JULY 2 - Sunday

15:00-16:30	**Public Lecture** (Tentative) Quantum computer and quantum materials: present and future (Hanhee Paik)
16:00-20:00	Registration Open
18:00-20:00	Welcome Reception

JULY 3 - Monday

	Premier Ballroom A (2F)	Room 104 (1F)	Room 107 (1F)	Room 113 (1F)	Room 116 (1F)
08:00-08:30	Opening Ceremony				
08:30-09:15	Plenary Session 1 Sang-Wook Cheong				
09:15-10:00	Plenary Session 2 Annica Black-Schaffer				
10:00-10:30		Coffee Break			
10:30-12:00		01 Heavy Fermion systems 1	06 Theoretical models and methods for strong correlations 1	10 Quantum magnetism, skyrmions and frustration 1	18 Strong spin-orbit interaction in correlated systems 1
12:00-14:00		Lunch Break			
12:15-13:45		Poster Session 1 / Premier Ballroom C (2F) 01. Heavy fermion systems 02. Kondo effect and valence fluctuations 03. Strong correlations in actinides 04. CEF effects and multipolar ordering in SCES 05. Quantum phase transitions and related phenomena			
14:00-14:45	Plenary Session 3 Bogdan A. Bernevig				
15:00-16:30		01 Heavy Fermion systems 2	06 Theoretical models and methods for strong correlations 2	10 Quantum magnetism, skyrmions and frustration 2	18 Strong spin-orbit interaction in correlated systems 2
16:30-17:00		Coffee Break			
17:00-18:30		01 Heavy Fermion systems 3	06 Theoretical models and methods for strong correlations 3	10 Quantum magnetism, skyrmions and frustration 3	20 Materials and devices for qubits 21 Emergent phenomena at the nanoscale
18:30-20:30		Special Session I 30 years of SCES and Kondo physics			

JULY 4 - Tuesday

	Premier Ballroom A (2F)	Room 104 (1F)	Room 107 (1F)	Room 113 (1F)	Room 116 (1F)
08:15-08:30	Poster Award Ceremony				
08:30-09:15	**Plenary Session 4** Mona Berciu				
09:15-10:00	**Plenary Session 5** Stephen Hayden				
10:00-10:30		Coffee Break			
10:30-12:00		02 Kondo effect and valence fluctuations	06 Theoretical models and methods for strong correlations 4	10 Quantum magnetism, skyrmions and frustration 4	22 Materials design and novel advanced materials
12:00-14:00		Lunch Break			
12:15-13:45		**Poster Session 2 / Premier Ballroom C (2F)** 06. Theoretical models and methods for strong correlations 07. Non-equilibrium phenomena in strongly correlated systems 08. Unconventional superconductivity 09. Superconductivity in novel materials			
14:00-14:45	**Plenary Session 6** Youngwoo Son				
15:00-16:30		03 Strong correlations in Actinides 1	15 Dirac/Weyl semimetals and topologically nontrivial materials 1	10 Quantum magnetism, skyrmions and frustration 5	08 Unconventional superconductivity 1
16:30-17:00		Coffee Break			
17:00-18:30		03 Strong correlations in Actinides 2 04 CEF effects and multipolar ordering in SCES	15 Dirac/Weyl semimetals and topologically nontrivial materials 2	14 Correlated materials with geometrical peculiarity 1	08 Unconventional superconductivity 2
18:30-20:30		Special Session II Quantum materials: the future direction			

JULY 5 - Wednesday

	Premier Ballroom A (2F)	Room 104 (1F)	Room 107 (1F)	Room 113 (1F)	Room 116 (1F)
08:15-08:30	Poster Award Ceremony				
08:30-09:15	Plenary Session 7 Gertrud Zwicknagl				
09:15-10:00	Plenary Session 8 Qimiao Si				
10:00-10:30	Group Photo	Coffee Break			
10:30-12:00		05 Quantum phase transitions and related phenomena 1	15 Dirac/Weyl semimetals and topologically nontrivial materials 3	14 Correlated materials with geometrical peculiarity 2	08 Unconventional superconductivity 3
12:00-13:15		Lunch Break			
12:15-13:45		Poster Session 3 / Premier Ballroom C (2F) 10. Quantum magnetism, skyrmions and frustration 11. Metal-insulator transitions 12. Large research facilities and novel technique for SCES investigations 13. Devices and applications of SCES 14. Correlated materials with geometrical peculiarity 18. Strong spin-orbit interaction in correlated systems 19. Multiferroics and related materials			
14:00-14:45	Prize Ceremony Talk				
15:00-16:30		05 Quantum phase transitions and related phenomena 2	15 Dirac/Weyl semimetals and topologically nontrivial materials 4	07 Non-equilibrium phenomena in strongly correlated systems 1	08 Unconventional superconductivity 4
16:30-17:00		Coffee Break			
17:00-18:30		05 Quantum phase transitions and related phenomena 3	15 Dirac/Weyl semimetals and topologically nontrivial materials 5	07 Non-equilibrium phenomena in strongly correlated systems 2	08 Unconventional superconductivity 5
19:00-21:00		Banquet			

JULY 6 - Thursday

	Premier Ballroom A (2F)	Room 104 (1F)	Room 107 (1F)	Room 113 (1F)	Room 116 (1F)
08:15-08:30	Poster Award Ceremony				
08:30-09:15	**Plenary Session 9** Hongjun Gao				
09:15-10:00	**Plenary Session 10** Satoru Nakatsuji				
10:00-10:30		Coffee Break			
10:30-12:00		05 Quantum phase transitions and related phenomena 4	11 Metal-insulator transitions 1	07 Non-equilibrium phenomena in strongly correlated systems 3	12 Large research facilities and novel techniques for SCES investigations
12:00-14:00		Lunch Break			
12:15-13:45		**Poster Session 4 / Premier Ballroom C (2F)** 15. Dirac/Weyl semimetals and topologically nontrivial materials 16. Two dimensional materials 17. Fermi surfaces and electronic structure of correlated phase		20. Materials and devices for qubits 21. Emergent phenomena at the nanoscale 22. Materials design and novel advanced materials	
14:00-14:45	**Plenary Session 11** Philip Kim				
15:00-16:30		09 Superconductivity in novel materials 1	11 Metal-insulator transitions 2	16 Two dimensional materials 1	13 Devices and applications of SCES
16:30-17:00		Coffee Break			
17:00-18:30		09 Superconductivity in novel materials 2	17 Fermi surfaces and electronic structure of correlated phases 1	16 Two dimensional materials 2	19 Multiferroics and related materials 1

JULY 7 - Friday

	Premier Ballroom A (2F)	Room 104 (1F)	Room 107 (1F)	Room 113 (1F)	Room 116 (1F)
08:15-08:30	Poster Award Ceremony				
08:30-09:15	Plenary Session 12 Antoine Georges				
09:15-10:00	Plenary Session 13 Roser Valenti				
10:00-10:30		Coffee Break			
10:30-12:00		09 Superconductivity in novel materials 3	17 Fermi surfaces and electronic structure of correlated phases 2	16 Two dimensional materials 3	19 Multiferroics and related materials 2
12:00-13:00		Summary Talk: Exp. & Theory + Closing Ceremony			
13:00-18:30		Excursion			

Oral Presentation: MONDAY, July 3

01 Heavy fermion systems 1

MONDAY, July 3 — Room 104 (1F)

1-2472
10:30-10:55
INVITED

The Strange Metal $YbRh_2Si_2$
Silke Paschen
Vienna University of Technology, Austria

1-2466
10:55-11:10

Gapless Electronic Ground State in $Ce_3Bi_4Pd_3$
Gaku Eguchi
Technische Universität Wien, Austria

1-1618
11:10-11:25

Pressure and Field Driven Magnetic Instabilities in Ternary Yb2Pd2(In,Sn)
Tahir Rao Khan[1], Herwig Michor[1], Gianrico Lamura[2], Mauro Giovannini[3], Ernst Bauer[1]
[1]Technische Universität Wien, Austria, [2]CNR-SPIN Genua, Italy, [3]University of Genova, Italy

1-1171
11:25-11:50
INVITED

Hall Effect at Hidden Quantum Critical Point in $CeCoIn_5$
Soonbeom Seo[1], Tuson Park[2]
[1]Changwon National University, Korea, [2]Sungkyunkwan University, Korea

1-0263
11:50-12:05

^{75}As NMR Study on the Kondo Destruction QCP in CeNiAsO
Yongkang Luo
Huazhong University of Science and Technology, China

01 Heavy fermion systems 2

MONDAY, July 3 — Room 104 (1F)

1-0220
15:00-15:25
INVITED

Visualizing Topological Edge States in Strongly Correlated Materials
Lin Jiao
Zhejiang University, China

1-1364
15:25-15:40

Spectroscopic Evidence of Coexistence and Competition between Magnetism and Kondo Effect in $CeCoGe_3$ and MnSi
Yang Liu
Zhejiang University, China

1-0705
15:40-15:55

Revealing Sign-reversal s^{+-}-wave Pairing by Quasiparticle Interference in the Heavy-fermion Superconductor $CeCu_2Si_2$
Shan Zhao[1], Bin Liu[1], Yi-feng Yang[2], Shiping Feng[3]
[1]Beijing Jiaotong University, China, [2]Chinese Academy of Sciences, China, [3]Beijing Normal University, China

1-1744
15:55-16:20
INVITED

Observation of a Critical Charge Mode in a Strange Metal
Hisao Kobayashi[1, 2], Satoru Nakatsuji[3, 4], Yashar Komijani[5, 6], Piers Coleman[6, 7]
[1]University of Hyogo, Japan, [2]RIKEN SPring-8 Center, Japan, [3]The University of Tokyo, Japan, [4]Johns Hopkins University, USA, [5]University of Cincinnati, USA, [6]Rutgers University, USA, [7]University of London, UK

1-0945
16:20-16:35

Unveiling Multipole Ordering in PrV_2Al_{20} by Magnetostriction and Thermal Expansion

Akito Sakai[1], Satoru Nakatsuji[1, 2]
[1]*The University of Tokyo, Japan,* [2]*The Institute for Solid State Physics, Japan*

01 Heavy fermion systems 3

MONDAY, July 3 — Room 104 (1F)

1-1637
17:00-17:25
INVITED

Crystal Growth of Locally-noncentrosymmetric Compounds in the $CaBe_2Ge_2$-type Structure

Seunghyun Khim
Max Planck Institute for Chemical Physics of Solids, Germany

1-1110
17:25-17:40

Anisotropic Magnetotransport Investigation of the Quadrupole Density Wave Phase in the Multiphase Superconductor $CeRh_2As_2$

Sanu Mishra
Los Alamos National Laboratory, USA

1-1006
17:40-18:05
INVITED

Visualizing Quantum Well States at the Surface of the Heavy Fermion URu_2Si_2

Edwin Herrera[1, 2], Hermann Suderow[1, 2]
[1]*Universidad Autónoma de Madrid, Spain,* [2]*Instituto Nicolás Cabrera and Condensed Matter Physics Center, Spain*

1-0607
18:05-18:20

Single Crystal Growth and Precise Phase Diagram of Superconducting UTe_2

Hironori Sakai[1], Yoshifumi Tokiwa[1], Petr Opletal[1], Motoi Kimata[2], Satoshi Awaji[2], Takahiko Sasaki[2], Dai Aoki[2], Shinsaku Kambe[1], Yo Tokunaga[1], Yoshinori Haga[1]
[1]*Japan Atomic Energy Agency, Japan,* [2]*Tohoku University, Japan*

1-1881
18:20-18:35

Enhanced Anomalous Hall Effect Caused by Magnetic Fluctuation at the Vicinity of Field-Reentrant Superconductivity in UTe_2

Motoi Kimata[1], Yusei Shimizu[1], Ai Nakamura[1], Dexin Li[1], Yoshiya Homma[1], Shiori Sugiura[1], Fuminori Honda[2], Tahahiko Sasaki[1], Dai Aoki[1]
[1]*Tohoku University, Japan,* [2]*Kyushu University, Japan*

06 Theoretical models and methods for strong correlations 1

MONDAY, July 3 — Room 107 (1F)

6-1133
10:30-10:45

Multipole Groups and Fracton Phenomena on Arbitrary Crystalline Lattices

Daniel Bulmash, Oliver Hart, Rahul Nandkishore
University of Colorado Boulder, USA

6-1985
10:45-11:00

Relating Non-Hermitian and Hermitian Quantum Systems at Criticality

Po-Yao Chang
National Tsing Hua University, Taipei

6-2533
11:00-11:25
INVITED

Fractionalization and Dynamics of Excitations in Quantum Spin Liquids

Nandini Trivedi
The Ohio State University, USA

6-0624
11:25-11:40

Entanglement Signature of Hundness and Mottness

Jeongmin Shim[1], Jan Von Delft[1], Seung-Sup Lee[2]
[1]*Ludwig-Maximilians-Universität München, Germany,* [2]*Seoul National University, Korea*

6-0604
11:40-12:05
INVITED

Numerical Renormalization Group Method for Computing Resonant Inelastic X-ray Scattering Spectra

Seung-Sup Lee
Seoul National University, Korea

06 Theoretical models and methods for strong correlations 2

MONDAY, July 3 — Room 107 (1F)

6-2008
15:00-15:15

Many-body Interactions and Flat Bands

Sanghoon Lee[1,2], Ihor Vakulchyk[3], Carlo Danieli[4], Alexei Andreanov[1,2], Tigran Sedrakyan[5], Sergej Flach[1,2]
[1]*Institute for Basic Science, Korea,* [2]*University of Science and Technology, Korea,* [3]*Paper, Canada,* [4]*Sapienza University of Rome, Italy,* [5]*University of Massachussets, USA*

