

# The 10<sup>th</sup> International Workshop on 2D Materials

## Day 1, July 5th Tuesday

Start from 8:00am @ Beijing time

9:00am @ Tokyo and Seoul time

Tencent Voov Meeting

<https://voovmeeting.com/dm/07UUcpAxFWyv> Meeting number: 818 079 671; Password: 380010

8:00-8:05 Host: Hongtao Yuan Opening remark 5 min

1 <sup>st</sup> session		Chair: Yoshihiro Iwasa		
8:05-8:45	Invited J1	<b>Electron microscopy and spectroscopy of 2D hybrid materials</b>	Kazu Suenaga	Osaka University
8:45-9:25	Invited K1	<b>Operando TEM investigation on the domain dynamics in 2D ferroelectrics</b>	Hyobin Yoo	Sogang University
9:25-10:05	Invited C1	<b>2D Layered MoSi<sub>2</sub>N<sub>4</sub> Family</b>	Wencai Ren	Institute of Metal Research

10:05-10:25 Group-Photo session and 20-min Break

10:25-10:45	YR-J1	<b>High-resolution micro-ARPES studies of monolayer VS<sub>2</sub> grown on bilayer graphene</b>	Tappei Kawakami	Tohoku University
10:45-11:05	YR-K1	<b>In-situ observation of dynamic changes of the graphene by STEM</b>	Hyunjeong Jeong	Ewha Womans University
11:05-11:25	YR-C1	<b>Lattice fluctuation induced pseudogap in quasi-one-dimensional Ta<sub>2</sub>NiSe<sub>5</sub></b>	Cheng Chen	University of Oxford

11:25-13:00 Lunch

2 <sup>nd</sup> Session,		Chair: Zhongkai Liu		
13:00-13:40	Invited J2	<b>Quasicrystals in twisted 2D systems</b>	Mikito Koshino	Osaka University
13:40-14:20	Invited C2	<b>Understanding cuprate electron correlations through 1D</b>	Zhuoyu Chen	Southern University of Science and Technology
14:20-15:00	Invited K2	<b>Field-tunable toroidal moment and anomalous Hall effect in noncollinear antiferromagnetic Weyl semimetal Co<sub>1/3</sub>TaS<sub>2</sub></b>	Je-Geun Park	Seoul National University

15:00-15:15 15-min Break

15:15-16:20	<b>Panel discussion : Future of 2D Materials</b> <b>Moderator: Prof. Hyeonsik Cheong</b>			
<b>Panel Talks</b> (5min each)	Je-Geun Park (Seoul National University) Hiroki Ago (Kyushu University) Yuanbo Zhang (Fudan University)			
<b>Open Discussion</b>	<b>Future of 2D Materials</b>			
16:20-16:30	10-min Break			
YR parallel session 1A Chair: Zhongkai Liu <a href="https://voovmeeting.com/dm/07UUcpAxFWyv">https://voovmeeting.com/dm/07UUcpAxFWyv</a> Meeting number: 818 079 671; Password: 380010				
16:30-16:50	YR-J2	<b>Tunnel coupled moiré lattice and electrically tunable Feshbach resonances in twisted bilayer semiconductors</b>	Yuya Shimazaki	Center for Emergent Matter Science, RIKEN
16:50-17:10	YR-K2	<b>Neuromorphic devices based on the electrochemical metallization in the ferroelectric material</b>	Chansoo Yoon	Konkuk University
17:10-17:30	YR-C2	<b>In-Gap States Induced by Distortion and Topology in Puckered Bismuthene</b>	Yanfeng Lyu	Nanjing University of Posts and Telecommunications
YR parallel session 1B Chair: Cheng Chen <a href="https://voovmeeting.com/dm/XR2JwIeTOKzI">https://voovmeeting.com/dm/XR2JwIeTOKzI</a> Meeting number: 365 049 457; Password: 855190				
16:30-16:50	YR-J3	<b>Ohmic current injection into single-crystal <i>h</i>-BN toward electrically-driven device applications</b>	Supawan Ngamprapawat	University of Tokyo
16:50-17:10	YR-K3	<b>First-principles study on twist-angle-dependent phonons and band edges from whirlpool-lattice distortions in MoS<sub>2</sub>/WSe<sub>2</sub> moiré heterobilayers</b>	Eunjung Ko	Korea Institute for Advanced Study
17:10-17:30	YR-C3	<b>Orbital-Selective High-Temperature Cooper Pairing Developed in the Two-Dimensional Limit</b>	Chaofei Liu	Peking University

