



The Quantum Science and Engineering (QSE)
program is proud to present:

“Advances in synthesis and quantum applications of 2D materials”

Dr. James Hone

James Hone is currently Wang Fong-Jen Professor and Chair of the Department of Mechanical Engineering at Columbia University.

He was director of Columbia’s Materials Science Research and Engineering Center (MRSEC) from 2014-2021. He received his BS in physics from Yale in 1990, and PhD in experimental condensed matter physics from UC Berkeley in 1998, and did postdoctoral work at the University of Pennsylvania and Caltech, where he was a Millikan Fellow. He joined the Columbia faculty in 2003.



Monday, December 4, 2023 from 11:00am-12:00noon
In-Person, Gore Hall- Room 315

ABSTRACT: 2D materials offer a unique opportunity to achieve new device functionality and realize novel quantum states. Synthesizing high-purity starting materials is key to achieving these goals. This talk will first describe recent advances in synthesis and doping of two-dimensional materials. In Our synthesis efforts focus on (1) growing ultra-pure crystals of transition metal dichalcogenides (TMDs), which show dramatic improvements in performance compared to commercially obtained TMDs; and (2) new strategies for graphene CVD synthesis that dramatically improve both speed, reproducibility, and quality.

This event is co-sponsored by the Departments of Physics and Astronomy, Materials Science and Engineering, Electrical and Computer Engineering, and