6-1826
15:15-15:30

Origin of π-shifted Three-dimensional Charge Density Waves in Kagome Metal AV3Sb5

Heqiu Li[1], Xiaoyu Liu[1,2], Yong Baek Kim[1,3], Hae-Young Kee[1,4]
[1]*University of Toronto, Canada,* [2]*University of Washington, USA,* [3]*Korea Institute for Advanced Study, Korea,* [4]*Canadian Institute for Advanced Research, Canada*

6-1990
15:30-15:55
INVITED

Exploration of Short-pitch Skyrmion Materials Based on First-principles Modeling

Ryotaro Arita[1,2]
[1]*The University of Tokyo, Japan,* [2]*RIKEN, Japan*

6-0378
15:55-16:20
INVITED

Ab Initio DMFT Methodologies for Correlated Quantum Materials

Byungkyun Kang[1], Patrick Semon[2], Andrey Kutepov[2], Mark Van Schilfgaarde[3], Siheon Ryee[4], Myung Joon Han[5], Walber Hugo Brito[6], Kristjan Haule[7], Gabriel Kotliar[7], Sangkook Choi[8]
[1]*University of Delaware, USA,* [2]*Brookhaven National Lab, USA,* [3]*King's College London, UK,* [4]*University of Hamburg, Germany,* [5]*Korea Advanced Institute of Science and Technology, Korea,* [6]*Universidade Federal de Minas Gerais, Brazil,* [7]*Rutgers University, USA,* [8]*Korea Institute for Advanced Study, Korea*

6-2160
16:20-16:35

Theoretical Study on the Electronic Structure and Spin Fluctuations of $Ba_{1-x}La_xFe_2As_2$

Hidetomo Usui[1], Daichi Anan[1], Hirofumi Sakakibara[2]
[1]*Shimane University, Japan,* [2]*Tottori University, Japan*

06 Theoretical models and methods for strong correlations 3

MONDAY, July 3 — Room 107 (1F)

6-2413
17:00-17:15

DFT+DMFT Calculations of Electronic Raman Scattering of Sr_2RuO_4

Germán Blesio
Jožef Stefan Institute, Slovenia

6-1393
17:15-17:30

Symmetry-Restoring Homotopic Action

Aaram Kim[1], Nikolay V. Prokof'ev[2], Boris V. Svistunov[2,3], Evgeny Kozik[4]
[1]*Daegu Gyeongbuk Institute of Science & Technology, Korea,* [2]*University of Massachusetts, Amherst, USA,* [3]*Jiao Tong University, China,* [4]*King's College London, UK*

6-1866
17:30-17:55
INVITED

Spin Excitation Spectra of Anisotropic Spin-1/2 Triangular Lattice Heisenberg Antiferromagnets

Tao Xiang, Runze Chi, Yang Liu, Yuan Wan, Haijun Liao
Institute of Physics, Chinese Academy of Sciences, China

6-1251
17:55-18:10

Multi-scale Space-time Ansatz for Correlation Functions of Quantum Systems Based on Quantics Representations

Hiroshi Shinaoka[1], Markus Wallerberger[2], Yuta Murakami[3], Kosuke Nogaki[4], Rihito Sakurai[1], Philipp Werner[5], Anna Kauch[6]
[1]Saitama University, Japan, [2]TU Wien, Australia, [3]RIKEN, Japan, [4]Kyoto University, Japan, [5]University of Fribourg, Switzerland, [6]TU Wien, Austria

6-1397
18:10-18:25

Finite-temperature Study of Correlations in a Bilayer Band Insulator

Yogeshwar Prasad[1,2]
[1]Kangwon National University, Korea, [2]Indian Institute of Science, India

10 Quantum magnetism, skyrmions and frustration 1

MONDAY, July 3 — Room 113 (1F)

10-0765
10:30-10:45

Multipolar Liquid in Spin-orbit Coupled d^2 Mott Insulators Tuned by the Magnetic Field

Hae-Young Kee
University of Toronto, Canada

10-0716
10:45-11:00

Spin Nematics Meet Spin Liquids: Exotic Phases in the Spin-1 Bilinear-Biquadratic Model with Kitaev Interactions

Rico Pohle
The University of Tokyo, Japan

10-0844
11:00-11:15

Ground States and Low-lying Excitations of an Extended S=1/2 Kitaev-Γ Model

Takafumi Suzuki[1], Matthias Gohlke[2], Jose (Carlos) Pelayo[2]
[1]University of Hyogo, Japan, [2]Okinawa Institute of Science and Technology, Japan

10-0324
11:15-11:30

Topological Quantum Dimers Emerging from Kitaev Spin Liquid Bilayer: Anyon Condensation Transition

Kyusung Hwang
Korea Institute for Advanced Study, Korea

10-1440
11:30-11:55
INVITED

Controlling Topological Phase Transitions of Kitaev Quantum Spin Liquids

Pureum Noh[1], Kyusung Hwang[2], Eun-Gook Moon[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Korea Institute for Advanced Study, Korea

10 Quantum magnetism, skyrmions and frustration 2

MONDAY, July 3 — Room 113 (1F)

10-1634
15:00-15:15

Dynamics of Fractionalized Spins in Quasi 2D Magnetic $V_{0.85}PS_3$

Vivek Kumar[1], Deepu Kumar[1], Birender Singh[1], Yuliia Shemerliuk[2], Mahdi Behnami[2], Bernd Büchner[2], Saicharan Aswartham[2], Pradeep Kumar[1]
[1]Indian Institute of Technology Mandi, India, [2]Leibniz-Institute for Solid-state and Materials Research, IFW-Dresden, Germany

10-1915
15:15-15:30

Spin Parity Effect in Monoaxial Chiral Ferromagnetic Chain

Sohei Kodama[1], Akihiro Tanaka[2], Yusuke Kato[1]
[1]The University of Tokyo, Japan, [2]National Institute for Materials Science, Japan

10-2550
15:30-15:45

Anomalous Hall Effect in Rare Earth Antiferromagnets with the Hexagonal Structures

Yoshichika Onuki[1,2], Kenri Nakaima[3], Wataru Iha[3], Shinya Matsuda[3], Dai Aoki[4], Ai Nakamura[4], Miho Nakashima[5], Yasushi Amako[5], Tetsuya Takeuch[6], Masato Hedo[3], Takao Nakama[3], Tatsuma D. Matsuda[1]
[1]Tokyo Metropolitan University, Japan, [2]RIKEN Center for Emergent Matter Science, Japan, [3]University of the Ryukyus, Japan, [4]Tohoku University, Japan, [5]Shinshu University, Japan, [6]Osaka University, Japan

10-2473
15:45-16:10
INVITED

Topological Transitions between Topological Spin Crystals Stabilized by Itinerant Frustration

Yukitoshi Motome
The University of Tokyo, Japan

10-2275
16:10-16:35
INVITED

Unveiling Dynamical Signatures of Dipolar-Octupolar Quantum Spin Ice

Yong Baek Kim
University of Toronto, Canada

10 Quantum magnetism, skyrmions and frustration 3

MONDAY, July 3 — Room 113 (1F)

10-1086
17:00-17:15

Magnetometric Exploration of the Phase Diagrams of Yb-based Delafossites

Sven Luther[1], Kizhake Malayil Ranjith Kumar[2,3], Tommy Kotte[1], Burkhard Schmidt[2], Philipp Schlender[4], Seunghyun Khim[2], Hiroshi Yasuoka[2], Yurii Skourski[1], Jochen Wosnitza[1,4], Thomas Doert[4], Michael Baenitz[2], Hannes Kühne[1]
[1]Helmholtz-Zentrum Dresden-Rossendorf, Germany, [2]Max Planck Institute for Chemical Physics of Solids, Germany, [3]Leibniz Institute for Solid State and Materials Research Dresden, Germany, [4]Technische Universität Dresden, Germany

10-0860
17:15-17:30

A Single Helicity of the Triple-q Magnetic Order in Magnetic Fields in Cubic Chiral Antiferromagnet EuPtSi

Takeshi Matsumura[1], Chihiro Tabata[2], Koji Kaneko[2], Hironori Nakao[3], Masashi Kakihana[4], Masato Hedo[4], Takao Nakama[4], Yoshichika Onuki[4,5]
[1]Hiroshima University, Japan, [2]Japan Atomic Energy Agency, Japan, [3]High Energy Accelerator Research Organization, Japan, [4]University of the Ryukyus, Japan, [5]RIKEN Center for Emergent Matter Science, Japan

10-0281
17:30-17:45

Dimensional Reduction and Incommensurate Spin Dynamics in the S=1/2 Triangular-lattice Antiferromagnet Ca3ReO5Cl2

Sergei Zvyagin
Helmholtz-Zentrum Dresden-Rossendorf, Germany

10-1946
17:45-18:10
INVITED

Spin Liquid Proximity and Fractionalization Signatures in $AYbSe_2$ Triangular Lattice Compounds

Allen Scheie
Los Alamos National Laboratory, USA

10-2438
18:10-18:35
INVITED

Complete Spectral Responses of Triangular-lattice Heisenberg Antiferromagnet

Stanislav Nikitin
Paul Scherrer Institute, Switzerland

18 Strong spin-orbit interaction in correlated systems 1

MONDAY, July 3 — Room 116 (1F)

18-2546
10:30-10:55
INVITED

Fractionalized Excitations and Spin-Orbit Excitons in the Ru-based Kitaev Candidate Materials

Kwang Yong Choi[1], Youngsu Choi[1], Seungyeol Lee[1], Je-Ho Lee[2], Dirk Wulferding[3], Beom Hyun Kim[4], Seung-Hwan Do[5], Yoshinori Imai[6], Kenya Ohgushi[6], Maeng-Je Seong[2]

[1]Sungkyunkwan University, Korea, [2]Chung-Ang University, Korea, [3]Institute for Basic Science, Korea, [4]Korea Institute for Advanced Study, Korea, [5]Materials Science and Technology Division, USA, [6]Tohoku University, Japan

18-0401
10:55-11:10

Unveiling the Co-3d Orbital and Spin State in $Ca_3Co_2O_6$ Using Synchrotron X-ray Diffraction

Kamini Gautam[1], Shunsuke Kitou[1], Arvind Yogi[2], D. K. Shukla[2], Arima Taka-hisa[1,3]

[1]RIKEN Center for Emergent Matter Science, Japan, [2]UGC-DAE Consortium for Scientific Research, India, [3]The University of Tokyo, Japan

18-0180
11:10-11:35
INVITED

Spin-orbit Coupled Dirac Fermions on a Honeycomb Lattice

Basudeb Mondal[1], Subhro Bhattacharjee[1], Vijay B. Shenoy[2]

[1]Tata Institute of Fundamental Research, India, [2]Indian Institute of Science, India

18-0352
11:35-11:50

Emergent Phenomena in Moderately Correlated Iridate Superlattices

Lin Hao

Hefei Institutes of Physical Science, Chinese Academy of Sciences, China

18-1153
11:50-12:05

Origin of Magnetism in Supposedly Non-magnetic $5d^1$ Osmium Oxide

Stefano Agrestini

Diamond Light Source, UK

18-2301
12:05-12:20

Comprehensive Magnetic Phase Diagrams of Kitaev Quantum Spin Liquid Candidate $Na_2Co_2TeO_6$

Minseong Lee

Los Alamos National Laboratory, USA

18 Strong spin-orbit interaction in correlated systems 2

MONDAY, July 3 — Room 116 (1F)

18-2154
15:00-15:25
INVITED

How Truly Strong is the Effective Spin-orbit Coupling in Iridates?

