

## Status of Global Lithium Industry and Related Energy Storage Technologies

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### With Guest Lecturer James Kaschmitter

Chief Executive Officer

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This lecture will provide a perspective on different energy storage technologies and the challenges of commercializing them. In addition, the speaker will contrast the relative advantages and deficiencies of each of these technologies.

#### Topics will include:

- Review of his successful commercialization of lithium-ion batteries, micro fuel cells and supercapacitors
- Discussion of manufacturing facilities he built for energy storage devices
- Relative difficulties of commercializing energy storage technologies as compared with other technologies that the U.S. has enjoyed success in

Rechargeable energy storage presents a distinct new set of challenges that are somewhat outside of recent domains of experience in the U.S., and present a new challenge, particularly in light of the increasing flight of U.S. talent to non-technical disciplines. Recent reports indicate that there are now 1,000 lithium-ion battery companies in China. Recognizing its strategic importance, and in response to recent U.S. government investments in rechargeable batteries, China's government is making an unprecedented investment in battery technology and manufacturing, particularly for electric vehicles. The speaker will give a perspective on China's rapid progress in this critical area.

Jim Kaschmitter is a distinguished "serial entrepreneur" establishing his first startup in 1972. Following graduate school at Stanford and an early a career in supercomputer and chip design in Silicon Valley, he became a lead engineer for the Strategic Defense Initiative Office (SDIO) "Star Wars Program" at Lawrence Livermore National Laboratory (LLNL), with responsibility for fault tolerant computers and image processing. In 1993 he co-founded PolyStor Corporation, the only domestic company at that point in time to have manufactured Li ion in high volume on U.S. soil with sales to several leading OEMs. He also founded PowerStor (electrolytic supercapacitors) and UltraCell (small portable methanol powered fuel cells).



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