

OSAKA-SYMLL Workshop

Time Table

2025 June 30 (Monday)

Morning Session with a Special Focus on

Altermagnetism *Chair Jaejun Yu*

10:00 Opening Remarks

by Kunihiko Yamauchi and Jaejun Yu

10:10 Dorj Odkhuu (Incheon National U)

Magnetism in Rutile-type oxide

10:40 Atsushi Hariki (OMU)

Magnetic Dichroism in Rutile NiF_2 :

Separating Altermagnetic and

Ferromagnetic Effects

11:10 **Break**

11:20 Sonny H Rhim (U Ulsan)

Off-stoichiometric surface

reconstruction in the altermagnetic

candidate $\text{RuO}_2/\text{Ru}(10\bar{1}0)$

11:50 Kunihiko Yamauchi (U Osaka)

Non-altermagnetic ground state and the

topologically protected surface states in

RuO_2

12:10-13:30 Lunch

Afternoon Session *Chair Sonny H Rhim*

13:30 Heungsik Kim (Kangwon National U)

Applying dynamical mean-field theory

for correlated materials

14:00 Myung Jun Han (KAIST)

Anisotropic Spin Hamiltonian

Generalized for NiPS_3

14:30 Kenta Kimura (OMU)

Large near-infrared directional

dichroism in olivine-type

antiferromagnets

14:50 Vu Thi Ngoc Huyen (Tohoku U)

Piezomagnetism in Noncollinear

Antiferromagnets

15:10 **Break**

15:20-17:05 Student talks [10+5 min]

Chair Thao Nguyen

1) Shunsuke Hirai (OMU, Suzuki G)

Study on Mechanism of Indirect-Direct

Transition in MoS_2 thin films using

Wannier model

2) Souichirou Kikuchi (OMU, Suzuki G)

Investigation of the electronic structure

origin of the piezomagnetic effect in

antiferromagnetic Mn_3Sn

3) Takumi Tsukihara (OMU, Suzuki G)

Optical anisotropy and electronic states of

the pleochronic material $\text{Ca}_3\text{ReO}_5\text{Cl}_2$

4) Andi Gumarilang (Mie U, Nakamura G)

Tailoring THz magnon frequencies in

multiple CrI_3/As stacking order via

exchange interactions: a first-principles

study

5) Andi M. N. F. Syamsul (Mie Univ,

Nakamura G)

Efficient Optimization of Interfacial

Structures in Lattice-Mismatched Fe/MgO

Interfaces Using Machine Learning and

DFT Integration

6) Ryoya Nakamura (OMU, Kimura G)

Observation of transverse magnetoelectric

response induced by ferroaxial rotation

7) Tseng Chih-Hsiang (Kyoto U, Karube G)

Generation of unconventional spin current

in altermagnet CrSb

18:00 - 20:00 Dinner

(Cuimotte, Nakanoshima)

July 1 (Tuesday)

Morning Session *Chair Junhyeok Bang*

10:00 Yoshitada Morikawa (U. Osaka)

Theoretical Study on Colossal
Permittivity of doped oxides

10:30 Young-woo Son (KIAS) [30min]

Ab initio extended Hubbard interactions
and their applications

11:00 **Break**

11:10 Thao Nguyen (U. Osaka)

Machine Learning-Based Hamiltonian
for Twisted van der Waals Materials

11:30 Susumu Minami (Kyoto U)

Strain band engineering for anomalous
Nernst effect

11:50-13:00 Lunch

Afternoon Session *Chair Tamio Oguchi*

13:00 Kunihiro Yananose (KIAS)

Octahedral chirality in two-dimensional
magnets

13:30 Younguk Kim (Sungkyunkwan U)

Replica Higher-Order Topology of
Hofstadter Butterflies in Twisted
Bilayer Graphene

14:00 **Break**

14:10 Student talks [10+5 min]

Chair Tamio Oguchi

14:10 Siti Amalia (U. Osaka, Sato G)

Strain-Driven Control of Electric
Polarization & Spin Splitting
in the Persistent Spin Helix State of
 XO_2Y_2 (X=W, Mo; Y=Cl, Br, I)
Monolayer

14:25 Harutaka Saito (U. Osaka, Sato G)

First-principles investigation of Cr^{3+} -
activated near-infrared phosphors

14:40 **Closing Remarks by Tamio Oguchi**

15:00 **Excursion to Osaka Castle**

**Venue: The University of Osaka,
Nakanoshima Center, Seminar room 7A**

*This workshop is supported by Center for
Spintronics Research Network,
Graduate School of Engineering Science,
The University of Osaka,
and JST-CREST
[Grant No. JPMJCR2202].*

