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## Editorial

The inaugural issue of *Journal of Power Sources (JPS)* was published in July, 1976. For the first several years, the power sources which were most commonly the subject of contributed papers were lead-acid batteries, a variety of lithium cells and solid electrolyte cells (including sodium sulfur and solid oxide fuel cells). Applications most commonly in authors' minds appear to have been electric vehicles and load leveling.

As the decade and the century draw to a close, it is clear that great strides have been taken in the development of electrochemical power sources and that some subtle shifts in the applications have occurred. Recent years have seen the emergence of the nickel metal hydride system—unconsidered in 1976—and, within the substantial increase in literature addressing fuel cells, it is the PEM system that dominates, again having emerged from nowhere in 1976. Another major change has been the coming of age of lithium batteries from an embryonic stage which coincided with the birth of *JPS* to a thriving industry with some products established and others predicted.

The one power source that has been addressed consistently throughout the period is lead-acid. The number of papers published on this battery in the *Journal of Power Sources* is at an all-time high.

The evolution of battery R&D during the last quarter of the century has taken place against a backdrop of sharply increasing demand for energy storage in portable elec-

tronic equipment, in telecommunications, in uninterruptible power supplies, and with impetus from the beginnings of a new electric vehicle market. This evolution will continue and expand given the huge market potential for remote-area power supplies, and a major change in automotive batteries from 12 to 42 V with, possibly, a bifurcation into a power unit and an energy unit.

From a technical point of view, there is a strong and growing interest in high-rate power sources. For example, high-power batteries are required for hybrid electric vehicles and newer electrochemical technologies such as supercapacitors are being pushed strongly for a wide variety of applications.

The Editorial Board of the *Journal of Power Sources* plans to move with the times. Emerging subject areas will be addressed—by special issues and, perhaps, through the publisher organizing discussion meetings. The first of these 'hot' subjects to be addressed is high-rate power sources and plans are in place to publish a special issue on this topic during the course of 1999.

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