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Preface

Lead-acid batteries have been in use for more than 140 years now. A huge battery industry has been developed worldwide with annual production worth tens of billions US dollars. During the past 30 years, this industry has been automated and computerized, thus making the technological process highly productive and the end product very reliable and maintenance-free. Lead-acid batteries have been the preferred choice for all applications requiring chemical power source with high power or energy output. That is the reason why they have gained a market share of about 60% of the world production of secondary power sources. Lately, however, lead-acid batteries have faced a new challenge.

The LABAT'2008 conference was held at a time of serious energy crisis on a worldwide basis associated with the constantly increasing prices of crude oil. Automotive vehicles need a battery not only to start the engine and store reserve energy, but also to contribute to the power supply needed to propel the vehicle. Nowadays, there are millions of hybrid vehicles on the road, which use nickel-metalhydride batteries and have reduced the consumption of gasoline. Unfortunately, for the time being, the lead-acid battery does not meet the performance requirements for hybrid vehicle applications. This is the big challenge that our community of scientists and engineers has to take up and we all shall double our efforts to solve some purely physicochemical issues related to the lead-acid battery technology so as to make it fit for the energetic system of the hybrid electric vehicle.

The 7th International Conference on lead-acid batteries, LABAT'2008, was attended by 256 delegates from 43 countries from 5 continents. They were leading scientists from universities and research centers, as well as chief executives, technologists and engineers from battery companies worldwide. 51 of the originally submitted 62 papers were presented during the conference sessions devoted to various issues related to the science and technology of lead-acid batteries as well as to the progress and the latest achievements in the development of HEV batteries for high-rate partial-state-of-charge operation. The exhibition held throughout the time of the conference comprised 25 stands where battery manufacturing companies as well as suppliers of materials and equipment to the battery industry displayed their products and services. Advertisements and contact details of these companies are included in the Exhibitors' Almanac.

The conference attendance and the diversity of topics discussed during the conference sessions provided "an alloy" of scientific and technical knowledge on lead-acid batteries and evidenced continuous progress and successful development of the oldest electrochemical power source, despite the suspended funding by public

institutions and international organizations for research in the field.

LABAT'2008 was once again sponsored by the private Bulgarian battery company MONBAT Plc. The Organizing Committee extends its gratitude to the owners of MONBAT, brothers Atanas and Plamen Bobokovi, for their financial and technical support during the organization of the conference. The wide international attendance of LABAT'2008 is a result not only of the hard work of the Local Organizing Committee, but also of the great contribution of the members of International Advisory Committee who proposed interesting topics for discussion during the conference and also gave their suggestions for Gaston Planté Medal nominees. The organizers of LABAT'2008 offer their sincere thanks to all speakers and participants from all over the world who contributed to making LABAT'2008 an international event of world importance, a meeting place for friends and members of a community united by a common goal. As during the previous LABAT issues, this conference, too, was held in a creative, informal and friendly atmosphere, and all participants expressed their satisfaction with the work done and the time spent in Varna. They all said that they were going home charged with new ideas for their future work.

The faultless organization and the success of LABAT'2008 was once again due to the hard work and tireless efforts of all members of the Local Organizing Committee, mostly staff of the Department of lead-acid batteries at the Institute of Electrochemistry and Energy Systems of the Bulgarian Academy of Sciences. Special thanks are due to all of them for their devoted and assiduous work, both before and during the conference.

And last, but not least, special credit should be given to the hosts of LABAT'2008, Balkantourist and the staff of Grand Hotel Varna Resort & Spa., who provided excellent conditions for our work and for the pleasant and enjoyable stay of all delegates in this beautiful seaside resort.

The next LABAT conference will be held during the second week of June 2011 at the Bulgarian Black Sea coast again.

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