

# Scanning Tunnelling Microscopy of Twisted Transition Metal Dichalcogenides

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In this talk, I will focus on scanning tunnelling microscopy and spectroscopy experiments aimed at creating novel moiré structures by twisting 2D layers, including the demonstration of reversible local response of domain wall networks in ferroelectric interfaces of marginally twisted WS<sub>2</sub> bilayers and spectroscopic evidence of flat bands in antiparallel twisted WS<sub>2</sub> bilayers. I will also discuss our progress in realizing quantum-confined devices in WS<sub>2</sub> monolayers including demonstration of gate-defined quantum dots, charge detectors and 1D transport.

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Figures

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