Sugata Ray

Indian Association for the Cultivation of Science, India

18-2395
15:25-15:40

A Surface-polarity-driven Valence-ordered Non-periodic Surface Reconstruction

Chi Ming Yim[1,2], Olivia Armitage[2], Dibyashree Chakraborti[2,3], Craig Wells[2], Seunghyun Kim[3], Andrew Mackenzie[2,3], Peter Wahl[2]

[1]Shanghai Jiao Tong University, China, [2]University of St Andrews, UK, [3]Max Planck Institute for Chemical Physics of Solids, Germany

18-0330
15:40-15:55

Direct Observation of Quantum Anomalous Vortex in Fe(Se,Te)

Y. S. Lin[1], S. Y. Wang[1], X. Zhang[2], Y. Feng[1], Y. P. Pan[1], , , , K. Liu[1], C. L. Zheng[1], K. Jiang[3], Y. F. Guo[2], Ziqiang Wang[4], Yihua Wang[1]

[1]Fudan University, China, [2]ShanghaiTech University, China, [3]Institute of Physics, Chinese Academy of Sciences, China, [4]Boston College, USA

18-0400
15:55-16:10

Relativistic Jahn-Teller Polaron in a Spin-Orbit Entangled and Strongly Correlated Oxide

Lorenzo Celiberti[1], Dario Fiore Mosca[2, 3], Leonid V. Pourovskii[2, 3], Anna Tassetti[4], Paola Caterina Forino[4], Roberto De Renzi[5], Giuseppe Allodi[5], Vesna Mitroviç[6], Eric Garcia[6], Rong Cong[6], Patrick Woodward[7], Samuele Sanna[4], Cesare Franchini[1, 4]

[1]University of Vienna, Austria, [2]Ecole Polytechnique de Paris, France, [3]College de France, France, [4]Alma Mater Studiorum - Università di Bologna, Italy, [5]University of Parma, Italy, [6]Brown University, USA, [7]The Ohio State University, USA

18-0771
16:10-16:25

Epitaxial Stabilization of New Honeycomb Quantum Magnet $Cu_3Co_2SbO_6$

Changhee Sohn

Ulsan National Institute of Science and Technology, Korea

20 Materials and devices for qubits
21 Emergent phenomena at the nanoscale

MONDAY, July 3 — Room 116 (1F)

20-1924
17:00-17:25
INVITED

Quantum Dot Josephson Junctions

Rok Zitko[1, 2]

[1]Jozef Stefan Institute, Slovenia, [2]University of Ljubljana, Slovenia

20-2269
17:25-17:40

Direct Observation of Quantum Tunneling of Magnetization in Ho Single Atom

Wonjun Jang[1, 2]

[1]Institute for Basic Science, Korea, [2]Ewha Womans University, Korea

20-0549
17:40-17:55

Universal Quantum Control of an Atomic Spin Qubit on a Surface

Yu Wang[1], Masahiro Haze[2], Hong T. Bui[1], We-hyo Seo[1], Andreas Heinrich[1], Soo-hyon Phark[1]

[1]Institute for Basic Science, Korea, [2]The University of Tokyo, Japan

21-2507
17:55-18:20
INVITED

Emergent Phenomena via Strain Engineering of 2D Materials

Tse-Ming Chen

National Cheng Kung University, Taipei

21-0654
18:20-18:35

Polaron Formation in $Eu_5In_2Sb_6$

M. Victoria Ale Crivillero[1], Sahana Rößler[1], M. S. Cook[2], Priscila F. S. Rosa[2], Mathias Doerr[3], Jens Müller[4], U. K. Rößler[5], Steffen Wirth[1]

[1]Max Planck Institute for Chemical Physics of Solids, Germany, [2]Los Alamos National Laboratory, USA, [3]Technical University Dresden, Germany, [4]Goethe-Universität Frankfurt am Main, Germany, [5]Leibniz Institute for Solid State and Materials Research Dresden, Germany

Special Session I 30 years of SCES and Kondo physics

18:30-20:30, MONDAY, July 3 Room 113 (1F)

S-2486
INVITED

From Resistance Minimum to Kondo Physics
Takashi Yanagisawa
National Institute of Advanced Industrial Science and Technology, Japan

S-1842
INVITED

Unconventional Superconductivity in the Kondo-Lattice System $CeCu_2Si_2$
Frank Steglich
Max-Planck-Institute for Chemical Physics of Solids, Germany

S-0573
INVITED

40 Years of SCES at Los Alamos
Joe D. Thompson
Los Alamos National Laboratory, USA

S-3001
INVITED

Early Theories of Strongly Correlated Electrons
Gertrud Zwicknagl
Technische Universität Braunschweig, Germany

S-1964
INVITED

Characteristic Fermi Surface Properties of Rare Earth and Actinide Compounds
Yoshichika Onuki
Tokyo Metropolitan University, Japan

Oral Presentation: TUESDAY, July 4

02 Kondo effect and valence fluctuations

TUESDAY, July 4 — Room 104 (1F)

2-2524
10:30-10:55
INVITED

Towards Experimental Confirmation of Two-channel Kondo Effects in Dilute $4f^2$ and $4f^3$ Electron Systems
Takahiro Onimaru
Hiroshima University, Japan

2-0438
10:55-11:10

Spin Exciton Excitations in Kondo in sulators at High Magnetic Fields
Peter Riseborough[1], Xiao Yuan[2]
[1]Temple University, USA, [2]Jiangsu University of Science and Technology, China

2-0278
11:10-11:25

Kondo Condensation and Holography in Highly Doped Si:P
HyunSik Im[1], SangJin Sin[2]
[1]Dongguk University, Korea, [2]Hanyang University, Korea

2-1713
11:25-11:50
INVITED

Magnetism and Superconductivity of Quasicrystals and Approximants
Kazuhiko Deguchi, Yuya Sakakibara, Yuki Nakamura, Taro Kuwano, Hiroki Taniguchi
Nagoya University, Japan

2-0911
11:50-12:05

Fabrication of Thermoelectric-power Measurement System under Extreme Conditions and Its Application to Mixed-valence Compound Golden-SmS
Keiichiro Imura[1], Yuki Ikeo[1], Kazushi Sakamoto[1], Noriaki Sato[2]
[1]Nagoya University, Japan, [2]Aichi Institute of Technology, Japan

03 Strong correlations in actinides 1

TUESDAY, July 4 — Room 104 (1F)

3-2268
15:00-15:15

Electronic Structure of Actinide Intermetallic Compound $ThRh_6Ge_4$: de Haas-van Alphen Study
Yoshinori Haga[1], Etsuji Yamamoto[1], Ai Nakamura[2], Fuminori Honda[3]
[1]Japan Atomic Energy Agency, Japan, [2]Tohoku University, Japan, [3]Kyushu University, Japan

3-1872
15:15-15:30

Magnetic Properties of Mixed Actinide Oxides
Eric Colineau
European Commission, Joint Research Centre, Germany

3-0745
15:30-15:55
INVITED

Resonant X-ray Scattering Study of the Nonmagnetic Order of 5f Electrons in a Pseudo-Kagomé Layered System URhSn
Chihiro Tabata[1], Fusako Kon[2], Hiroshi Amitsuka[2], Yusei Shimizu[3], Yoshiya Homma[3], Dai Aoki[3], Hironori Nakao[4]
[1]Japan Atomic Energy Agency, Japan, [2]Hokkaido University, Japan, [3]Tohoku University, Japan, [4]High Energy Accelerator Research Organization, Japan

3-1437
15:55-16:10

Preparation and Characterization of UTe_x Thin Films with Varied Composition
Evgenia Tereshina-Chitrova
Institute of Physics, Czech Academy of Sciences, Czech Republic

03 Strong correlations in actinides 2
04 CEF effects and multipolar ordering in SCES

TUESDAY, July 4 — Room 104 (1F)

3-2502
17:00-17:25
INVITED

Lifshitz Transitions and the High Field Fermi Surface of UCoGe
Alix McCollam
University College Cork, Ireland

4-2114
17:25-17:40

A Possible New Phase in Zero-field Region in Antiferro-quadrupole Ordered Phase of CeB_6
Takeshi Mito[1], Hiroki Mori[1], Keisuke Miyamoto[1], Taichi Tanaka[1], Yusuke Nakai[1], Koichi Ueda[1], Fumitoshi Iga[2], Hisatomo Harima[3]
[1]University of Hyogo, Japan, [2]Ibaraki University, Japan, [3]Kobe University, Japan

4-1670
17:40-17:55

Crystal Field Excitations in Quantum Spin Ice Candidate $Pr_2Zr_2O_7$: Dynamic Lattice Effects and Exotic Behavior of Spins in Magnetic Field H || [111] as Observed by Raman Scattering Spectroscopy
Natalia Drichko[1], Yuanyuan Xu[1], Huiyuan Man[1], Nan Tang[2], Li Xiang[3], Komalavalli Thirunavukkuarasu[3], Dmitry Smirnov[3], Satoru Nakatsuji[2]
[1]Johns Hopkins University, USA, [2]The University of Tokyo, Japan, [3]National High Magnetic Field Laboratory, USA

4-1010
17:55-18:10

Magnetocrystalline Anisotropy in $RCd_{1-6}Sb_2$ (R=Ce-Nd) Single Crystals
Vikash Sharma, Arumugam Thamizhavel
Tata Institute of Fundamental Research, India

4-0348
18:10-18:25

Vibronic Order and Emergent Magnetism in Cubic d^1 Double Perovskites
Naoya Iwahara[1], Liviu F. Chibotaru[2]
[1]Chiba University, Japan, [2]KU Leuven, Belgium

06 Theoretical models and methods for strong correlations 4

TUESDAY, July 4 — Room 107 (1F)

6-1897
10:30-10:45

Topological or not? A Unified Pattern Description in the One-dimensional Anisotropic Quantum XY Model with a Transverse Field
Yun-Tong Yang, Hong-Gang Luo
Lanzhou University, China

6-1326
10:45-11:00

Lieb-Schultz-Mattis Theorem for 1d Quantum Magnets with Magnetic Space Group Symmetries
Yuan Yao[1], Linhao Li[2], Masaki Oshikawa[2], Chang-Tse Hsieh[3]
[1]RIKEN, Japan, [2]The University of Tokyo, Japan, [3]National Taiwan University, Taipei

6-2559
11:00-11:25
INVITED

Drude Weights and f-sum Rules for Nonlinear Optical Conductivities
Masaki Oshikawa
The University of Tokyo, Japan

6-0629
11:25-11:40

Doped Mott Insulator on Penrose Tiling
Shiro Sakai
RIKEN, Japan

6-0978
11:40-11:55
Variational Equations of States for Strongly Interacting Quantum Hamiltonians
Wenxin Ding
Anhui University, China

15 Dirac/Weyl semimetals and topologically nontrivial materials 1

TUESDAY, July 4 — Room 107 (1F)

15-2469
15:00-15:25
INVITED
Flat Bands and Correlated Metallic States in Kagome Metals
Joseph Checkelsky
Massachusetts Institute of Technology, USA

15-0415
15:25-15:40
Switchable Chiral Transport in a Charge-ordered Kagome Superconductor
Chunyu Guo[1], Carsten Putzke[1], Sofia Konyzheva[2], Xiangwei Huang[2], Martin Gutierrez-Amigo[3], Ion Errea[3], Dong Chen[4], Maia G. Vergniory[4,5], Claudia Felser[4], Mark H. Fischer[6], Titus Neupert[6], Philip J. W. Moll[1]
[1]Max Planck Institute for the Structure and Dynamics of Matter, Germany, [2]École Polytechnique Fédérale de Lausanne, Switzerland, [3]University of the Basque Country, Spain, [4]Max Planck Institute for Chemical Physics of Solids, Germany, [5]Donostia International Physics Center, Spain, [6]University of Zürich, Switzerland

15-0760
15:40-15:55
Layer Number Dependence of Topological Properties in Thin Films of a Ferromagnetic Weyl Semimetal Co-Based Shandite
Kazuki Nakazawa, Yasuyuki Kato, Yukitoshi Motome
The University of Tokyo, Japan

15-0952
15:55-16:10
The Canting of Moments and the Intrinsic Origin of the Second Transition in $Co_3Sn_2S_2$
Ivica Zivkovic
École polytechnique fédérale de Lausanne, Switzerland

15-2487
16:10-16:35
INVITED
Energy Gaps and Correlations in Twisted Graphene Layers
Klaus Ensslin
Eidgenössische Technische Hochschule Zürich, Switzerland

15 Dirac/Weyl semimetals and topologically nontrivial materials 2

TUESDAY, July 4 — Room 107 (1F)

15-2211
17:00-17:15
Extraordinary Magnetotransport in Antiferromagnetic EuSnP
Dariusz Kaczorowski
Polish Academy of Sciences, Poland

15-2082
17:15-17:30
Quantum Anomalous Hall Insulator in Ionic Rashba Lattice of Correlated Electrons
Marcin Wysokiński
Institute of Physics, Polish Academy of Sciences, Poland

15-1260
17:30-17:55
INVITED
Anomalous Surface States of Magnetic Topological Materials
Bohm Jung Yang
Seoul National University, Korea

15-0729
17:55-18:10
Weyl-Kondo Semimetal Behavior in the Chiral Structure Phase of $Ce_3Rh_4Sn_{13}$
Kazuaki Iwasa
Ibaraki University, Japan

15-1691
18:10-18:25

Chern Dartboard Insulator: Sub-Brillouin Zone Topology and Skyrmion Multipoles

Yun-Chung Chen[1], Yu-Ping Lin[2], Ying-Jer Kao[1]
[1]National Taiwan University, Taipei, [2]University of California, Berkeley, USA

10 Quantum magnetism, skyrmions and frustration 4

TUESDAY, July 4 — Room 113 (1F)

10-2387
10:30-10:45

Correlated Partial Disorder in Weakly Frustrated Quantum Heisenberg Antiferromagnets

Matias Gonzalez
Helmholtz-Zentrum Berlin, Germany

10-0439
10:45-11:00

Translational Symmetry Broken Magnetization Plateau of the spin-1/2 Ferromagnetic and Antiferromagnetic Bond-Alternating Spin Chain with Competing Anisotropies

Toru Sakai[1,2]
[1]University of Hyogo, Japan, [2]QST SPring-8, Japan

10-1574
11:00-11:25
INVITED

Magnetic Frustration in Octahedral Lattices: Emergent Complexity in Applied Field

Mike Zhitomirsky
CEA, France

10-0581
11:25-11:40

Magnetic Hedgehog Lattices in Itinerant Magnets

Shun Okumura[1], Satoru Hayami[2], Yasuyuki Kato[1], Yukitoshi Motome[1]
[1]The University of Tokyo, Japan, [2]Hokkaido University, Japan

10-0148
11:40-11:55

The Bond-frustrated Helimagnet $ZnCr_2Se_4$ as a Spiral-spin-liquid Approximant

Dmytro S. Inosov[1], Y. V. Tymoshenko[1], Y. O. Onykiienko[1], A. Akopyan[2], D. Shukla[2], N. Prasai[2], M. Doerr[1], D. Gorbunov[3], S. Zherlitsyn[3], D. J. Voneshen[4], M. Boehm[5], J. Ollivier[5], V. Tsurkan[6], A. Loidl[6], J. L. Cohn[2]
[1]Technische Universität Dresden, Germany, [2]University of Miami, USA, [3]Helmholtz-Zentrum Dresden-Rossendorf, Germany, [4]STFC Rutherford Appleton Laboratory, UK, [5]Institut Laue-Langevin, France, [6]University of Augsburg, Germany

