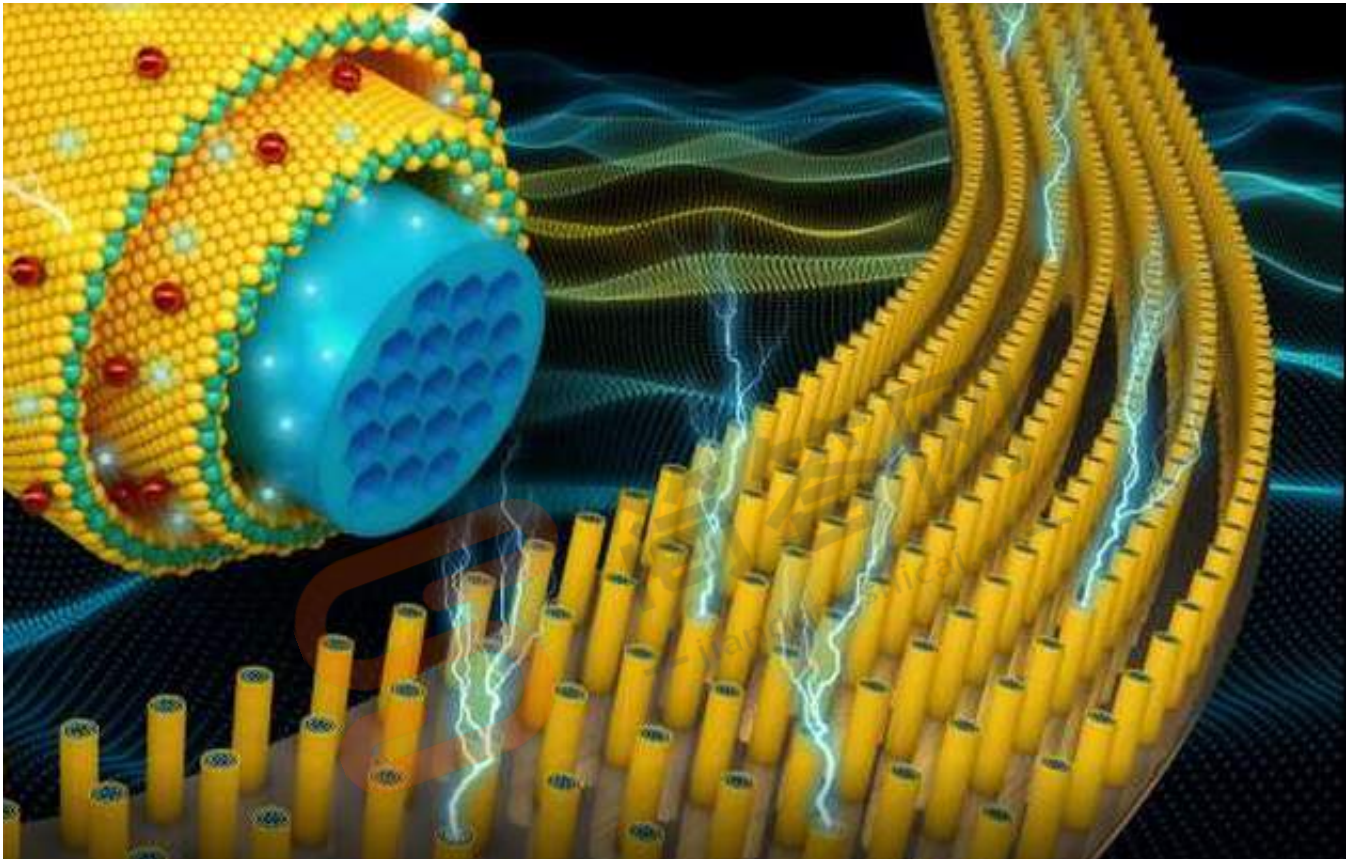


导读:智能手机用户对电池续航时间和充电时间的追求是无止境的。最新的手机电池技术来自美国中佛罗里达大学, 续航时间是当前锂离子电池的20倍。



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 ?????????????????????”UCF????Nitin Choudhary??

[illegible]

Fisker?UCLA????????????????

Yeonwoong Eric Jung from UCF says it's a challenge to integrate graphene with other materials used in supercapacitors, though. That's why his team wrapped 2D metal materials (TMDs) just a few atoms thick around highly-conductive 1D nanowires, letting electrons pass quickly from the core to the shell. That yielded a fast charging material with high energy and power density that's relatively simple to produce. "We developed a simple chemical synthesis approach so we can very nicely integrate the existing materials with the two-dimensional materials," Jung says.

[illegible]

The research is in early days and not ready for commercialization, but it looks promising. ""For small electronic devices, our materials are surpassing the conventional ones worldwide in terms of energy density, power density and cyclic stability," Choudhary said.

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Jung calls the research "proof-of-concept," and the team is now trying to patent its new process. If commercialized, it could allow for EVs that can be charged in minutes rather than hours, smartphones that can be charged in seconds, and home energy storage solutions will drastically reduce our reliance on fossil fuels.

[illegible]