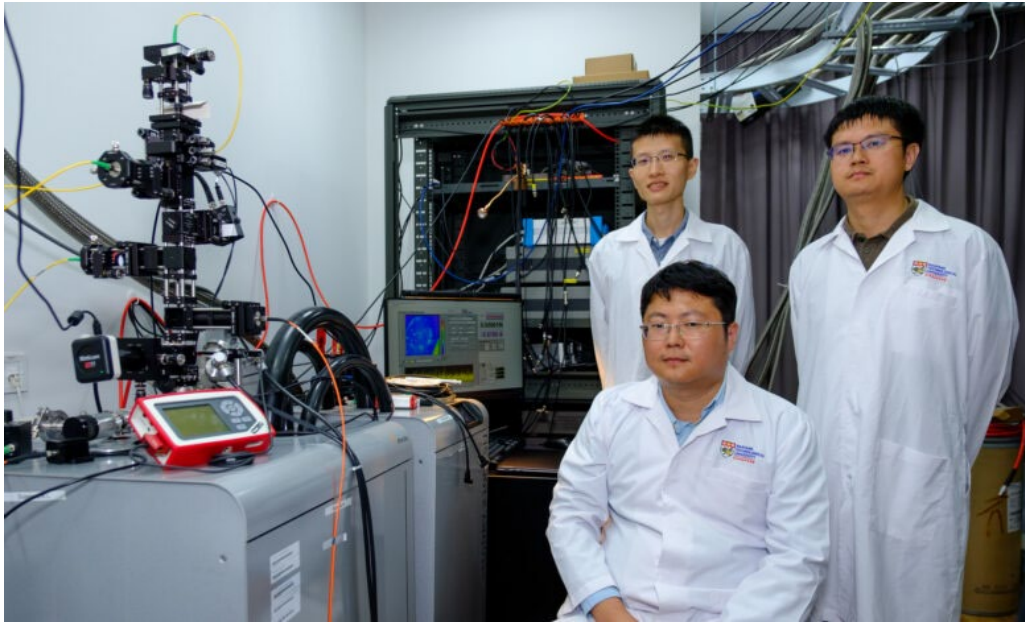


15 March 2026

Scientists Control Electric Currents with Light: A Breakthrough in Quantum Material Technology



Researchers at Nanyang Technological University (NTU) have introduced a method for controlling electric currents with light, addressing a significant challenge in the field of quantum materials. This advancement facilitates the manipulation of magnetic fields through optical beams, enabling the rapid and precise reversal of electron movement along the edges of these materials.

Innovative Technique for Electrical Control

By employing light for electrical control, this technique removes the need for physical wiring, allowing for more efficient operations without the requirement for large external apparatus. The study, which appears in the journal **Nature**, suggests new avenues for directing electricity through quantum materials and could contribute to developments in energy-efficient quantum computing technologies.

Implications for Future Technologies

The research underscores the effective use of optical techniques in materials science and indicates important implications for future technological advancements.

Source: Nanyang Technological University

<https://news.appliedhe.com/2026/03/15/scientists-control-electric-currents-with-light-a-breakthrough-in-quantum-material-technology/>