
Foreword

Following the success of the 1st and 2nd International Meetings on Lithium Batteries held at Rome and Paris, respectively, the 3rd Meeting was held at Kyoto in May 1986 and attracted some 240 scientists and engineers from 20 countries. The objective of the Kyoto Meeting was to discuss the theoretical, experimental, and engineering aspects of primary and secondary lithium batteries in order to gain a better understanding of their characteristics, and to continue their development through international cooperation.

Although several types of lithium batteries have entered the commercial market as lightweight and portable power sources, expansion of their use into heavy-duty applications requires research into solving many fundamental and technical problems. Various new compounds are promising candidate materials for lithium batteries. Current research indicates that inorganic compounds that react topochemically with lithium, conjugated polymers, etc., will be used for the positive electrode. New aprotic solvents and inorganic/organic compounds are expected to serve as electrolytes.

The topics under discussion at the Kyoto Meeting included:

- New depolarizers for primary and secondary lithium batteries
- Reaction mechanisms and kinetics of electrode processes
- Film formation and passivation of lithium
- Organic and solid electrolytes for lithium batteries
- Reliability and non-destructive methods for testing lithium batteries
- Safety and disposal of lithium batteries.

The state-of-the-art and future prospects of each of these topics were covered by 4 plenary and 18 keynote lectures. In addition, 68 contributed papers were presented as posters with ample time for lively discussion among delegates. The meeting concluded with a round-table discussion on "the future of lithium batteries" and included a summary of the results obtained from a questionnaire given to the delegates. I believe that this Meeting will stimulate further international cooperative research on lithium batteries.

At the end of the meeting, there was general agreement that Prof. R. R. Haering of the University of British Columbia would be invited to organize the next meeting at Vancouver, Canada, scheduled for 1988.

On behalf of the Scientific Committee, I thank all the speakers and the participants for their contributions.

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