
Nanotech Shows off 'Bullet-Proof' Graphene Battery

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A Nanotech Graphene-Powered Lithium-Ion Battery 18650 cell was shot by a 4.5BRA bullet at a speed of 2,917 feet per second.

The non-flammable qualities of Nanotech Energy's graphene-powered batteries have been demonstrated in a new abuse test.

A Nanotech Graphene-Powered Lithium-Ion Battery 18650 cell was shot by a 4.5BRA bullet at a speed of 2,917 feet per second. Despite the force of impact, the battery did not catch fire and even still held a charge.

In contrast, a rival commercial battery 18650 cell shot by a 4.5BRA bullet at a speed of 2,915 feet per second immediately burst into flames and no longer held a charge.



Commercial 18650 Li-Ion Battery versus Nanotech Energy's Graphene-Powered Li-Ion 18650 Battery in a bullet abuse test.

"In recent days and weeks, battery safety has been in the spotlight like never before. The recent high-rise apartment fire in NYC is just one of many fires that have been caused by traditional lithium-ion batteries. Battery technology is a significant part of the future of energy, but safety must be made paramount as we come to rely on it more as a society. This is exactly why we are pioneering safe battery solutions," said Dr. Jack Kavanaugh, CEO and chairman of [Nanotech Energy](#).

The results of the new abuse test reinforce earlier findings about Nanotech Graphene-Powered Lithium-Ion Batteries. In the summer of 2022, they outperformed standard lithium-ion batteries in two other tests.

In a nail test, traditional lithium-ion batteries reached temperatures of 700°C in a fraction of a second. In contrast, Nanotech Graphene-Powered Batteries remained intact, with no fire, no explosion, and only a small hole in the battery cell.

In a heat test, both batteries were warmed to extreme temperatures. The traditional lithium-ion battery went through irreversible change and completely burned down at 150°C. In contrast, when a Nanotech Graphene-Powered Battery was heated to 150°C it kept its performance for nearly two hours. Even further heating the battery to 180°C caused cell venting, but no fires or explosions.

Read the [original article](#) on Manufacturing.