10-2497
11:55-12:20
INVITED

Majorana Fermions and Half-integer Thermal Quantum Hall Effect in a Quantum Magnet

Yuji Matsuda
Kyoto University, Japan

10 Quantum magnetism, skyrmions and frustration 5

TUESDAY, July 4 — Room 113 (1F)

10-2385
15:00-15:15

Metastable Skyrmion Lattice State in EuPtSi

Alexandre Pourret[1], Simon Rousseau[1], Gabriel Seyfarth[2], Georg Knebel[1], Pierre Dalmas de Reotier[1], Dai Aoki[3]
[1]Université Grenoble Alpes, CEA, Grenoble INP, France, [2]Université Grenoble Alpes, EMFL, CNRS, LNCMI, France, [3]Tohoku University, Japan

10-0446
15:15-15:30

Unravelling Complex Magnetic Textures in Topological Materials

Alessandro Bombardi[1], Anuradha Vibakar[1], Jaimie Moya[2], Shiming Lei[2], Dmtry Khalyavin[3], Emilia Morosan[2]
[1]Diamond Light Source, UK, [2]Rice University, USA, [3]ISIS Neutron and Muon Source, UK

10-1970
15:30-15:45

Engineering Antiferromagnetic Skyrmions and Antiskyrmions at Metallic Interfaces

Deepak Kathyat[1], Sanjeev Kumar[2]
[1]Nanyang Technological University, Singapore, [2]Indian Institute of Science Education and Research, India

10-1920
15:45-16:10
INVITED

Antiferromagnetic Skyrmion Lattices in Nature

Daniel C. Cabra
National University of La Plata, Argentina, Argentina

10-1305
16:10-16:35
INVITED

Stabilization Mechanism of Skyrmion Crystals in Centrosymmetric Metallic Magnets

Zhentao Wang
Zhejiang University, China

14 Correlated materials with geometrical peculiarity 1

TUESDAY, July 4 — Room 113 (1F)

14-2561
17:00-17:25
INVITED

Charge Density Wave in Kagome Superconductor AV_3Sb_5 (A = K, Rb, Cs)

Jae-Hoon Park
Pohang University of Science and Technology, Korea

14-1458
17:25-17:40

X-ray Diffraction on the Charge-density Wave in the Kagome Superconductor RbV3Sb5

Sabreen Hammouda
Forschungszentrum Jülich GmbH, Germany

14-0800
17:40-17:55

Unexpected Resistivity Minimum in a Highly-localized 4f-electron System

Zachary Podrebersek, Eundeok Mun
Simon Fraser University, Canada

14-0485
17:55-18:10

One-dimensional Static Short-range Orbital Order in Spin-glass Pyrochlore $Y_2Mo_2O_7$ Observed by Synchrotron X-ray Scattering

Shunsuke Kitou[1], Hitoshi Mori[1], Hikaru Fukuda[2], Kentaro Ueda[2], Yoshio Kaneko[1], Yuto Hosogi[3], Takeshi Hara[3], Yuiga Nakamura[4], Kunihisa Sugimoto[5], Yuichi Yamasaki[1,6], Hironori Nakao[7], Hajime Sagayama[7], Taishun Manjo[4], Daisuke Ishikawa[1,4], Alfred Q. R. Baron[1,4], Hiroshi Sawa[3], Ryotaro Arita[1,2], Yoshinori Tokura[1,2], Taka-hisa Arima[1,2]
[1]RIKEN, Japan, [2]The University of Tokyo, Japan, [3]Nagoya University, Japan, [4]Japan Synchrotron Radiation Research Institute, Japan, [5]Kindai University, Japan, [6]National Institute for Materials Science, Japan, [7]High Energy Accelerator Research Organization, Japan

14-2127
18:10-18:25

Novel X-ray Circular Dichroism in a Collinear Antiferromagnet on a Chiral Lattice

Jun Okamoto[1], Di-Jing Huang[1,2]
[1]National Synchrotron Radiation Research Center, Taipei, [2]National Tsing Hua University, Taipei

22 Materials design and novel advanced materials

TUESDAY, July 4 — Room 116 (1F)

22-2201
10:30-10:55
INVITED

Electric Field Control of Nanoscale Spin Systems in Piezoelectrics, Molecules, and on Surfaces

Arzhang Ardavan
University of Oxford, UK

22-1847
10:55-11:10
Surface and Interface Structural Properties of Nanomaterials
Yongsoo Yang
Korea Advanced Institute of Science and Technology, Korea

22-0561
11:10-11:25
Broken Helix and Anisotropic Magnetotransport Properties of a Eu-based Semimetal EuZnGe
Takashi Kurumaji[1], Masaki Gen[2], Shunsuke Kitou[2], Hajime Sagayama[3], Akihiko Ikeda[4], Taka-hisa Arima[1]
[1]The University of Tokyo, Japan, [2]RIKEN Center for Emergent Matter Science, Japan, [3]High Energy Accelerator Research Organization, Japan, [4]The University of Electro-Communications, Japan

22-1668
11:25-11:50
INVITED
Small Moment Antiferromagnetic Ordering in Single Crystalline La_2Ni_7
Raquel Ribeiro[1,2], Sergey Bud'ko[1,2], Li Xiang[1,2], Dominc Ryan[1,3], John Wilde[1,2], Aashish Sapkota[1,2], Wei Tian[4], Andreas Kreyssig[1,2], Kyungchan Lee[1,2], Na Hyun Jo[1,2], Lin-Lin Wang[1], Yevhen Kushnirenko[1,2], Ben Schrunk[1,2], Adam Kaminski[1,2], Paul Canfield[1,2]
[1]Ames National Laboratory, USA, [2]Iowa State University, USA, [3]McGill University, Canada, [4]Oak Ridge National Laboratory, USA

22-1322
11:50-12:05
Non-coplanar helimagnetism in the Layered Van-der-Waals Metal $DyTe_3$
Sebastian Esser[1], Max Hirschberger[1,2]
[1]The University of Tokyo, Japan, [2]RIKEN Center for Emergent Matter Science, Japan

08 Unconventional superconductivity 1

TUESDAY, July 4 — Room 116 (1F)

8-1277
15:00-15:25
INVITED
Quantum Oscillations and Fermi Surfaces in the Spin-triplet Superconductor UTe_2
Dai Aoki
Tohoku University, Japan

3-2461
15:25-15:40
Thermodynamic Evidence for High-field Bulk Superconductivity in UTe_2
Marcelo Jaime
Los Alamos National Laboratory, USA

8-1497
15:40-15:55
High Magnetic Field Studies of Ultraclean UTe_2
Alexander Eaton[1], Theodore Weinberger[1], Nicholas Popiel[1], Zheyu Wu[1], Alexander Hickey[1], Andrej Cabala[2], Jiří Pospíšil[2], Jan Prokleška[2], Gaël Bastien[2], Petr Opletal[3], Hironori Sakai[3], Yoshinori Haga[3], Robert Nowell[4], Shermane Benjamin[4], Yurii Skourski[5], Vladimír Sechovský[2], Gilbert Lonzarich[1], F. Malte Grosche[1], Michal Vališka[2]
[1]University of Cambridge, UK, [2]Charles University, Czech Republic, [3]Japan Atomic Energy Agency, Japan, [4]National High Magnetic Field Laboratory, USA, [5]Hochfeld-Magnetlabor Dresden, Germany

8-1114
15:55-16:10
Probing the Superconductivity of UTe_2 by Tunneling Spectroscopy
Hyeok Yoon
University of Maryland, USA

8-0782
16:10-16:25
Metamagnetism-induced First-order Transition within the Superconducting State of UTe_2 under Magnetic Field along the Easy a-axis
Yoshifumi Tokiwa[1], Petr Opletal[1], Hironori Sakai[1], Katsunori Kubo[1], Etsuji Yamamoto[1], Shinsaku Kambe[1], Motoi Kimata[2], Satoshi Awaji[2], Takahiko Sasaki[2], Dai Aoki[2], Yo Tokunga[1], Yoshinori Haga[1]
[1]Japan Atomic Energy Agency, Japan, [2]Tohoku University, Japan

08 Unconventional superconductivity 2

TUESDAY, July 4 — Room 116 (1F)

8-1705
17:00-17:15
Suppressed Fluctuations as the Origin of the Static Order in Sr_2RuO_4
Bongjae Kim[1], Sergii Khmelevskyi[2], Cesare Franchini[3], Igor Mazin[4]
[1]Kunsan National University, Korea, [2]Vienna University of Technology, Austria, [3]University of Vienna, Austria, [4]George Mason University, USA

8-1586
17:15-17:30
Two-component Superconductivity in Sr_2RuO_4 Studied by Uniaxial and Hydrostatic Pressure μSR
Hans-Henning Klauss
Technische Universität Dresden, Germany

8-0886
17:30-17:55
INVITED
Phenomena and Physics in Pressurized High-Tc Superconductors
Liling Sun
Institute of Physics, Chinese Academy of Sciences, China

8-2094
17:55-18:20
INVITED
Josephson Effect in Twisted Cuprate Bicrystals
Ding Zhang
Tsinghua University, China

Special Session II Quantum materials: the future direction

18:30-20:30, TUESDAY, July 4 — Room 113 (1F)

S-2592
INVITED
Quantum Metamaterials
Allan H MacDonald
University of Texas Austin, USA

S-2454
INVITED
Design and discover of new correlated electron systems – Exploring new materials space
Paul Canfield
Iowa State University, USA

S-3002
INVITED
TBD
Roser Valenti
Goethe University Frankfurt, Germany

Oral Presentation: WEDNESDAY, July 5

05 Quantum phase transitions and related phenomena 1

WEDNESDAY, July 5 — Room 104 (1F)

5-0231
10:30-10:55
INVITED
Ferromagnetic Quantum Criticality and Strange Metal Behavior
Huiqiu Yuan
Zhejiang University, China

5-1968
10:55-11:10
Orbitally Selective Breakdown of the Fermi Liquid and Simultaneous Enhancement of Metallic and Insulating States in Correlated Multiband Systems with Spin-orbit Coupling
Yu-Zhong Zhang
Tongji University, China

5-1663
11:10-11:25
Superconductivity Near Magnetic and Ferroelectric Quantum Phase Transitions
Stephen Rowley
University of Cambridge, UK

5-1651
11:25-11:50
INVITED
Magnetic Field & Pressure: Tuning Knobs for the Discovery of Novel Quantum States
Sara Haravifard
Duke University, USA

5-1625
11:50-12:05
The Impact of Quantum-critical Instabilities on the Magnetic Phase Diagram of CePdAl
Kai Grube[1], Oliver Stockert[2], Veronika Fritsch[3], Chien-Lung Huang[4], Hilbert v. Löhneysen[1]
[1]Karlsruhe Institute of Technology, Germany, [2]Max-Planck-Institute for Chemical Physics of Solids, Germany, [3]Augsburg University, Germany, [4]National Cheng Kung University, Taipei

5-0274
12:05-12:20
Pressure-induced Gap Closing in the Highly Symmetric Quantum Paramagnet DTN
Kirill Povarov
Helmholtz-Zentrum Dresden-Rossendorf, Germany

05 Quantum phase transitions and related phenomena 2

WEDNESDAY, July 5 — Room 104 (1F)

5-1928
15:00-15:15
Condensation of Preformed Charge Density Waves in Kagome Metals
Changwon Park, Young-Woo Son
Korea Institute for Advanced Study, Korea

5-1283
15:15-15:30
From the Transverse-field Ising Chain to the Quantum E_8 Integrable Model: Theoretical Progress and Experimental Realizations
Jianda Wu
Shanghai Jiao Tong University, China

5-0988
15:30-15:45
Strange-metal Behavior near a Ferromagnetic Quantum Critical Point of Ce(Si1-xAgx)2
Soohyeon Shin, Vladimir Pomjakushin, Igor Plokhikh, Marisa Medarde, Ekaterina Pomjakushina
Paul Scherrer Institut, Switzerland

5-2599
15:45-16:10
INVITED

Superconductivity without Quasiparticles
Joerg Schmalian
Karlsruhe Institute of Technology, Germany

5-2240
16:10-16:25

Evidence for Emergent Textures and Polar-elasticity in the Vicinity of Ferroelectric Quantum Phase Transitions
Dan Scott, Stephen Rowley
University of Cambridge, UK

05 Quantum phase transitions and related phenomena 3

WEDNESDAY, July 5 — Room 104 (1F)

5-1941
17:00-17:25
INVITED

1/4 is the New 1/2: Interaction-induced Unification of Quantum Anomalous and Spin Hall Effects
Philip Phillips
University of Illinois at Urbana-Champaign, USA

5-2477
17:25-17:40

Possible Realization of Floating Phase in S = 5/2 Frustrated Spin Chain Compounds
Koteswara Rao Bommisetti[1], Krishnamraju Boya[1], Kiwan Nam[2], Kuldeep Kargeti[3], S Ershadrad[4], Arun K Manna[1], Biplab Sanyal[4], Swarup K Panda[3], Ramender Kumar[5], P. L. Paulose[5], Kee Hoon Kim[2]
[1]Indian Institute of Technology Tirupati, India, [2]Seoul National University, Korea, [3]Bennett University, India, [4]Uppsala University, Sweden, [5]Tata Institute of Fundamental Research, India

