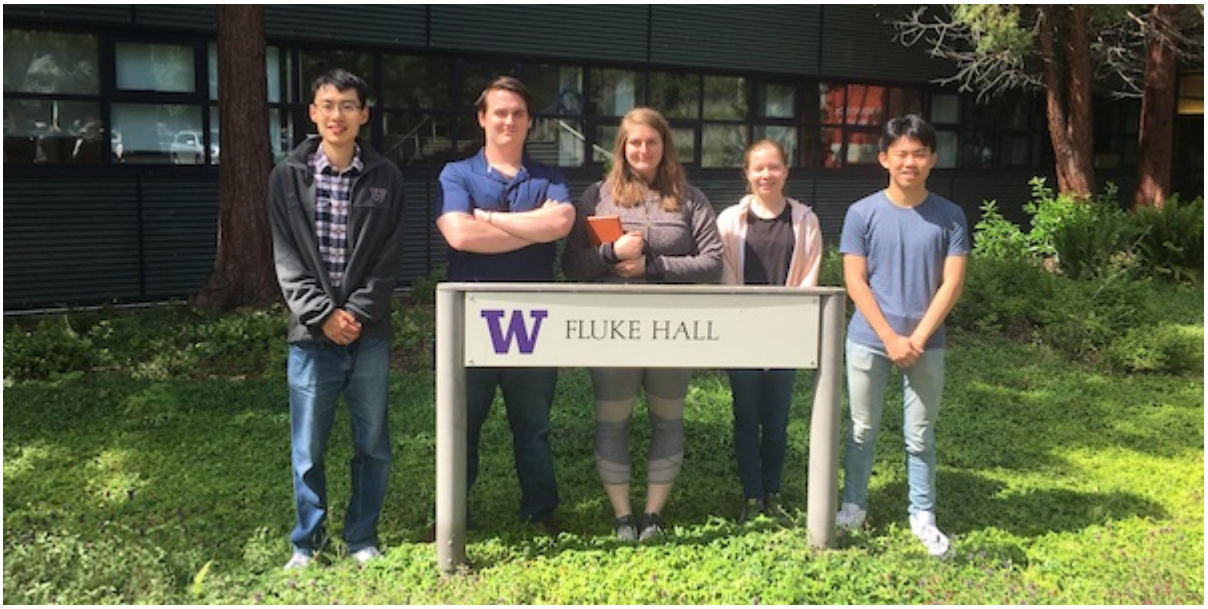
INSTITUTE FOR NANO-ENGINEERED SYSTEMS

FALL 2019

INSTITUTE NEWS

Functional materials expert joins NanoES

We are excited to welcome Mohammad Malakooti to UW as an assistant professor in mechanical engineering. Malakooti is developing new methodologies to synthesize and ultimately manufacture stable, mechanically robust, and functional nanomaterials that can be integrated into durable macrostructures in ways that harness their unique nanoscale properties. His research has the potential to impact printed electronic skin, multifunctional composites, integrated nanoscale devices, stretchable tactile sensors, among other emerging areas. Learn more about his research.

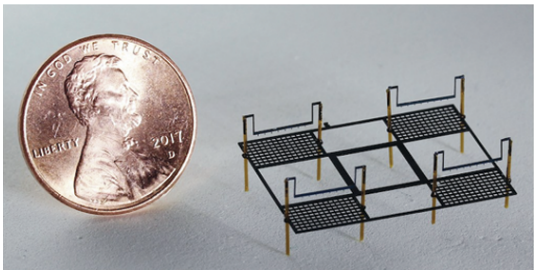


Encouraging the next generation of quantum pioneers

The UW initiative QuantumX awarded five undergraduate and master's students grants to fabricate nanoscale quantum devices at the Washington Nanofabrication Facility.

IN THE NEWS

WIRED



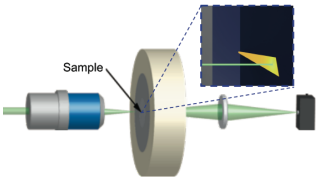
An Itty-Bitty Robot That Lifts Off Like a Sci-Fi Spaceship

WIRED magazine featured research from mechanical engineering professors Sawyer Fuller and Igor Novosselov in which they power tiny robots by accelerating ions instead of burning fuel or spinning rotors.

Defects Wanted; Apply Here: Q&A with UW Physicist

Kai-Mei Fu, professor of electrical & computer engineering and physics, recently sat down with *APS Physics* to discuss how properties of atomic defects in materials may enable quantum technologies for secure communication.

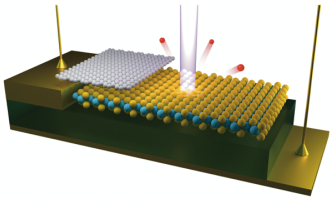
RESEARCH HIGHLIGHTS



Can lasers really cool semiconductors?

New analysis from Materials Science & Engineering Professor Peter Pauzauskie and colleagues calls into question a landmark 2013 study that claimed to demonstrate that a semiconductor could be cooled using light.

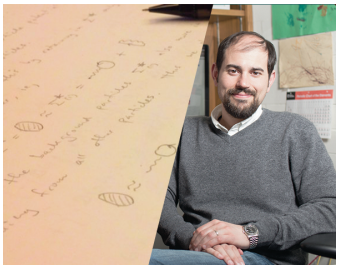
Nature



First-ever visualizations of electrical gating effects on electronic structure

Physicists David Cobden and Xiaodong Xu developed a new technique to measure the energy and momentum of electrons in microelectronic devices made of 2D materials.

Nature



Scientists can now control thermal profiles at the nanoscale

A team led by Professor of Chemistry David Masiello designed and tested an experimental system that uses a near-infrared laser to actively heat two nanoscale metal rods to different temperatures.

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