The Deadly Lithium Ion Battery

Lithium ion batteries are blowing up, starting fires and, generally, destroying people's homes, cars, electronics and physical health. Boeing was ordered to stop flying the 787 Dreamliner because it's Lithium ion batteries are catching fire spontaneously.

A group of silicon valley venture capitalists forced/leveraged the government to buy and pay for these specific batteries (Silicon Valley billionaires own the lithium ion Cartel), in order to benefit their profit margins. Other batteries don't have these problems. Silicon Valley knew about this from day one, but those snarky billionaires put greed ahead of safety. There are thousands and thousands of reports of spontaneous lithium ion fires, but the Silicon Valley campaign billionaires, who back lithium ion, pay to keep this information hushed up.

Millions of these batteries have been recalled for fire risk. The VC's tried to dump as many of them as they could (into hoverboards and Musk's "home energy pack") before they got caught. Now they are caught. These VC's own stock in lithium mining companies in Afghanistan and really like the Afghan war.

These links show vast sets of Fisker electric cars that burst into flames just because they GOT WET:

http://updates.jalopnik.com/post/34669789863/more-than-a-dozen-fisker-karma-hybrids-caught-fire-and

http://green.autoblog.com/2012/08/12/fisker-flambe-second-karma-spontaneously-combusts-w-video/

http://www.autoblog.com/2012/11/05/how-sandy-may-have-set-17-plug-in-hybrids-on-fire/

http://www.digitaltrends.com/cars/fisker-karma-spontaneously-combusts/

http://cbdakota.wordpress.com/2012/11/07/fisker-karmas-catch-fire-following-inundation-by-sandy/

http://www.engadget.com/2012/08/12/fisker-karma-hyrbid-ev-second-fire/

http://www.techfever.net/2012/08/fisker-karma-hybrid-ev-ignites-while-parked/

http://evmc2.wordpress.com/2012/11/04/fisker-karma-fire-report/

http://fellowshipofminds.wordpress.com/2012/05/12/karma-burns-owners-mansion/

http://www.carbuzz.com/news/2012/11/1/Karmas-Ignite-After-Hurricane-Floods-Newark-Port-7711437/

There are hundreds of other links proving the point., ie: http://lithium-ion.weebly.com

Tesla Motors has filed a patent which states the following, THESE ARE TESLA MOTORS WORDS warning about a crisis, the level of which they never disclosed to the consumer:

"Thermal runaway is of major concern since a single incident can lead to significant property damage and, in some circumstances, bodily harm or loss of life. When a battery undergoes thermal runaway, it typically emits a large quantity of smoke, jets of flaming liquid electrolyte, and sufficient

heat to lead to the combustion and destruction of materials in close proximity to the cell. If the cell undergoing thermal runaway is surrounded by one or more additional cells as is typical in a battery pack, then a single thermal runaway event can quickly lead to the thermal runaway of multiple cells which, in turn, can lead to much more extensive collateral damage. Regardless of whether a single cell or multiple cells are undergoing this phenomenon, if the initial fire is not extinguished immediately, subsequent fires may be caused that dramatically expand the degree of property damage. For example, the thermal runaway of a battery within an unattended laptop will likely result in not only the destruction of the laptop, but also at least partial destruction of its surroundings, e.g., home, office, car, laboratory, etc. If the laptop is on-board an aircraft, for example within the cargo hold or a luggage compartment, the ensuing smoke and fire may lead to an emergency landing or, under more dire conditions, a crash landing. Similarly, the thermal runaway of one or more batteries within the battery pack of a hybrid or electric vehicle may destroy not only the car, but may lead to a car wreck if the car is being driven or the destruction of its surroundings if the car is parked. "WTF!!! THESE ARE TESLA MOTORS OWN WORDS

Tesla's own staff have now admitted that once a lithium ion fire gets started in one of their cars, it is almost impossible to extinguish burning lithium ion material.

In Fact, in the Malibu, California Tesla Fire the Tesla Driver was burned alive and his body rendered "unrecognizable" according to fire officials who found him melted into a ball of molten plastic, alloy and battery debris.

Telsa's own words in THEIR patent filing say that the risk is monumental. Tesla has 6800 lithium ion batteries, any one of which can explode and start a chain reaction! If you look at all of the lithium ion danger movies you will see how easy it is to set these things into failure mode. They even get more flammable as they age.

Imagine a car crash with a Tesla where these 6800 batteries get slammed all over and then exposed to rain, fire hose water, water on the roads, cooling system liquid.. OMG!!

LION batteries have already crashed a UPS plane and killed people. Look here: http://washingtonexaminer.com/dreamliner-fires-spark-new-doubts-about-a-green-energy-technology/article/2519353

Tesla and Fisker have only sold a few hundred cars, (thank god) because nobody but "douchebags and elitist dicks" want these overpriced Frat boy toys. A regular car company sells hundreds of thousands of cars per model.

Every single Tesla, or Fisker, sold increases the likelihood of a burn up. Those burn-ups will affect the homes, cars and lives of the people next door who never even bought one.

Go to http://www.youtube.com and type into the search window: "Lithium ion explosion" or "lithium battery and water" or "Ithium ion water" or "FAA lithium ion fires" and any related derivation and you will hundreds of videos about how dangerous these batteries are. There are numerous videos of Tesla's #18650 batteries blowing up.