5-1857
17:40-17:55

Competition between the Staggered and Three-body Interaction Potentials on Strongly Correlated Spin-1 Bose Gas in an Optical Lattice: Emergence of Spin-singlet Density Ordered Phase
Sheikh Noor Nabi
Indian Institute of Technology Kharagpur, India

5-1951
17:55-18:20
INVITED

Competitive Structural and Electronic States under Pressure
Shanti Deemyad
University of Utah, USA

5-1391
18:20-18:35

High Pressure Neutron Scattering Study of the Quantum Magnet SrCu2(BO3)2
Mohamed Zayed[1], Ellen Fogh[2]
[1]Carnegie Mellon University in Qatar, Qatar, [2]Ecole Polytechnique Fédérale de Lausanne, Switzerland

15 Dirac/Weyl semimetals and topologically nontrivial materials 3

WEDNESDAY, July 5 — Room 107 (1F)

15-2079
10:30-10:45

Interplay of Non-linear Electric and Spin Transport in Weyl and Dirac Semimetals
Miklos Horvath
Beijing Academy of Quantum Information Sciences, China

15-1812
10:45-11:00

Nonlinear Electrical Transport Phenomena in Topological Materials
Heon-Jung Kim
Daegu University, Korea

15-2227
11:00-11:25
INVITED

Weyl Triplons in a Frustrated Quantum Magnet
Pinaki Sengupta
Nanyang Technological University, Singapore

15-2325
11:25-11:50
INVITED

Direct Visualization of Electronic Liquid Crystal Phases in Correlated Topological Semimetals
Tien-Ming Chuang
Institute of Physics, Academia Sinica, Taipei

15-1404
11:50-12:05

Tunable Topological Dirac Surface States and Van Hove Singularities in Kagome Metal GdV6Sn6
Yong Hu, Ming Shi
Paul Scherrer Institute, Switzerland

15 Dirac/Weyl semimetals and topologically nontrivial materials 4

WEDNESDAY, July 5 — Room 107 (1F)

15-2596
15:00-15:25
INVITED

Quantum Hall Effects with and without Magnetic Fields
Allan H MacDonald
University of Texas at Austin, USA

15-0185
15:25-15:40

Tuning Behavior of Dirac Fermions in Graphene
Kalobaran Maiti
Tata Institute of Fundamental Research, India

15-0764
15:40-16:05
INVITED

Visualizing the Fractional Topological Order: From Fractional Chern Insulators to the Tao-Thouless State
Kwon Park
Korea Institute for Advanced Study, Korea

15-0532
16:05-16:20

Quantum Hall Effect in a Weyl-Hubbard Model: Interplay between Topology and Correlation
Snehasish Nandy, Christopher Lane, Jian-Xin Zhu
Los Alamos National Laboratory, USA

15-0702
16:20-16:35

Unraveling the Nature of Dirac Fermions in Black Phosphorus through Nuclear Magnetic Resonance Spectroscopy
Yusuke Nakai
University of Hyogo, Japan

15 Dirac/Weyl semimetals and topologically nontrivial materials 5

WEDNESDAY, July 5 — Room 107 (1F)

15-1059
17:00-17:15

Electronic and Magnetic Structure of $EuZn_2P_2$
Kristin Kliemt
Goethe-Universität Frankfurt am Main, Germany

15-0528
17:15-17:30

Elucidating the Chiral Anomaly in the Electronic Structure of Dirac Materials
Elizabeth A. Peterson, Christopher Lane, Jian-Xin Zhu
Los Alamos National Laboratory, USA

15-0229
17:30-17:55
INVITED

Tuning Topological Materials by Magnetism and Applied Strain**
Na Hyun Jo[1,2]
[1]*Ames National Laboratory, Iowa State University, USA,* [2]*Lawrence Berkeley National Laboratory, USA*

15-0379
17:55-18:10

Observation of Pressure-induced Weyl State and Superconductivity in a Chirality-neutral Weyl Semimetal Candidate $SrSi_2$

Mengyu Yao
Max Planck Institute for Chemical Physics of Solids, Germany

15-1470
18:10-18:25

Strong Topological Insulator State in Half Heusler Compound TmPdSb

Shovan Dan, O. Pavlosiuk, Karan Singh, A Ptok, P. Wiśniewski, D. Kaczorowski
Polish Academy of Sciences, Poland

14 Correlated materials with geometrical peculiarity 2

WEDNESDAY, July 5 — Room 113 (1F)

14-1412
10:30-10:45

Large Anomalous Hall Effect at Zero Magnetic Field in Noncollinear Antiferromagnetic Material NbMnP

Hisashi Kotegawa[1], Yoshiki Kuwata[1], Vu Thi Ngoc Huyen[2], Yuki Arai[1], Hideki Tou[1], Masaaki Matsuda[3], Keiki Takeda[4], Hitoshi Sugawara[1], Michi-To Suzuki[2]
[1]Kobe University, Japan, [2]Tohoku University, Japan, [3]Oak Ridge National Laboratory, USA, [4]Muroran Institute of Technology, Japan

14-0597
10:45-11:00

Magnetic Properties and Hall Effect in a New Chiral-Lattice Magnet $GdPt_2B$

Yoshiki J. Sato[1], Hikari Manako[1], Ryuji Okazaki[1], Yukio Yasui[2], Ai Nakamura[3], Dai Aoki[3]
[1]Tokyo University of Science, Japan, [2]Meiji University, Japan, [3]Tohoku University, Japan

14-0335
11:00-11:15

A Cluster Mott Insulator and Molecular Quantum Spin Liquid State in Nb_3Cl_8

Jiayu Hu[1], Xuefeng Zhang[1], Xiao-Qun Wang[2], Hai-Qin Lin[2], Gang Li[1]
[1]ShanghaiTech University, China, [2]Zhejiang University, China

14-1383
11:15-11:40
INVITED

Quantum Phases Driven by Antisite Disorder in the Cage Compound $FeGa_3$

J. Larrea Jimenez[1], V. Martelli[1], E. Fogh[2], H. Ronnow[2], N. Velisavljevic[3]
[1]University of Sao Paulo, Brazil, [2]Institute of Physics, Ecole Polytechnique Fédérale de Lausanne, Switzerland, [3]Argonne National Laboratory, USA

14-0758
11:40-12:05
INVITED

Designing Berry Curvature Giant Dipoles and Pinch Points in Multiorbital Systems

Maria Teresa Mercaldo
Università di Salerno, Italy

07 Non-equilibrium phenomena in strongly correlated systems 1

WEDNESDAY, July 5 — Room 113 (1F)

7-1068
15:00-15:25
INVITED

Ultrafast Control of Electronic Interactions in Low-dimensional Cuprate Superconductors

Matteo Mitrano
Harvard University, USA

7-2289
15:25-15:40

Spin Wavepackets in the Kagome Ferromagnet Fe_3Sn_2: Propagation and Precursors

Changmin Lee[1,2], Yue Sun[2,3], Linda Ye[4,5], Sumedh Rathi[2,3], Kevin Wang[2,3], Yuan-Ming Lu[6], Joel Moore[2,3], Joseph Checkelsky[4], Joseph Orenstein[2,3]
[1]Hanyang University, Korea, [2]Lawrence Berkeley National Laboratory, USA, [3]University of California, Berkeley, USA, [4]Massachusetts Institute of Technology, USA, [5]Stanford University, USA, [6]The Ohio State University, USA

7-1983
15:40-15:55

Thermalization and Transient Dynamics in Multi-Channel Kondo Systems under the Quantum Quench: Large-N Schwinger-Keldysh Approach

Iksu Jang, Po-Yao Chang
National Tsing Hua University, Taipei

7-0998
15:55-16:10

Theory of Kondo Collapse and Revival after an Ultrashort THz Light Pulse

Johann Kroha
University of Bonn, Germany

7-0433
16:10-16:25

Current-Induced Metallization and Valence Transition in Black SmS

Shin-ichi Kimura[1,2], Hiroshi Watanabe[1], Shingo Tatsukawa[1], Takuto Nakamura[1], Keiichiro Imura[3], Hiroyuki S. Suzuki[4], Noriaki K. Sato[5]
[1]Osaka University, Japan, [2]Institure for Molecular Science, Japan, [3]Nagoya University, Japan, [4]The University of Tokyo, Japan, [5]Aichi Institute of Technology, Japan

07 Non-equilibrium phenomena in strongly correlated systems 2

WEDNESDAY, July 5 — Room 113 (1F)

7-0906
17:00-17:15

Properties of Dissipative Floquet Majorana Modes Using a Quantum Dot

Nicolo Forcellini[1], Zhan Cao[1], Dong E. Liu[1,2]
[1]Beijing Academy of Quantum Information Sciences, China, [2]Tsinghua University, China

7-0670
17:15-17:30

Theoretical Study of Magnetic Excitations in a Photoexcited Two-dimensional Mott Insulator

Kenji Tsutsui[1], Kazuya Shinjo[2], Shigetoshi Sota[2], Takami Tohyama[3]
[1]National Institutes for Quantum Science and Technology, Japan, [2]RIKEN, Japan, [3]Tokyo University of Science, Japan

7-0487
17:30-17:45

Coherent-phonon-driven Metastable States in 1T-$TiSe_2$ Revealed by Time-Resolved ARPES

Shaofeng Duan, Wentao Zhang
Shanghai Jiao Tong University, China

7-0451
17:45-18:00

Classifying the Universal Dynamics of a Quenched Ferromagnetic Superfluid in Two Dimensions

Jae-yoon Choi
Korea Advanced Institute of Science and Technology, Korea

7-1936
18:00-18:25
INVITED

Dynamical Spin-shear Coupling in van der Waals Antiferromagnets

Haidan Wen
Argonne National Laboratory, USA

08 Unconventional superconductivity 3

WEDNESDAY, July 5 — Room 116 (1F)

8-2532
10:30-10:55
INVITED

Recent Progress on Spectroscopy of Clean Cuprate Superconductors

Bernhard Keimer
Max Planck Institute for Solid State Research, Germany

8-0553
10:55-11:20
INVITED

Local Pairing Inferred from the Re-Emergent AF Order in Superconducting State and Novel Criticality of Cuprate Superconductors

Hai-Hu Wen
Nanjing University, China

8-2394
11:20-11:35

Geometric Frustration Produces Long-sought Bose Metal Phase of Quantum Matter: A Candidate for the Pseudogap Phase of the Unconventional Superconducting Cuprates

Anthony Hegg, Jinning Hou, Wei Ku
Shanghai Jiao Tong University, China

8-1417
11:35-11:50

Elucidating the Spatial Symmetry of Charge Density Waves in Prototypical Cuprate Superconductors

Jaewon Choi
Diamond Light Source, UK

8-1614
11:50-12:05

Effects of Pb and Carbonate Substitutions on the Superconducting Properties of $TlSr_4Cu_2O_2CrO_4$

Ho Keun Lee
Kangwon National University, Korea

08 Unconventional superconductivity 4

WEDNESDAY, July 5 — Room 116 (1F)

8-1835
15:00-15:15

Neutron-Scattering Study for Antiferromagnetic Order in Zn-doped $CeCoIn_5$

Kaede Inoh[1], Azumi Yashiro[1], Asuka Hosogai[1], Ryosuke Koizumi[1], Hideaki Ebisawa[1], Teppei Takahashi[1], Ikuto Kawasaki[2], Daisuke Okuyama[3], Hung-Cheng Wu[4], Taku J. Sato[4], Kazuaki Iwasa[1], Kenji Ohoyama[1], Stephane Raymond[5], Kenichi Tenya[6], Makoto Yokoyama[1]
[1]Ibaraki University, Japan, [2]Japan Atomic Energy Agency, Japan, [3]High Energy Accelerator Research Organization, Japan, [4]Tohoku University, Japan, [5]Universite Grenoble Alpes, France, [6]Shinshu University, Japan

8-1358
15:15-15:30

Calorimetric Evidence for Four-Fermion Phase in the $Ba_{1-x}K_xFe_2As_2$ System

Vadim Grinenko
Shanghai Jiao Tong University, China

8-0974
15:30-15:45

Ultrafast Dynamics in (Li0.84Fe0.16)OHFe0.98Se and Single-layer FeSe/SrTiO3: Correlation between Tc and the EPC Strength

Jimin Zhao
Institute of Physics, Chinese Academy of Sciences, China

8-0393
15:45-16:00

Interlayer Pairing and Preformed Pairing in Iron-based Superconductors Probed by Inelastic Neutron Scattering

Huiqian Luo, Wenshan Hong, Zezong Li, Honglin Zhou, Chang Liu, Xiaoyan Ma, Shiliang Li
Institute of Physics, Chinese Academy of Sciences, China

8-0612
16:00-16:25
INVITED

Nematicity in Exotic Iron-Based Superconductors

Anna Boehmer
Ruhr University Bochum, Germany

08 Unconventional superconductivity 5

WEDNESDAY, July 5 Room 116 (1F)

8-0176
17:00-17:25
INVITED

Spin and Charge Dynamics in Infinite-layer Nickelates
Ke-Jin Zhou
Diamond Light Source, UK

8-0564
17:25-17:40

The Nickel Age of Superconductivity: Comparison with Cuprates and Theoretical Design of Cuprate-analog Nickelates
Yusuke Nomura
Keio University, Japan

