



THE INSTITUTE FOR
MOLECULAR
ENGINEERING

Seminar Series

SPEAKER

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Cornell University



Graphene Kirigami

In the last few years, scientists and engineers have begun to borrow design principles from the paper arts of origami and kirigami.

Graphene, an extraordinarily strong atom-thick sheet, serves as an ideal starting material for bringing these design ideas down to the nanoscale. We have developed a technique to lift graphene into water, where we can manipulate it like a sheet of paper. The thermally stiffened graphene behaves like paper, which allows us to directly apply designs from the paper art of kirigami to create three-dimensional structures and moving parts. We demonstrate robust stretchable electrodes and extraordinarily resilient hinges. We show that we can control graphene devices directly with micro-manipulators or remotely with magnetic fields and lasers.

Friday, June 27th

12:00 PM GCIS W301

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