This article in the LA Times sheds more light of the horrors of Lithium Ion: http://articles.latimes.com/2013/jan/18/business/la-fi-dreamliner-battery-20130119

Lithium Ion batteries "go thermal" in peoples pockets, in your notebook, especially in your Tesla and Fisker car and everywhere else. There are thousands and thousands of articles documenting this and there is a cover-up by the Silicon Valley billionaires that fund these things to keep this fact out-of-sight.

Making Lithium Ion batteries poisons the workers who make them. It is a dangerous product. Each time the workers, particularly in Asia, make lithium ion they are being poisoned by the factory where they make them.

Outlaw lithium ion batteries. Go to http://www.ntsb.gov and demand removal of lithium ion batteries from the market.

A Reminder that Lithium Ion Batteries Can Be Deadly



Rob Enderle |



As we ramped up to Christmas last year, a new product was catching the market on fire and then **catching pretty much everything else on fire**: hoverboards that used substandard lithium ion batteries. The hoverboards were eventually **pulled from many stores** and **barred from airplanes**. However, from time to time, smartphones catch fire and so do laptops. And given that I almost lost my house to a lithium ion battery on an electric bicycle, I'm particularly aware that any energy storage device mistreated or acting strangely could become deadly.

Now the odds of having this happen to you or an employee are relatively low, but the more batteries you have, and the higher their capacity, the larger those odds grow. There have been over <u>40 recalls</u> associated with lithium ion batteries in the last decade or so.

Considering that our vehicles, technology products, and even some homes and businesses are increasingly using lithium ion batteries, we should remind ourselves that this technology needs to be treated respectfully. This is what a **burning lithium ion battery looks like in a laptop** and **in a cell phone.** (It's amazing how much heat one of these things can put out.) Knowing what to do with these

batteries could save your life.

Don't Buy Aftermarket Batteries from Unbranded Suppliers

The problem with the hoverboards (other than the fact that they don't actually hover) is that they used low-cost substandard batteries and chargers. These low-quality products are **what are generally connected to fires**. In general, batteries from a branded supplier like Panasonic can be trusted but be aware of **counterfeit batteries** in the market that look like they come from a branded vendor and do not. Always buy from trusted suppliers, preferably from the firm that built the product that these batteries are going into. Do the same with the charger. A charger that charges too fast may overheat even a good battery and **cause it to fail catastrophically**.

Dispose of Batteries Properly

Lithium ion is hazardous waste but, more importantly, it has about a third of the energy density of dynamite. If it discharges quickly, it can do a lot of damage. Even in your trash, it can find enough combustible material to take out your business or house. It's best to keep the batteries separate, don't store them together in large numbers (so one battery doesn't set off a bunch of them), and dispose of them through a proper service. Many of the stores that sell these batteries will dispose of them for you and cities have places where you can drop them off for legal destruction or recycling. In particular, you don't want to put them into a trash compactor that could crush them or otherwise puncture them because that could result in a catastrophic failure, and under pressure with other flammable material, an explosion.

Isolate Them from Metal

The most obvious hazard for any battery is a short circuit. This means you don't want to store batteries around conductive material like metal or wiring. Again, don't store them together, and make sure they are stored away from flammable material and from anything that could cause them to short out.

If Dropped, Consider Replacing

Most laptop and cell phone battery fires are believed to occur as the result of some kind of physical damage. Most of the Tesla fires I've covered have resulted from something penetrating the battery containment (which is impressive on the Tesla). If you see damage around the battery, it's best to be safe and have it replaced. It's far better to incur the cost of a new battery than that of a home or car.

Replace the Battery if It Gets Wet

You can dry out your phone and use it if it gets wet, but if corrosion builds up on the battery, it could short out. Once water gets inside the battery case, it's particularly hard to both get it out and see if corrosion has started. Replacing the battery could help prevent an otherwise catastrophic outcome.

Careful with Charging

Charge batteries away from other flammable products and don't leave them charging for long periods unattended. If a battery appears to be overheating, remove it from the charger immediately, place it someplace safe (preferably on cement or something non-conductive and non-flammable). If the battery

deforms in any way, replace it because it's likely a cell has failed and there is an increased chance of explosion.

Wrapping Up

As the energy density in batteries is increased, so are the risks of catastrophic discharge. Poorly made batteries making it into the supply chain add to that danger. As it is with any technology that is potentially dangerous, learning how to handle lithium ion safely is important. Look for the warning signs of excessive heat or distorted batteries.

One last note: If you do have a lithium ion fire, don't breathe the fumes (they are toxic). Either let it burn itself out or use a Class D fire extinguisher (smothering may not work and using water on an electrical fire is very dangerous). If you can safely isolate the fire from everything else, do that, but keep yourself safe first. And when in doubt, replace the batteries.

A regular reminder to employees about the dangers of this technology and what to do if there is a problem would seem prudent as well.

Rob Enderle is President and Principal Analyst of the Enderle Group, a forward-looking emerging technology advisory firm. With over 30 years' experience in emerging technologies, he has provided regional and global companies with guidance in how to better target customer needs; create new business opportunities; anticipate technology changes; select vendors and products; and present their products in the best possible light. Rob covers the technology industry broadly. Before founding the Enderle Group, Rob was the Senior Research Fellow for Forrester Research and the Giga Information Group, and held senior positions at IBM and ROLM. Follow Rob on Twitter @enderle, on Facebook and on Google+