8-0869
17:40-17:55

Theoretical Description of Charge Doping in an Intercalated FeSe Superconductor between Itinerant and Strongly Correlated Limits
Makoto Shimizu[1], Daniel Guterding[2], Harald O. Jeschke[1]
[1]Okayama University, Japan, [2]Technische Hochschule Brandenburg, Germany

8-1600
17:55-18:10

Exposing the Odd-parity Superconductivity in $CeRh_2As_2$ with Hydrostatic Pressure
Konstantin Semeniuk[1], Meike Pfeiffer[2], Javier Landaeta[1], Seunghyun Khim[1], Elena Hassinger[1,2]
[1]Max Planck Institute for Chemical Physics of Solids, Germany, [2]Dresden University of Technology, Germany

8-2171
18:10-18:25

Intriguing Effects of Quantum Magnetic Impurity with/without Vertex in a Topological Superconductor
Xiaoqun Wang
Zhejiang University, China

Oral Presentation: THURSDAY, July 6

05 Quantum phase transitions and related phenomena 4

THURSDAY, July 6 — Room 104 (1F)

5-2573
10:30-10:55
INVITED

Understanding And Improving Robustness of Topological Phases In Nanodevices
Susan Coppersmith
University of New South Wales, Australia

5-0664
10:55-11:10

Entanglement Negativity of Fermionic Topological Phases and Quantum Critical Points
Wonjune Choi, Frank Pollmann, Michael Knap
Technical University of Munich, Germany

5-1226
11:10-11:25

Electron Transport in a Quantum Dot with Resistive Leads: A Continuous-Time Quantum Monte Carlo Study
Ji-Woo Lee[1], Yao-Lung L. Fang[2,3], Harold U. Baranger[2]
[1]Myongji University, Korea, [2]Duke University, USA, [3]NVIDIA, USA

5-1579
11:25-11:40

Dynamical Phase Transitions and Quench Dynamics in Correlated Hybrid Quantum Dot Systems
Ireneusz Weymann
Adam Mickiewicz University, Poland

5-2608
11:40-12:05
INVITED

Quantum Oscillations Hosted by an Unconventional Vortex State in the Underdoped Cuprate Superconductors
Suchira Sebastian
University of Cambridge, UK

09 Superconductivity in novel materials 1

THURSDAY, July 6 — Room 104 (1F)

9-1794
15:00-15:15

Pressure-induced Structural Phase Transition and New Superconducting Phase in UTe_2
Fuminori Honda[1], Shintaro Kobayashi[2], Naomi Kawamura[2], Saori Kawaguchi[2], Jun Gouchi[3], Yoshiya Uwatoko[3], Jacques Flouquet[4], Dai Aoki[5]
[1]Kyushu University, Japan, [2]Japan Synchrotron Radiation Research Institute, Japan, [3]The University of Tokyo, Japan, [4]Universit´e Grenoble Alpes, France, [5]Tohoku University, Japan

9-0774
15:15-15:30

Superconductivity in van der Waals Metal Sulfides under High Pressure
Fang Hong
Institute of Physics, Chinese Academy of Sciences, China

9-1901
15:30-15:45

Fermi Surfaces of $CeRh_2As_2$ and $LaRh_2As_2$
Hisatomo Harima[1], Koki Numa[1], Ai Nakamura[2], Yoshiya Homma[2], Dai Aoki[2]
[1]Kobe University, Japan, [2]Tohoku University, Japan

9-1790
15:45-16:10
INVITED

Exploring the Interplay of Ordered States in the Locally Non-Centrosymmetric Superconductor $CeRh_2As_2$
Elena Hassinger
Technische Universität Dresden, Germany

9-2217
16:10-16:35
INVITED

Superconductivity in Noncentrosymmetric Boride Compounds MRh2B2 and MIr2B2 (M = Nb, Ta)

Tomasz Klimczuk[1], Karolina Gornicka[1], Debarchan Das[2], Weiwei Xie[3], Robert Cava[4]
[1]Gdańsk University of Technology, Poland, [2]Paul Scherrer Institut, Switzerland, [3]Michigan State University, USA, [4]Princeton University, USA

09 Superconductivity in novel materials 2

THURSDAY, July 6 — Room 104 (1F)

9-1981
17:00-17:15

Superconductivity Properties of Quasicrystals and its Approximants

Nayuta Takemori[1,2], Sakai Shiro[2], Fujita Nobuhisa[3]
[1]Osaka University, Japan, [2]RIKEN, Japan, [3]Tohoku University, Japan

9-1656
17:15-17:30

Structural Quantum Criticality Tuned by Rare-earth Ion Substitution in Infinite-layer Nickelates $RNiO_2$

Alaska Subedi
CNRS, France

9-1552
17:30-17:45

Two-Dimensional High-Tc Superconductivity in the Iron Based Superconductor KFe_2As_2

Marta Fernández-Lomana[1], Beilun Wu[1], Edwin Herrera[1], A.A. Haghighirad[2], Roser Valentí[3], Y-J Song[3], Hermann Suderow[1,4], A.E. Böhmer[2,4], Isabel Guillamón[1,4]
[1]Instituto de ciencia de Materiales Nicolás Cabrera, Condensed Matter Physics Center, UAM, Spain, [2]Karlsruhe Institute of Technology, Germany, [3]Goethe-Universität Frankfurt, Germany, [4]Unidad Asociada de Bajas Temperaturas y Altos Campos Magnéticos, UAM, CSIC, Spain

9-0216
17:45-18:10
INVITED

Structural and Strain Modulation of Superconductivity in AV_3Sb_5 (A= K, Rb, Cs)

Yu Song
Zhejiang University, China

9-2498
18:10-18:25

Two-fold Symmetric Superconductivity in the Kagome Superconductor RbV_3Sb_5

Ben-Chuan Lin, Shuo Wang
Southern University of Science and Technology, China

11 Metal-insulator transitions 1

THURSDAY, July 6 — Room 107 (1F)

11-0740
10:30-10:45

Imaging the d-charge Density in Ti_2O_3 across the Metal-insulator Transition

Liu Hao Tjeng
Max Planck Institute for Chemical Physics of Solids, Germany

11-1612
10:45-11:00

Heat Transport at Low Temperatures in $BaBiO_3$

Valentina Martelli[1], Julio Larrea Jiménez[1], Divine Kumah[2], Walber Hugo De Brito[3]
[1]University of São Paulo, Brazil, [2]North Carolina State University, USA, [3]Federal University of Minas Gerais, Brazil

11-0427
11:00-11:15

Decoupling the Metal Insulator Transition and Crystal Field Effects of VO_2

Sang-Wook Han[1], In-Hui Hwang[2], Chang-In Park[1], Sunmog Yeo[3]
[1]Jeonbuk National University, Korea, [2]Argonne National Laboratory, USA, [3]Korea Atomic Energy Research Institute, Korea

11-2221
11:15-11:30

Insulator-Metal-Transition of VO_2 with Modified Orbital Occupancy by Octahedral Symmetry

Dooyong Lee[1], Sehwan Song[2], Taewon Min[2], Jiwoong Kim[2], Jisung Lee[3], Haeyong Kang[2], Jouhahn Lee[3], Deok-Yong Cho[4], Jaekwang Lee[2], Jae Hyuck Jang[3], Sungkyun Park[2]
[1]Kyungpook National University, Korea, [2]Pusan National University, Korea, [3]Korea Basic Science Institute, Korea, [4]Jeonbuk National University, Korea

11-0668
11:30-11:55
INVITED

Coupled Electronic Transitions of Rare-earth Nickelates

Srimanta Middey
Indian Institute of Science, India

11 Metal-insulator transitions 2

THURSDAY, July 6 — Room 107 (1F)

11-1209
15:00-15:15

Field-induced Reentrant Insulating State in the Extreme Quantum Limit of a Topological Insulator $Bi_{1-x}Sb_x$ (x ~ 0.1)

Yuto Kinoshita
The University of Tokyo, Japan

11-1517
15:15-15:30

Variational Monte-Carlo Approach for Hubbard Model Applied to Twisted Bilayer WSe_2 at Half-Filling

Andrzej Biborski, Michal Zegrodnik
AGH University of Science and Technology, Poland

11-1547
15:30-15:45

Orbital-selective Mott and Peierls Transition in Hydrogenated VO_2

So Yeun Kim[1,2], Steffen Backes[3,4], Hyojin Yoon[5], Changhee Sohn[6], Woojin Kim[1,2], Junwoo Son[5], Silke Biermann[3,4], Tae Won Noh[1,2], Se Young Park[7]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea, [3]Ecole Polytechnique, France, [4]Collège de France, France, [5]Pohang University of Science and Technology, Korea, [6]Ulsan National Institute of Science and Technology, Korea, [7]Soongsil University, Korea

11-0679
15:45-16:00

The Direct Observation of Spin-state Excitation in the Metal-insulator Transition of $FeSb_2$

Lin Miao
Southeast University, China

11-2489
16:00-16:25
INVITED

Magnon-magnon Interactions in Soft Mott Insulators

Johan Chang[1], Qisi Wang[2], Izabella Bialo[1], Leonardo Martinelli[1]
[1]University of Zurich, Switzerland, [2]City University of Hong Kong, Hong Kong (SAR of China)

17 Fermi surfaces and electronic structure of correlated phase 1

THURSDAY, July 6 — Room 107 (1F)

17-2310
17:00-17:15

First-principles Study of the Anomalous Hall Conductivity and Strongly Correlated Electronic and Magnetic Structures in MNb_3S_6 (M=Co, Fe, Mn, and Ni)

Hyowon Park
University of Illinois at Chicago, USA

17-1877
17:15-17:40
INVITED

Coexistence of Superconductivity with Partially Filled Stripes in the Hubbard Model

Mingpu Qin
Shanghai Jiao Tong University, China

17-0175
17:40-17:55
ARPES Studies on Interfacial Superconductors
Rui Peng
Fudan University, China

17-0987
17:55-18:10
Direct Imaging of Valence Orbitals Using Hard X-ray Photoelectron Spectroscopy
Daisuke Takegami
Max Planck Institute for Chemical Physics of Solids, Germany

17-2320
18:10-18:25
Infrared Signatures of Charge Density Wave in a Kagome Metal ScV_6Sn_6
Soonjae Moon
Hanyang University, Korea

07 Non-equilibrium phenomena in strongly correlated systems 3

THURSDAY, July 6 — Room 113 (1F)

7-1678
10:30-10:45
Shedding Light on Strong Correlations and Topology: Nonlinear Optical Properties of the Weyl-Kondo Semimetal
Sarah E. Grefe, Jianxin Zhu
Los Alamos National Laboratory, USA

7-0646
10:45-11:00
Subcycle Pulse-Induced Nonequilibrium Dynamics in One-Dimensional Strongly Correlated Electron Systems
Kazuya Shinjo[1], Shigetoshi Sota[1], Seiji Yunoki[1], Takami Tohyama[2]
[1]RIKEN, Japan, [2]Tokyo University of Science, Japan

7-2237
11:00-11:15
Band-dependent Ultrafast THz Emission from α-$(BEDT\text{-}TTF)_2I_3$
Heejae Kim[1], Sheng Qu[2]
[1]Pohang University of Science and Technology, Korea, [2]Max Planck Institute for Polymer Research, Germany

7-0675
11:15-11:30
Nonreciprocal Landau-Zener Tunneling and Current Response
Sota Kitamura[1], Naoto Nagaosa[1,2], Takahiro Morimoto[1]
[1]The University of Tokyo, Japan, [2]RIKEN Center for Emergent Matter Science, Japan

7-1481
11:30-11:45
4D Visualization of the Light-induced Coherent Magnon by an X-ray Free Electron Laser
Sae Hwan Chun
Pohang Accelerator Laboratory, Korea

7-1244
11:45-12:00
Attosecond Dynamics of Strongly Correlated Materials: Signature of Double Occupancy
Youngjae Kim
Korea Institute for Advanced Study, Korea

16 Two dimensional materials 1

THURSDAY, July 6 — Room 113 (1F)

16-1157
15:00-15:15
Meron Stabilization in Twisted Magnets
Kyoung-Min Kim[1], Moon Jip Park[2], Gyungchoon Go[3], Se Kwon Kim[3]
[1]Institute for Basic Science, Korea, [2]Hanyang University, Korea, [3]Korea Advanced Institute of Science and Technology, Korea

16-2358
15:15-15:30

Effect of Doping Differences on Topological Phases in Twisted Bilayer Cuprate

Ki Hoon Lee[1], Youngjae Jeon[1, 2]
[1]*Incheon National University, Korea,* [2]*Pohang University of Science and Technology, Korea*

16-2514
15:30-15:55
INVITED

Ultrafast Dynamics and Floquet Engineering of Quantum Materials

Shuyun Zhou
Tsinghua University, China

16-0535
15:55-16:10

Geometric Aspects of Flat Bands with a Singularity

Jun Won Rhim
Ajou University, Korea

16-2475
16:10-16:25

Chirality and Correlations in the Spontaneous Spin-valley Polarization in Rhombohedral Multilayer Graphene

Yunsu Jang[1], Youngju Park[2], Jeil Jung[2], Hongki Min[1]
[1]*Seoul National University, Korea,* [2]*University of Seoul, Korea*

16 Two dimensional materials 2

THURSDAY, July 6 — Room 113 (1F)

16-0574
17:00-17:15

Observation of a High-temperature Excitonic Insulating Phase in a Monolayer Ta_2NiSe_5

