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By: Alexandru Pancescu, Hardware Editor

Batteries Based on Lithium-ion Cells Are Dangerous

The fundamental technology behind them is at fault



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The Web

Lithium-ion cells are very popular when it comes to producing batteries for cell phones and mobile computing systems as the technology behind them allows manufacturers to create batteries with quite a long functioning time per charge and the production price is lower than in the case of other technologies. But it looks like the very technology behind the batteries based on lithium-ion cells is dangerous as it has already been proven by numerous accidents and laptop and cell phone battery recalls. According to a [news site](#) that cites a number of Japanese experts like Masataka Wakihara from the Tokyo Institute of Technology, who is a governmental advisor concerning battery safety, the way laptop and cell phone batteries are made must be changed so the end product will be a more secure and robust battery for every day use. According to Kuniaki Tatsumi from the National Institute of Advanced Industrial Science and Technology, who is specialized in battery related research, "companies are less cautious about designing batteries with a focus on safety". Among the major manufacturers and vendors of lithium-ion cell based batteries there are two Japanese companies and one of them is Sony that entered this market in 1992. "Battery companies are still learning because the technology is young, but there is a fundamental flaw with the way lithium-ion batteries are currently designed and if the companies genuinely care about safety, they need to completely change their production methods. A lithium-ion battery is quite a dangerous little box of energy," Professor Wakihara said. As the Japanese manufacturers produced more than half of the total number of 2 billion batteries based on the lithium-ion technology that were sold on a global scale, it is very important to persuade them that the technologies behind the standard batteries must be improved. As operating systems and software applications become more and more complex and the hardware layer become more powerful and energy hungrier, the strain on batteries found in cell phones, laptops, notebooks and other mobile computing devices increased. These concerns about the safety provided by the batteries are based on a number of incidents where batteries found in laptops or cell phones overheated and burst into flames. Such incidents led to massive recalls issued by Sony, Nokia and others. Researchers from the Tokyo Institute of Technology say that it is possible to modify the current manufacturing technologies in order to get better and safer batteries. The answer is to cover the battery's electrodes in a solid polymer coating forming a structure that resists to higher operating temperatures. Sony already announced that a battery plant in Singapore will start manufacturing batteries based on those technologies.