



Preface

The *High Energy Density Electrochemical Power Sources* workshop was held from 17 to 20 September 2003 in the Hotel Negresco, Nice, France. The meeting benefited by a prestigious scientific sponsorship, which included the *US Army – Communications Electronics Command (CECOM)*, *US Air Force – European Office of Aerospace R&D (EOARD)*, *US Navy – Office of Naval Research International Field Office (ONRIFO)*, *Délégation Générale à l'Armement (DGA)*, *Centre National de la Recherche Scientifique, Université de Provence (UP)*, *Région Provence-Alpes-Côte d'Azur*.

The *High Energy Density Electrochemical Power Sources* workshop was the second organized by Marcelle Gaune-Escard in this field, with a goal of evaluating the status of current R&D on Li-ion batteries, fuel cells and metal-air batteries and future directions. The previous workshop was held in Rethymnon, Crete (October 2000). At the time of the Rethymnon workshop (which was attended by over 35 scientists from most of the key academic and industrial laboratories from all over the world) it was suggested that future workshops should be expanded to include a variety of low and high power systems, and power conditioning. Over 50 scientists attended the *High Energy Density Electrochemical Power Sources* workshop in Nice, clearly demonstrating the consistently increasing interest in the fields of Li-ion batteries and fuel cells. More than 35 papers were presented at the meeting covering various aspects of research and technology for lithium batteries, supercapacitors, and fuel cells.

The interest in lithium batteries is certainly motivated by the rapidly expanding commercialisation in the consumer electronics market and by their expected extension in the electric vehicle area. However, although a commercial success, lithium batteries are still the object of intense research and development, thus also favouring a large academic

involvement in the field, mostly directed in the investigation of new electrode and electrolyte materials.

The interest in fuel cells is also motivated by the commercialization potential in addition to military systems. Topics ranged from hydrogen storage, to direct methanol fuel cells, fuel reforming, air cathodes and high temperature systems.

The scientific program was organized by the chairperson, Marcelle Gaune-Escard (Ecole Polytechnique Universitaire de Marseille), with the help of a highly qualified International Scientific Advisory Committee composed of M. Amiet, (DGA, France), R.T. Carlin (Office of Naval Research, USA), H. Catherino (ERO/ARL, London, UK), H. Eudeline (SAFT, Poitiers, France), L. Ferreiro, (ONRIFO, London, UK) M.A. Hendrickson (US Army, CECOM, USA) B. Lakeman, (DSTL, UK) E.J. Plichta (US Army CECOM, USA), W. Donaldson (EAORD, London, UK) M. Salomon (Max Power Inc., USA) and B. Scrosati (University of Rome, Italy).

Last but not least, the administration of the meeting was conducted efficiently by Joyce Bartolini (Ecole Polytechnique Universitaire de Marseille).

A selection of the papers presented at the *High Energy Density Electrochemical Power Sources* Workshop is presented in this Special Proceedings Issue of the Journal of Power Sources.

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