So Young Kim[1], Kwangrae Kim[1], Chang Il Kwon[1, 2], Ji Eun Lee[3], Jieun Seok[3], B. J. Kim[1], Jae Hoon Kim[3], Jonghwan Kim[1, 2], Jun Sung Kim[1, 2]
[1]*Pohang University of Science and Technology, Korea,* [2]*Institute for Basic Science, Korea,* [3]*Yonsei University, Korea*

16-1108
17:15-17:30

Experimental Evidence of Sliding Ferroelectricity in Bulk Misfit Layered $VPbS_3$

Klara Uhlirova
Charles University, Czech Republic

16-0715
17:30-17:45

Magnetic Phases of Monolayer NiPS_3 at T=0: the S=1 Bilinear Biquadratic XXZ Model on the Honeycomb Lattice

Paula Mellado
Universidad Adolfo Ibañez, Chile

16-2002
17:45-18:00

Anisotropic Magnon Damping via Quantum Fluctuations in van der Waals Honeycomb Ferromagnet $CrGeTe_3$

Lebing Chen[1], Chengjie Mao[2], Jae-Ho Chung[3], Matthew B. Stone[4], Alexander I. Kolesnikov[4], Xiaoping Wang[4], Naoki Murai[5], Bin Gao[1], Olivier Delaire[2], Pengcheng Dai[1]
[1]*Rice University, USA,* [2]*Duke University, USA,* [3]*Korea University, Korea,* [4]*Oak Ridge National Laboratory, USA,* [5]*Japan Atomic Energy Agency, Japan*

16-2429
18:00-18:25
INVITED

Novel Creation Methods for 2D Atomically Thin Topological Materials with Strong Electron Correlation

Junji Haruyama[1, 2]
[1]*Aoyama Gakuin University, Japan,* [2]*The University of Tokyo, Japan*

12 Large research facilities and novel technique for SCES investigations

THURSDAY, July 6 — Room 116 (1F)

12-2260
10:30-10:55
INVITED
X-ray and Neutron Studies of Successive Magnetic Transitions in Lanthanide-Based Magnets
Taka-hisa Arima[1, 2]
[1]The University of Tokyo, Japan, [2]RIKEN, Japan

12-2591
10:55-11:20
INVITED
Ultrafast Photoexcitation of Electrons and Charge Density Wave Stability in Kagome Metals at XFELs
Changyong Song[1, 2]
[1]Pohang University of Science and Technology, Korea, [2]Max Planck POSTECH/Korea Research Initiative, Korea

12-2534
11:20-11:35
Applications of Artificial Intelligence to Neutron Scattering
William Ratcliff
National Institute of Standards and Technology, USA

12-2375
11:35-11:50
Using μSR to Probe Diffusive Spin Excitations and Quantum Entanglement in Frustrated Magnets
Francis Pratt
STFC Rutherford Appleton Laboratory, UK

12-1093
11:50-12:05
A Versatile Low-Vibration Magneto-Optical Cryostat
Randy Dumas
Quantum Design, USA

12-1184
12:05-12:20
Spin-wave and Orbital Excitations under Epitaxial Strain in $BiFeO_3$ Thin Films
Taehun Kim, Valentina Bisogni
Brookhaven National Laboratory, USA

13 Devices and applications of SCES

THURSDAY, July 6 — Room 116 (1F)

13-0300
15:00-15:25
INVITED
Topological Josephson Effect in Hinge States of WTe_2
Gil-Ho Lee
Pohang University of Science and Technology, Korea

13-2590
15:25-15:50
INVITED
Proximity-Effect-Induced Superconductivity in NiPb Binary Surface Alloy and Monatomic Ni Kagome Lattice on Pb(111)
Pin-Jui Hsu
National Tsing Hua University, Taipei

13-2163
15:50-16:05
Inverse-current Quantum Electro-oscillations in a Charge-density-wave Insulator
Tian Le
Westlake University, China

13-2496
16:05-16:20
Spin Orbit Torque at All Oxide Insterface
Mi-Jin Jin
Institute for Basic Science, Korea

13-0417
16:20-16:35
RESEDA - A Spin - Echo Spectrometer for Strongly Correlated Electron Systems
Johanna Katharina Jochum
Heinz Maier-Leibnitz Zentrum, Germany

19 Multiferroics and related materials 1

THURSDAY, July 6 Room 116 (1F)

19-2416
17:00-17:25
INVITED

Manipulation of Magnetic States and Topological Defects in Multiferroic Materials

Maxim Mostovoy
University of Groningen, The Netherlands

19-2057
17:25-17:40

First-principles Calculations of Piezomagnetic Coefficients in Antiferromagnets Mn_3AN (A=Ni, Cu, Zn, Ga, Ge) and Mn_3X (X=Sn, Ge)

Vu Thi Ngoc Huyen[1], Yuki Yanagi[2], Michi-To Suzuki[1]
[1]Tohoku University, Japan, [2]Toyama Prefectural University, Japan

19-1190
17:40-17:55

Flat Phonon Band and Negative Piezoelectricity in Ferroelectric HfO_2

Jun Hee Lee
Ulsan National Institute of Science and Technology, Korea

19-2443
17:55-18:10

Emerging 4-variants in-plane Ferroelectricity and Switchable Ternary Polar States under Square Tensile Strain

Yoon Seok Oh[1], Jun Han Lee[1], Nguyen Xuan Duong[2], Min-Hyoung Jung[3], Hyun-Jae Lee[1], Ahyoung Kim[4], Youngki Yeo[5], Junhyung Kim[1], Gye-Hyeon Kim[1], , Jaegyu Kim[5], Tae Kwon Song[6], Jae-Hyeon Ko[7], Tae-Yeong Koo[8], Changhee Sohn[1], Kibog Park[1], Chan-Ho Yang[9], Sang Mo Yang[4], Jun Hee Lee[1]
[1]Ulsan National Institute of Science and Technology, Korea, [2]University of Ulsan, Korea, [3]Sungkyunkwan University, Korea, [4]Sogang University, Korea, [5]Korea Advanced Institute of Science and Technology, Korea, [6]Changwon National University, Korea, [7]Hallym University, Korea, [8]Pohang Accelerator Laboratory, Korea, [9]Pohang University of Science and Technology, Korea

19-1185
18:10-18:25

Finely Tuned Interlayer Interaction in Mn-doped Quasi-two-dimensional Magnet $Ba_2CoGe_2O_7$ and Magnetoelectric Phase Transition

Yoshito Watanabe[1], Masaki Gen[2], Taro Nakajima[1], Takashi Kurumaji[1], Yusuke Tokunaga[1], Taka-hisa Arima[1]
[1]The University of Tokyo, Japan, [2]RIKEN, Japan

Oral Presentation: FRIDAY, July 7

09 Superconductivity in novel materials 3

FRIDAY, July 7 — Room 104 (1F)

9-2349
10:30-10:45
Surface Termination-dependent Electronic Structure of LaFeAsO
Sung Won Jung[1], Luke Rhodes[2], Matthew Watson[3], Daniil V Evtushinsky[4], Cephise Cacho[3], Timur Kim[3]
[1]Gyeongsang National University, Korea, [2]University of St. Adrews, UK, [3]Diamond Light Source, UK, [4]École polytechnique fédérale de Lausanne, Switzerland

9-1622
10:45-11:00
Superconductivity in $(Ba,K)SbO_3$
Minu Kim
Max Planck Institute for Solid State Research, Germany

9-2156
11:00-11:25
INVITED
Spin-orbit Coupling and Superconducting Stripes in an Oxide Heterostructure EuO/KTO(110)
Xianhui Chen
University of Science and Technology of China, China

9-1182
11:25-11:40
Large Critical Current Density in Thermally Annealed High-Entropy Alloy Superconductors
Soon-Gil Jung[1], Jihyun Kim[2], Yoonseok Han[2], Jin Hee Kim[3], Jong-Soo Rhyee[3], Sunmog Yeo[4], Tuson Park[2]
[1]Sunchon National University, Korea, [2]Sungkyunkwan University, Korea, [3]Kyung Hee University, Korea, [4]Korea Atomic Energy Research Institute, Korea

9-1169
11:40-11:55
Observation of Robust Zero-energy State and Enhanced Superconducting Gap in a Tri-layer Heterostructure of MnTe/Bi2Te3/Fe(Te, Se)
Tong Zhang
Fudan University, China

17 Fermi surfaces and electronic structure of correlated phase 2

FRIDAY, July 7 — Room 107 (1F)

17-0358
10:30-10:45
Frist Principles Study of the Fermi Surface Topology of $CeCu_2Si_2$
Roxanne Tutchton[1], Jean-Pierre Julien[2], Qimiao Si[3], Jian-Xin Zhu[1]
[1]Los Alamos National Laboratory, USA, [2]Université Grenoble Alpes, France, [3]Rice University, USA

17-0520
10:45-11:00
"Investigating Rare-Earth Hexaborides: Insights from Macroscopic to Atomic Length Scales
Maria Victoria Ale Crivillero[1], Markus König[1], Jean Carlo Souza[2,3], Pascoal G. Pagliuso[2,4], Jörg Sichelschmidt[1], Sahana Rößler[1], Horst Borrmann[1], Hubert Dawczak-Debick[1], Zachary Fisk[5], Priscila F. S. Rosa[4], Steffen Wirth[1]
[1]Max Planck Institute for Chemical Physics of Solids, Germany, [2]UNICAMP Universidade Estadual de Campinas, Brazil, [3]Weizmann Institute of Science, Israel, [4]Los Alamos National Laboratory, USA, [5]University of California, Irvine, USA

17-0636
11:00-11:25
INVITED
Pseudogap Induced by Short-range Order of Dopants
Keun Su Kim
Yonsei University, Korea

17-0429
11:25-11:40

Spin-Resolved Strongly Correlated Electronic Structure of Ferromagnetic Triple-Layer Ruthenate $Sr_4Ru_3O_{10}$

Jonathan Denlinger[1], Prosper Ngabonziza[2], Alexei V. Fedorov[1], Gang Cao[3], James W. Allen[4], G. Gebreyesus[5], Richard M. Martin[6]

[1]Lawrence Berkeley National Laboratory, USA, [2]Lousiana State University, USA, [3]University of Colorado Boulder, USA, [4]University of Michigan, USA, [5]University of Ghana, Ghana, [6]Stanford University, USA

17-2424
11:40-11:55

Distinctive Differences in Electron self-Energy between the Pseudo-gap and Strange Metallic States in the Two-dimensional Hubbard Model

Arata Tanaka

Hiroshima University, Japan

16 Two dimensional materials 3

FRIDAY, July 7 — Room 113 (1F)

16-2363
10:30-10:55
INVITED

Tuning Layered Quantum Materials Using Pressure and Thickness Control

Swee Kuan Goh

The Chinese University of Hong Kong, Hong Kong (SAR of China)

16-1455
10:55-11:10

Pressure-induced Antiferromagnetic to Ferromagnetic Transition in a Honeycomb van der Waals Magnet $CrCl_3$

Dilip Bhoi

The University of Tokyo, Japan

16-0780
11:10-11:25

A Novel Charge Density Wave Order in Epitaxially Grown Few-layer 1T-TaTe2

Jinwoong Hwang

Kangwon National University, Korea

16-0372
11:25-11:40

Anomalous Hall Measurement of 2D Ferromagnet-based Heterostructures

Changgu Lee

Sungkyunkwan University, Korea

16-1105
11:40-11:55

Putative Spin-nematic Phase in BaCdVO(PO4)2

Markos Skoulatos

Technical University of Munich, Germany

19 Multiferroics and related materials 2

FRIDAY, July 7 — Room 116 (1F)

19-1749
10:30-10:55
INVITED

Optical Microscope Imaging of Antiferromagnetic Domains via Linear Magnetoelectric Effect

Tsuyoshi Kimura, Takeshi Hayashida, Keito Arakawa, Takahiko Oshima, Kenta Kimura

The University of Tokyo, Japan

19-0425
10:55-11:10

Studying the Structural Transitions and the Antiferromagnetic Structures of $TbFe_3(BO_3)_4$ and $GdFe_3(BO_3)_4$ by Soft X-ray Absorption Spectroscopies

Yi-Ying Chin[1], Ping-Yi Wang[2], Ruei-Tze Hung[1], Hong-Ji Lin[3], Chien-Te Chen[3], Hiroshi Nakajima[4], Tsuyoshi Kimura[5], Ashish Chainani[3]

[1]National Chung Cheng University, Taipei, [2]National Yang Ming Chiao Tung University, Taipei, [3]National Synchrotron Radiation Research Center, Taipei, [4]Osaka Prefecture University, Japan, [5]The University of Tokyo, Japan

19-1083
11:10-11:25

Structural and Magnetic Characterisation of Pr3Ni2NbO9 Double Perovskite

Som Datta Kaushik

UGC-DAE Consortium for Scientific Research, India

19-0475
11:25-11:40

Neutron Scattering Studies for $RMnO_3$ and $RFeO_3$ in 2D-THA System

Shinichiro Yano[1], Kazuki Iida[2], Daichi Ueta[3], Chinwei Wang[1], Wei-Tin Chen[4], Richard Mole[5], Jason S Gardner[6], Despina Louca[7], Shinichi Itoh[3]

[1]National Synchrotron Radiation Research Center, Taipei, [2]Comprehensive Research Organization for Science and Society, Japan, [3]High Energy Accelerator Research Organization, Japan, [4]National Taiwan University, Taipei, [5]Australian Nuclear Science and Technology Organisation, Australia, [6]Oak Ridge National Laboratory, USA, [7]University of Virginia, USA

