

# PQS2D

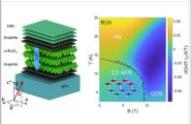
Programmable Quantum Simulators  
based on 2D Materials



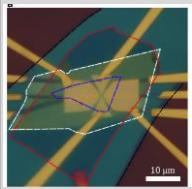
# NEWSLETTER

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## RESEARCH ADVANCES



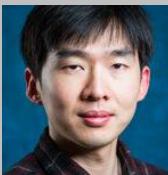
- **Massicotte group, Giant Anisotropic Magnetoresistance in Few-Layer  $\alpha$ -RuCl<sub>3</sub> Tunnel Junctions**, ACS Nano 2024, 18, 36, 25118–25127
- **Collaboration: Hawrylak, Gaudreau and Luican-Mayer groups Valley-spin polarization at zero magnetic field induced by strong hole-hole interactions in monolayer WSe<sub>2</sub>**  
Preprint: arXiv:2410.11653v1



## SEMINARS



October 3<sup>rd</sup>, 2024: **Dr. Marek Potemski, LNCMI-Grenoble, CNRS France** talked about the results of magneto-spectroscopy studies (Raman scattering, far- and near-infrared optics, EPR) on several representative layered antiferromagnets.



December 5<sup>th</sup>, 2024: **Prof. Ziliang Ye (UBC)** showed that such a hysteretic phenomenon can also occur in chemically synthesized rhombohedral molybdenum disulfide (3R-MoS<sub>2</sub>).

For more details, go to our [PQS2D website](#).

## ENGAGEMENT

- December 1<sup>st</sup>-6<sup>th</sup>, 2024: [2024 MRS Fall Meeting & Exhibit](#), Boston (USA). **Prof. Ziliang Ye (UBC)** presented the *Ferroelectric Switching of Light-Matter Interaction in Rhombohedral-Stacked MoS<sub>2</sub>*.
- November 3<sup>rd</sup>-8<sup>th</sup>, 2024: [AVS 70<sup>th</sup>](#), Tampa (USA). **Prof. Adina Luican-Mayer (uOttawa)** talked about the *Scanning Tunneling Microscopy Studies of Twisted Transition Metal Dichalcogenides*.

## HAPPY NEW YEAR!

We extend our best wishes to all co-applicants, collaborators, and trainees for a fantastic year ahead!



## PQS2D CO-PIS and PARTNERS ANNUAL MEETING

On September 26th, 2024, the co-applicants and partners met to discuss research milestones and explore potential collaborations. This meeting provided an excellent opportunity to maintain and strengthen their relationships.

