

## Preface

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Human activity is very much dependent on the lead/acid battery. For example, the 'automotive' design of the battery activates hundreds of millions of cars, buses, and trucks, while the 'stationary' design ensures the reliable operation of power stations, computer centres, and telecommunications networks. Quite simply, should the production of lead/acid batteries stop, then the quality of human life would suffer.

The ever-increasing importance of the lead/acid battery in contemporary life has created a world society of scientists, technologists, and manufacturers who energetically exchange details of new discoveries and developments in the field of lead/acid batteries. The contours of the science of lead/acid batteries have now been defined.

The last international scientific symposium on lead/acid batteries was organized by the Electrochemical Society five years ago in New Orleans, Louisiana, U.S.A. The delegates came from 13 countries and 44 papers were presented. Since then, a considerable body of new knowledge and experience has been gathered on the theory, the technology, the design, and the operation of lead/acid batteries. The main aim of LABAT '89 — an international conference on lead/acid batteries held in Bulgaria in May - June 1989 — was to review developments since the New Orleans symposium. This special issue of the *Journal of Power Sources* presents the proceedings of LABAT '89.

The LABAT '89 conference was attended by 280 delegates from 34 countries drawn from Africa, Asia, Australia, Europe and North and South America. Among the attendees were more than 35 general directors and presidents of companies, 32 professors from universities and research institutes, as well as many world-renowned scientists and manufacturers from the foremost lead/acid battery research and development establishments. Over 80 papers were delivered and were organized in 10 sessions of lectures, poster presentations, and panel discussions. The following topics were addressed: positive and negative plates; battery modelling; measurement of battery characteristics; sealed batteries; manufacturing technology and equipment; new applications; new lead power systems; regional overviews of market development.

The wide scope and popularity of LABAT '89 was the result of extensive international co-operation and participation in its planning and organization. The initiative for summoning the conference came from UNESCO's Commission for Europe and from Prof. Budevski, Director of the Central Laboratory of Electrochemical Power Sources (CLEPS) at the Bulgarian Academy of Sciences. The theme and scientific programme of the conference were determined by an International Advisory Committee consisting of scientists from 12 countries. The active participation of Dr D. A. J. Rand

from CSIRO, Australia, and Dr K. R. Bullock from Johnson Controls, U.S.A. (Chairman of the Electrochemical Society Symposium in New Orleans, 1984) deserves special mention. LABAT '89 also owed its success to the generosity of the sponsor companies Chloride Technical (U.K.), Neste Oy (Finland), Johnson Controls (U.S.A.), Grace GmbH (F.R.G.), and SK 'Akumulatori' (Bulgaria), as well as to the support of the Bulgarian Academy of Sciences. In this respect, the assistance of Mr D. Brown (Chloride Technical), Dr V. Iliev (SK 'Akumulatori') and Mr C. Pochhammer (Grace GmbH) is gratefully acknowledged.

The local organization of LABAT '89 was conducted by members of the Department of Lead/Acid Batteries of CLEPS. Special thanks are due to Dr G. Papazov, Mrs M. Gerganska, Mrs L. Bogdanova and Mrs B. Shopova for their indefatigable efforts in compiling, editing, and distributing all of the printed programmes, abstracts, and notices for the meeting, and to Dr T. Rogachev and Dr St. Ruevski for their dedication in running an extremely lively social programme.

In opening LABAT '89, Academician B. Sendov, the President of the Bulgarian Academy of Sciences, remarked on the overwhelming worldwide response to the event and suggested that this should encourage future meetings to discuss further the advancement of the lead/acid battery. As a consequence, the next international conference on lead/acid batteries — LABAT '92 — will be held in 1992, again in Bulgaria.

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