

Super spider silk opens way to nano medical devices

September 10 2013

Scientists in the United States said on Tuesday they had coated spider silk with carbon nanotubes, creating a fibre that is not only super-strong but also conducts electricity.

The new thread is three times stronger than untreated [spider silk](#), which weight-for-weight is already one of the strongest substances in Nature, they reported.

The first mooted application is in nano-scale medical devices.

In tests, the prototype has been used as heartbeat monitor and as a piston, able to raise a relatively huge 35 milligrammes using electrical current and humidity to make the thread contract like a muscle.

The study, published in the journal *Nature Communications*, is led by Eden Steven of the National High Magnetic Field Laboratory in Tallahassee, Florida.

More information: Paper: [dx.doi.org/10.1038/ncomms3435](https://doi.org/10.1038/ncomms3435)

© 2013 AFP

Citation: Super spider silk opens way to nano medical devices (2013, September 10) retrieved 23 May 2024 from <https://phys.org/news/2013-09-super-spider-silk-nano-medical.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.