

Lithium Batteries Pose Serious Safety Risks to E-Bikes, Idle Electric Vehicles, and Power Banks, Warn Battery Experts

Battery experts issue an urgent warning regarding potential dangers associated with lithium batteries used in e-bikes, idle electric vehicles, and power banks.

CHIANG MAI, THAILAND, August 31, 2023 /EINPresswire.com/ -- In a critical endeavor to place

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Battery experts Post and Dr. Pecht aim to prevent further accidents

public safety at the forefront, we - Distinguished Prof. Michael Pecht of CALCE - University of Maryland, USA, a battery management electronic engineering team from Bangalore, India, and myself - are issuing this urgent press release to emphasize the imminent hazards linked to lithium batteries utilized in e-bikes, electric vehicles (EVs), and power banks.

Despite numerous earlier individual attempts to raise awareness about this critical issue, previous press releases (please refer to the provided links below) have unfortunately failed to gain the necessary traction. It has come to our attention that the lack of coverage may be attributed to our focus on solutions rather than adequately

highlighting the grave problems at hand.

To add insult to injury, manufacturers, in particular of low-end e-bike battery management systems and power banks, have shown reluctance to upgrade safety measures, solely due to market competition and profit margin considerations.

The following pressing concerns regarding lithium batteries must be urgently addressed:

1. [E-Bike Batteries](#):

Shockingly, each year, e-bike batteries are responsible for hundreds of deaths and thousands of accidents worldwide. The number of reported cases of battery explosions and fires exceeds 15,000 (the vast majority are registered by security cameras in [China](#)).

However, it is disheartening to note that by investing just a few euros per new e-bike battery, these risks could be largely mitigated.

2. Electric Vehicle Batteries:

Negligence towards safety monitoring during storage and transportation of EV batteries has led to alarming incidents, e.g. in parking garages. Most recently, a tragic event occurred North of the Netherlands where a ship was engulfed in flames, resulting in the destruction of 498 EVs.

This serves as a stark reminder of the urgent need to rectify this glaring problem. Implementing robust safety measures for EV batteries is imperative to safeguard lives and prevent further catastrophic accidents. The associated costs of implementing these measures are minimal compared to the potential consequences. It is worth mentioning that renowned battery expert and consultant, James Post, has long (at the 2012/2013 Battery Safety Conferences) recommended comprehensive safety monitoring for EV batteries not only during operation but also during standstill and transport.

3. Power Banks: The lack of robust safety monitoring practices for power banks, particularly with the (dominant) Chinese brands, is a significant concern. These portable power sources, now -in higher capacity versions- frequently used to charge laptops during travel, pose substantial risks if not adequately protected (against transients that may damage the safety system) and regulated.

Of particular concern is the aviation industry's allowance of up to 20 lithium batteries with a capacity of 100Wh each. This allowance is equivalent to carrying 4-5 e-bike batteries. It is crucial to recognize the potential risk if a seller brings 20 power banks on a sales trip while strictly adhering to regulations. A fire resulting from 20 power banks onboard an aircraft would likely exceed the crew's control. Implementing comprehensive safety monitoring measures for power banks, at a minimal cost per unit, can significantly reduce this risk. However, it is paramount to urgently revise the aviation industry's allowance for lithium batteries.

It has been observed that certain manufacturers, particularly those in the low-end market



Each year at Eurobike Academy, battery expert James Post teaches e-bike R & D staff how to improve battery design, with a focus on BMS-and thermal design, 2 traditional weak points with e-bike batteries. Key objectives are to achieve safer and longer life

segment, have been reluctant to voluntarily enhance safety measures for lithium batteries and power banks. This hesitation is primarily attributed to their concerns over market competition and profit margins.

It is evident that stricter governance and regulatory measures are essential to ensure consumer safety and prevent any potential accidents or hazards.

The aforementioned concerns are shared by Distinguished Professor Dr. Michael Pecht, the director of the renowned CALCE battery & electronics lab at the University of Maryland. Dr. Pecht emphasizes the urgency in addressing these issues, stating, "It is imperative that we take immediate action to tackle this pressing matter." For more information on Dr. Pecht's research and insights, please visit the CALCE battery research overview page at <https://calce.umd.edu/battery-research-overview>

The media's attention to this pressing issue is paramount.

By shedding light on the hazards posed by lithium batteries and highlighting the ethical dilemma faced by manufacturers prioritizing profits over public safety, we can foster the necessary change. Battery experts James Post and Distinguished Prof. Michael Pecht strongly emphasize the importance of addressing these dangers to prevent further accidents and loss of life.

By shining a spotlight on the hazards and the shame associated with those manufacturers, and prioritizing profits over public safety, we can foster the necessary change.

About James Post

- in professional electronics development, production, and projects since 1975, specializing in power electronics, communication and (embedded) software

- 10 years active in the e-bike industry; a promotor for battery safety monitoring and longer lifespan by giving lectures in Asia, USA and Europe (e.g. every year at the Eurobike Academy), training e-bike dealers and (later) their teachers, as well as publishing articles (portfolio Bike Europe: journa.com/james-post)

- At the Battery Safety Conference of 2012 and 2013, he pleaded for safety monitoring of EV batteries, both during operation and inactive use (e.g. transport). Safety monitoring during use is now common, but not during inactive use.

Note to Editors:

I kindly urge editors to not only consider the "publication value", but also the potential prevention of avoidable accidents and loss of life. In my personal opinion, the press holds a moral obligation to raise awareness about this issue and thus help to initiate the implementation of necessary solutions.

Additional information and requests for interviews via phone, chat, or video can be facilitated

upon your request. Please note that I am currently in the Thai timezone: 11 hours ahead of EST. Interviews are thus best arranged in the US early morning via james.post@ebikebattery.technology

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