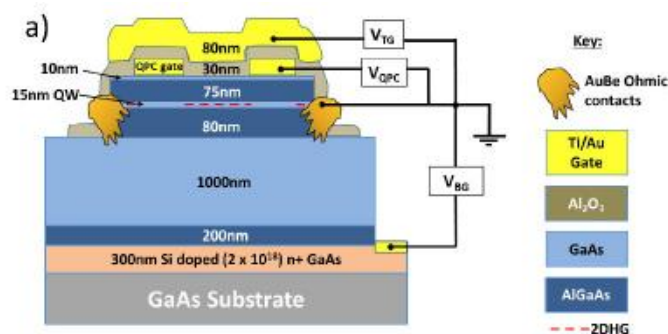


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Researchers classify the spin-orbit effects of holes confined to one dimension quantum wires

Electron 'holes' in semiconductors are very attractive for future spintronics devices due to their unique spin properties, but until now researchers did not have a good understanding of these spin properties. Researchers from Australia's UNSW have classified the spin-orbit effects of holes confined to one dimension for the first time.



The researchers started out by trying to explain a 2006 experimental result, that showed that in one-dimensional quantum wires, spin-splitting was extremely sensitive to the direction of the magnetic field, unlike electrons which are insensitive to the field direction. In the recent study, the researchers identified a new spin-orbit interaction factor caused by the holes' confinement to one dimension, and found that this new factor explained the 2006 experimental result.

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Posted: Nov 14, 2017 by [Ron Mertens](#)

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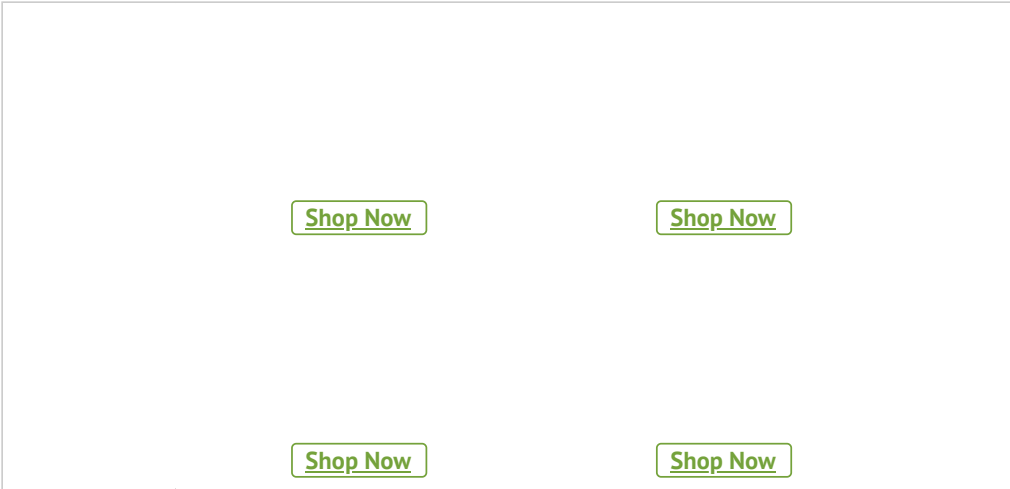
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