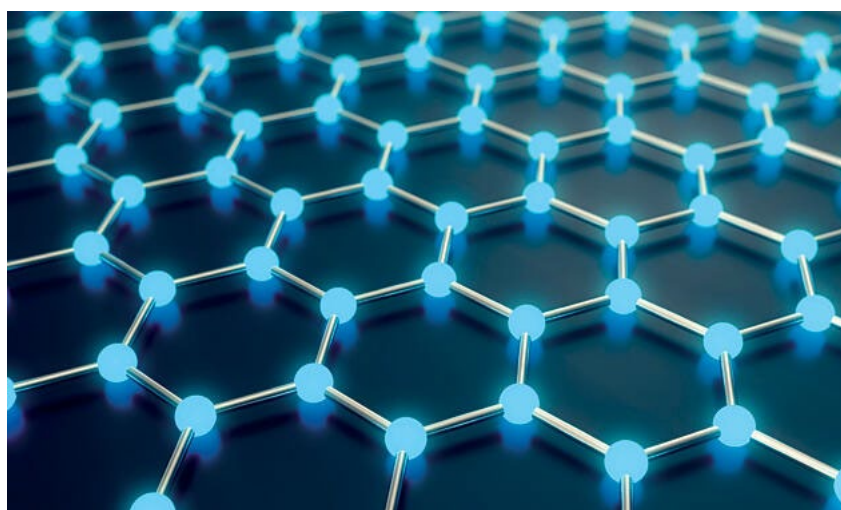


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Translated from Japanese

Discovery of quantum physics phenomenon that holds the key to creating innovative materials Nanyang Technological University, Singapore

Nanyang Technological University (NTU) in Singapore announced on November 26 that NTU researchers have discovered a quantum physics phenomenon that could lead to breakthroughs in a variety of fields, from computing to energy.



Topological materials, which allow electrons to flow across their surfaces, are promising quantum materials, but their quantum properties are not yet fully understood. Subatomic particles such as electrons have hexagonal geometric shapes and have van Hove singularities, which result in strong interactions between them when they are at certain energy levels. These interactions could give quantum materials desirable properties and lead to technological breakthroughs.

Assistant Professor Chang Guoqing from NTU's School of Physics and Mathematical Sciences and his colleagues have discovered that it is possible to tune the energy levels of the van Hove singularities of two topological materials, opening the door to engineering quantum materials with novel properties.

https://spap.jst.go.jp/asean/news/241204/topic_na_01.html