Rethinking The Lithium-ion Battery Revolution Over Cost and Safety

For nearly two years, a team of former Chevrolet Volt and Toyota Prius engineers has been working on the next big thing in electric cars: the latest version of the 154-year-old lead-acid battery. Their aim is to build a battery strong enough to power a wider range of vehicles, something they think the current cutting-edge technology, lithium ion, cannot do cheaply, particularly given recent safety scares. The focus of Energy Power Systems on a technology older than the automobile itself illustrates the difficulty with lithium-ion batteries. While widely used in everything from laptops to electric cars and satellites, a number of high-profile incidents involving smoke and fire have been a reminder of the risks and given them an image problem. Many experts now believe it will take at least another decade for lithium-ion technology to be readied for widespread adoption in transportation. Interviews with two dozen battery executives, experts and researchers, including the founder of Securaplane, which made Boeing's battery charger, reveal an industry in which some are having second thoughts about using lithium-ion, and are instead looking to enhance previous technologies or to leap ahead. The lead-acid battery research is aiming for improved power in a smaller package.

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