



Weekly News



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Quantum Computers Begin to Measure Up

Much of the progress so far in quantum computing has been done on so-called gate-based quantum computers. These devices use physical components, most notably superconducting circuits, to host and control the qubits. The approach bears similarity to conventional, device-based classical computers. But the Optical Quantum Computing Research Team at the RIKEN Center for Quantum Computing

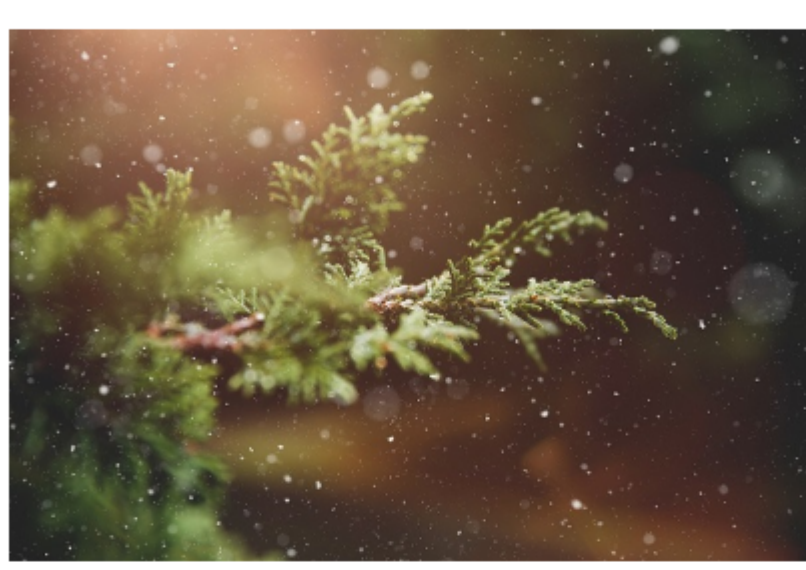
has been taking a very different approach. Instead of optimizing gate-based quantum computers, Atsushi Sakaguchi, Jun-ichi Yoshikawa and team leader Akira Furusawa have been developing measurement-based quantum computing.

[Read Article](#)



Researchers Create Terahertz-Permeable Aerogel Material

Researchers at Linköping University have developed an aerogel — one of the world's lightest materials — made of cellulose and a conducting polymer enabling the tuning of terahertz waves. Its absorption of terahertz signals can be switched on and off through a redox reaction. [Read Article](#)



Laser Light Sheet Unveils Snowflake Acceleration

To reach the ground, snowflakes are swept into the turbulent atmosphere, swirling through the air instead of plummeting directly to the ground. Determining snowflake fall speed is crucial for predicting weather patterns and measuring climate change. In order to study the acceleration of snowflakes in atmospheric turbulence, researchers from the University of Utah deployed a tracking system comprised of a laser light sheet and a single-lens reflex (SLR) camera. They found that regardless of turbulence or snowflake type, acceleration follows a universal statistical pattern that can be described as an exponential distribution. [Read Article](#)

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Latest Webinars



Laser Application for Display Manufacturing

Tue, Jan 16, 2024 10:00 AM - 11:00 AM EST

Displays are windows into the connected world as nearly every consumer device today has a display and a smartphone without one is impossible to imagine. To produce state-of-the-art displays lasers must be utilized, especially to create high-end and high-resolution designs. Dr. Oliver Haupt from Coherent focuses on OLED displays for smart phones as well as the adoption of OLED displays in the IT sector. He also addresses the incremental market opportunity for MicroLED displays from the very small range in AR to the very large 4K TV market. Finally, he explains how over the last few years more and more UV short wavelengths lasers have been required and implemented in production due to the display material combinations, increase of active display areas, and pixel sizes down to the micron level.

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