---

**Day 2, July 6th Wednesday****Start from 8:00am @ Beijing time****9:00am @ Tokyo and Seoul time**

Tencent VooV Meeting

<https://voovmeeting.com/dm/nmDNP21X5SkV> Meeting number: 890 052 265; Password: 380010

1 <sup>st</sup> session		Chair: Hongtao Yuan		
8:00-8:40	Invited J3	<b>Nonlinear transport in 2D layered materials</b>	Yoshihiro Iwasa	University of Tokyo
8:40-9:20	Invited K3	<b>Direct photoemission from exciton insulator</b>	Han Woong Yeom	Institute for Basic Science
9:20-10:00	Invited C3	<b>Ultrathin high-<math>T_c</math> superconductors and Josephson junctions</b>	Ding Zhang	Tsinghua University
10:00-10:20		20-min Break		
10:20-10:40	YR-J4	<b>Signature of topological band crossing in ferromagnetic <math>\text{Cr}_{1/3}\text{NbSe}_2</math> epitaxial thin film</b>	Bruno, K. Saika	University of Tokyo
10:40-11:00	YR-K4	<b>Nitrogen Doping Engineering through <math>\text{NH}_3</math> Plasma Treatment for Enhancement Mode <math>\text{MoS}_2</math> Thin-Film Transistors</b>	Mingu Kang	Korea Advanced Institute of Science and Technology (KAIST)
11:00-11:20	YR-C4	<b>Tuning the magnetic anisotropy energy of <math>\text{Fe}_5\text{GeTe}_2</math></b>	Feng Qin	Nanjing University
11:20-13:00		Lunch		
2 <sup>nd</sup> Session,		Chair: Hyeonsik Cheong		
13:00-13:40	Invited J4	<b>Resonant tunneling through quantized subbands of few-layer <math>\text{WSe}_2</math> in van der Waals tunnel junctions</b>	Tomoki Machida	University of Tokyo
13:40-14:20	Invited K4	<b>Interface Band Engineering Toward High-Performance 2D van der Waals Electronics</b>	Chul-Ho Lee	Korea University
14:20-15:00	Invited C4	<b>Engineering near-infrared light emission in mechanically exfoliated <math>\text{InSe}</math> crystals through hydrostatic pressure for multicolor microlasing</b>	Qing Zhang	Peking University
15:00-15:20		20-min Break		
15:20-15:40	YR-J5	<b>Moiré exciton dynamics in van der Waals heterostructure</b>	Heejun Kim	Kyoto University

15:40-16:00	YR-K5	<b>Raman study on bilayer-monolayer MoS<sub>2</sub>/WSe<sub>2</sub> heterostructure</b>	Siwon Oh	Sogang University
16:00-16:20	YR-C5	<b>ARPES and STM study on the electronic structure of twisted bilayer WSe<sub>2</sub></b>	Ding Pei	ShanghaiTech University
16:20-16:40	YR-J6	<b>Rolling 2D sheets into 1D nanotubes by using nano-test-tubes</b>	Yusuke Nakanishi	Tokyo Metropolitan University
16:40-17:00	YR-C6	<b>Observation of anomalous amplitude modes in the kagome metal CsV<sub>3</sub>Sb<sub>5</sub></b>	Gan Liu	Nanjing University
17:00-17:10      Host: Hyeonsik Cheong      Closing remark 10 min				

### **Day 3, July 7th Thursday**

#### **Extended Tutorial Session:**

**Start from 8:30am @Beijing time**

**9:30am @Tokyo and Seoul time**

**Student Summer School Lectures (50 + 10 min each)**

Tencent VooV Meeting

<https://voovmeeting.com/dm/a9GTymwatt7G> Meeting number: 423 063 942; Password: 380010

Extended Tutorial Session		Chair: Hongtao Yuan		
8:30-9:30	Tutorial Lecture1	<b>Magnetism in two-dimensional materials</b>	Wei Ji	Renmin University of China
9:40-10:40	Tutorial Lecture2	<b>Freestanding Perovskite Oxides – a new playground for emergent low-dimensional correlated phases and electronic applications</b>	Yuefeng Nie	Nanjing University