPPICE 2006, held in Madrid from 18 to 20 October 2006. This congress is a biannual event organised by the Spanish Fuel Cells Association (APPICE), with the intent to create a meeting place for researching groups, technology centres, companies and institutions, with an interest in fuel cells. More than 100 communications were presented from a similar number of groups, gathered, after a reviewing process by the Scientific Committee, in a *Book of the Congress* (APPICE, ISBN 84-690-1309-2, Madrid, 2006). This number supposes a 25% increase respect to the first edition (CONAPPICE 2004), which reflects the still growing interest of this technology in Spain, probably in the same way as occurring in the international community. It is also a satisfaction the registered increase of participation from groups of neighbouring countries, Portugal, France, Switzerland, Germany, UK, among others, and many of them in a collaborative work with Spanish groups.

The congress was divided in five themes, namely High Temperature Fuel Cells, Low Temperature Fuel Cells, Fuels, Systems and Generalities, covering ample scope, from basic research (materials, reactions, electrocatalysis, processes), development of components and devices, fuel reforming, hydrogen generation and storage, demonstration projects, normalization, and initiatives of public and private institutions. There were three invited lectures given by J.T.S. Irvine (St. Andrews University, UK), G.G. Scherer (Paul Scherrer Institute, Switzerland) and J. Hoffmann (Siemens, Germany) that served as introductory remarks to each congress day topic.

The works presented in CONAPPICE 2006 have given an overview of the state-of-the-art of fuel cell, with some lat-

est advances. Also the issues of becoming a generalised and established technology were addressed, as well as possibilities and directions of future development. It is recognised that the advanced concept, although not new, of energy conversion in a fuel cell, is nowadays a necessary chain link in a desired clean, efficient and secure energy future. However, it must rely on materials with superior characteristics in terms of chemical, thermal and transport properties, and catalysis selectivity, notwithstanding affordable cost. As a conclusion, an important basic research effort may be necessary at this moment, accompanying the demonstration projects that are showing the real capabilities of this technology through out the world, but still only possible to a restricted scale.

Finally, the Organising Committee wants to thank to delegates and invited lecturers for their high quality participation, and to the sponsors and collaborating entities for their interest. Also thanks are due to the Scientific Committee for their work in the reviewing process and to JPS for the launch of this special issue. We hope that CONAPPICE 2006 has contributed to the dissemination of these technologies and, why not, to fostering new fuel cell activities in Spain.

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