

Toward improving the safety of Lithium-ion batteries

December 17 2007

After recalls and fires involving Lithium-ion batteries, battery manufacturers and scientists have launched an intensive effort to improve the safety of these rechargeable power packs found in dozens of consumer electronics products, according to an article scheduled for the Dec. 17 issue of *Chemical & Engineering News*, ACS' weekly newsmagazine.

In the article, C&EN Senior Editor Mitch Jacoby points out that fires and explosions involving Lithium-ion batteries are rare, occurring in anywhere from one in 1 million to one in 10 million batteries, according to the best estimates. Still, these widely-publicized incidents have worried consumers and forced costly recalls of millions of batteries.

Researchers in industry and academia do not fully understand why Lithium-ion batteries sometimes catch fire or explode, Jacoby notes. Possible explanations include impurities that short circuit the batteries and yet unidentified reactions that underlie the problem.

Nevertheless, researchers are exploring new battery materials, including components that generate less heat and reduce the risk of mishaps. Manufacturers are already selling or planning to sell safer Lithium-ion batteries for power tools and electric vehicles, with more improvements on the way, according to the article.

Link: pubs.acs.org/cen/science/85/8551sci1.html

Source: ACS

Citation: Toward improving the safety of Lithium-ion batteries (2007, December 17) retrieved 26 April 2024 from <https://phys.org/news/2007-12-safety-lithium-ion-batteries.html>

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