19-0357
11:40-11:55

Neutron Diffraction Studies across Metamagnetic Transition in Tb_2BaNiO_5: Insight into Exotic Multiferroic Properties of this Compound

Sudhindra Rayaprol[1], Ram Kumar[2], Helen E Maynard-Casely[3], Maxim Avdeev[3], Echur V Sampathkumaran[4]

[1]University Grants Commission-Department of Atomic Energy Consortium for Scientific Research, India, [2]University of Maryland, USA, [3]Australian Centre for Neutron Scattering, Australia, [4]Homi Bhabha Centre for Science Education, India

Poster Presentation: MONDAY, July 3

01 Heavy fermion systems

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

1-0295 **Nonlocal Kondo Effect and Two-Fluid Picture Revealed in an Exactly Solvable Model**
Jiangfan Wang[1], Yi-feng Yang[2]
[1]*Hangzhou Normal University, China,* [2]*Institute of Physics, Chinese Academy of Sciences, China*

1-0586 **Discovery of an Antiferromagnetic Chiral Helix in Trigonal $GdNi_3Ga_9$**
Shota Nakamura[1], Takeshi Matsumura[2], Shigeo Ohara[1]
[1]*Nagoya Institute of Technology, Japan,* [2]*Hiroshima University, Japan*

1-0727 **Meta-magnetic Transition Behaviors and Magnetization Curves in $CeRu_2Si_2$–based Substitutional Systems from Magnetic View-points**
Kazuo Yano[1], Yuusuke Amakai[2], Yoshiaki Hara[3], Eiji Kita[1], Hideaki Takano[2], Hisanori Tanimoto[1], Shigeyuki Murayama[2]
[1]*University of Tsukuba, Japan,* [2]*Muroran Institute of Technology, Japan,* [3]*National Institute of Technology, Ibaraki College, Japan*

1-0733 **Ultrasonic Study of the Heavy-fermion Superconducter $U_{1-x}Th_xBe_{13}$ under High Magnetic Fields**
Ruo Hibino[1], Hiroyuki Inagaki[1], Tatsuya Yanagisawa[1], Hiroyuki Hidaka[1], Hiroshi Amitsuka[1], Yusei Shimizu[2], Atsuhiko Miyata[3], Sergei Zherlitsyn[3], Joachim Wosnitza[3,4], Duygu Yazici[5], M. Brian Maple[5]
[1]*Hokkaido University, Japan,* [2]*Tohoku University, Japan,* [3]*Helmholtz-Zentrum Dresden-Rossendorf, Germany,* [4]*Technische Universität Dresden, Germany,* [5]*University of California, San Diego, USA*

1-0801 **Intrinsic 2D van der Waals Heavy-fermion CeSiI**
Bo Gyu Jang[1], Changhoon Lee[2], Jian-Xin Zhu[1], Ji Hoon Shim[2]
[1]*Los Alamos National Laboratory, USA,* [2]*Pohang University of Science and Technology, Korea*

1-0820 **Magnetism and Superconductivity in Mixed-dimesional Periodic Anderson Model for UTe_2**
Ryuji Hakuno, Kosuke Nogaki, Youichi Yanase
Kyoto University, Japan

1-0893 **Pressure Effects on the Magnetic Transitions in the Heavy-fermion Compounds YbTrGe (Tr = Ni, Pt, Rh, and Ir)**
Yuya Shimosato, Kazunori Umeo, Toshiro Takabatake, Takahiro Onimaru
Hiroshima University, Japan

1-0982 **Electronic States for Dense Kondo Amorphous Alloy Ce-Al**
Riga Wu, Yusuke Amakai
Muroran Institute of Technology, Japan

1-1017 **U f^2 Multiplet States in Low Energy Excitations of UTe_2**
Denise Sacramento Christovam
Max Planck Institute for Chemical Physics of Solids, Germany

1-1081 **Underscreened Kondo Cloud in Superconductor**
Anand Manaparambil[1], Catalin Pascu Moca[2], Gergely Zarand[3], Ireneusz Weymann[1]
[1]*Adam Mickiewicz University, Poland,* [2]*University of Oradea, Romania,* [3]*Budapest University of Technology and Economics, Hungary*

01 Heavy fermion systems

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

1-1096 **The Strongly Correlated High-Pressure Structure of Unconventional Superconductor $CeSb_2$**
Christian K. de Podesta[1], Theodore I. Weinberger[1], Oliver P. Squire[1], Jiasheng Chen[1], Stephen A. Hodgson[1], Christine Beavers[2], Rustem Khasanov[3], Patricia L. Alireza[1], F. Malte Grosche[1]
[1]University of Cambridge, UK, [2]Diamond Light Source Ltd., UK, [3]Paul Scherrer Institut, Switzerland

1-1097 **Superconductivity Beyond the Conventional Pauli Limit in High-Pressure $CeSb_2$**
Oliver Squire, Stephen Hodgson, Jiasheng Chen, Vitaly Fedoseev, Christian De Podesta, Theodore Weinberger, Patricia Alireza, Malte Grosche
University of Cambridge, UK

1-1160 **Magnetic Refrigeration Down to 1 K with Heavy-fermion Alloys $Ce_2(Cu_{1-x}Ni_x)_2In$ Tuned to the Quantum Critical Point**
Kanta Watanabe, Yasuyuki Shimura, Takahiro Onimaru, Toshiro Takabatake
Hiroshima University, Japan

1-1301 **The Temperature Dependent Electronic Structures of CeB_4 : DMFT(Dynamical Mean Field Theory) Study**
Junwon Kim, Jihoon Shim
Pohang University of Science and Technology, Korea

1-1411 **Lattice Properties in Heavy-fermion Superconductor $CeCo_{1-x}Ni_xIn_5$**
Ryosuke Koizumi, Kaede Inoh, Azumi Yashiro, Makoto Yokoyama
Ibaraki University, Japan

1-1486 **Superconductivity of α'' - Phase Ce: A Comprehensive Transport Study**
Dajun Su, Yanan Zhang, Zhaoyang Shan, Jiawen Zhang, Rui Li, Huiqiu Yuan
Zhejiang University, China

1-1513 **N-point Saddle-band Model for the Hidden Order Phase of URu_2Si_2**
Jonathan D. Denlinger[1], Jeongsoo Kang[2]
[1]Lawrence Berkeley National Laboratory, USA, [2]The Catholic University of Korea, Korea

1-1518 **Electron Phase Separation and Magnetic Phase Diagrams in Heavy Fermion Antiferromagnets $Ce_xLa_{1-x}B_6$**
Andrey Azarevich[1], Alexey Bogach[1], Vladimir Glushkov[1], Sergey Demishev[1], Natalya Shitsevalova[2], Svetlana Polovets[2], Volodymyr Filipov[2], Slavomir Gabani[3], Jozef Kacmarcik[3], Karol Flachbart[3], Nikolay Sluchanko[1]
[1]Prokhorov General Physics Institute of Russian Academy of Sciences, Russia, [2]Frantsevich Institute for Problems of Materials Science of National Academy of Sciences of Ukraine, Ukraine, [3]Institute of Experimental Physics of Slovak Academy of Sciences, Slovakia

1-1557 **Temperature Dependence of the Rare-Earth Raman Spectrum of the Quadrupolar Heavy-Fermion Material $PrTi_2Al_{20}$**
Marvin Lenk, Johann Kroha
University of Bonn, Germany

1-1583 **Crystal Structure and Magnetic Properties of Orthorhombic $R_2Pt_9Al_{16}$ (R = Pr, Nd, and Sm)**
Yuji Matsumoto[1], Takahiro Mitsui[1], Kyugo Ota[1], Yuki Watabe[1], Yoshinori Haga[2]
[1]University of Toyama, Japan, [2]Japan Atomic Energy Agency, Japan

POSTER PRESENTATION

01 Heavy fermion systems

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

1-1685 **Anisotropic Kondo Lattice Behavior Revealed in the Quasiparticle Dynamics of the Flat-band Kagome Metal Ni_3In**
Dong-Hyeon Gim[1], Dirk Wulferding[1,2], Chulwan Lee[3], Hengbo Cui[1], Kiwan Nam[1], Myung Joon Han[3], Kee Hoon Kim[1]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea, [3]Korea Advanced Institute of Science and Technology, Korea

1-1792 **Physical Properties of a New Ternary Compound RPt_3Al_5 (R = rare-earth element) and UPt_3Al_5**
Hiroto Fukuda[1], Fuminori Honda[2], Takatsugu Koizumi[1], Yusei Shimizu[1], Yoshiki Sato[3], Ai Nakamura[1], Dexin Li[1], Yoshiya Homma[1], Atsushi Miyake[4], Masashi Tokunaga[4], Masanobu Shiga[5], Tatsuya Kawae[5], Dai Aoki[1]
[1]Tohoku University, Japan, [2]Kyusyu University, Japan, [3]Tokyo University of Science, Japan, [4]The University of Tokyo, Japan, [5]Kyushu University, Japan

1-1852 **A New Form of Magnetic Correlation in Co Doped $YbRh_2Si_2$**
Koji Kaneko[1], Oliver Stockert[2], Chihiro Tabata[1], Ryoji Kiyanagi[1], Akiko Nakao[3], Keitaro Kuwahara[4], Cornelius Krellner[5], Christoph Geibel[6]
[1]Japan Atomic Energy Agency, Japan, [2]Max-Planck Institute for Chemical Physics of Solids, Germany, [3]Comprehensive Research Organization for Science and Society, Japan, [4]Ibaraki University, Japan, [5]Goethe University Frankfurt, Germany, [6]Max Planck Institute for Chemical Physics of Solids, Germany

1-1868 **Inelastic Neutron Scattering on Quantum Critical $Ce_3Pd_{20}Si_6$**
Federico Mazza[1,2], Silke Buehler-Paschen[1]
[1]Vienna University of Technology, Austria, [2]Institut Laue-Langevin, France

1-1913 **Origin of the Non-Fermi-Liquid Behavior in $CeRh_2As_2$**
Pavlo Khanenko[1], Konstantin Semeniuk[1], Daniel Hafner[1], Thomas Lühmann[1], Jacintha Banda[1], Javier Francisco Landaeta[1], Christoph Geibel[1], Seunghyun Khim[1], Elena Hassinger[2], Gertrud Zwicknagl[3], Manuel Brando[1]
[1]Max-Planck-Institute for Chemical Physics of Solids, Germany, [2]Technical University Dresden, Germany, [3]Technische Universität Braunschweig, Germany

1-1967 **Development of Long-range Phase Coherence on the Kondo Lattice**
Jian-Jun Dong[1], Yi-feng Yang[2]
[1]Chongqing University, China, [2]Institute of Physics, Chinese Academy of Sciences, China

1-2026 **Probing Ground State 4f Symmetry and Anisotropic Hybridization Effects on the Unconventional Superconductor $CeNi_2Ge_2$**
Hidenori Fujiwara[1,2]
[1]Osaka University, Japan, [2]RIKEN SPring-8 Center, Japan

1-2196 **Heavy-Fermion in a Mono-Atomic Layer $YbCu_2$/Cu(111)**
Hiroki Sugihara, Takuto Nakamura
Osaka University, Japan

1-2207 **High Field Angular Dependent Heat Capacity in Heavy Fermion Superconductor UTe_2**
Ali Bangura
Florida State University, USA

1-2326 **Synthesis and Characterization of Two Phases (Magnetic and Non-magnetic) in Non-centrosymmetric Ternary Compound Ce-Fe-Ge**
Saqlain Yousuf, Tuson Park, Hanoh Lee, Harim Jang, TaeBeom Park, Jihyun Kim
Sungkyunkwan University, Korea

POSTER PRESENTATION

01 Heavy fermion systems

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

1-2346 **Mechanism of Novel Heavy Fermion Formation in the Weakly Anisotropic Ferromagnetic Kondo Model**
Shingo Kuniyoshi, Ryousuke Shiina
University of the Ryukyus, Japan

1-2434 **Suppression of Ferromagnetism and Influence of Disorder in Silicon-substituted CeRh6Ge4**
Yongjun Zhang[1], Michael Smidman[2], Huiqiu Yuan[2]
[1]Hubei Normal University, China, [2]Zhejiang University, China

1-2576 **Charge Delocalization Crossover in the Heavy Fermion Superconductor CeRhIn5**
Honghong Wang[1], Tae Beom Park[1], Jihyun Kim[1], Harim Jang[1], Eric D. Bauer[2], Joe D. Thompson[2], Tuson Park[1]
[1]Sungkyunkwan University, Korea, [2]Los Alamos National Laboratory, USA

1-2605 **Spatial Separation Of Fano Lattice And Gapped Electronic Density Of States In The Heavy Fermion Magnetic Phases Of $Ce(Ru_{0.92}Rh_{0.08})_2Si_2$**
Edwin Herrera[1], Miguel Águeda[1], Francisco Martín Vega[1], Isabel Guillamón[1], Eric Mascot[2], Beilun Wu[1], Jacques Flouquet[3], Jean Pascal Brison[3], Georg Knebel[3], Dai Aoki[4], Dirk Morr[2], Hermann Suderow[1]
[1]Universidad Autonoma de Madrid, Spain, [2]University of Illinois at Chicago, USA, [3]Université Grenoble Alpes, France, [4]Tohoku University, Japan

02 Kondo effect and valence fluctuations

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

2-0510 **Understanding Magnetism of Intermediate Valent CeFe2Al8**
Nilofar Kurawle, Smita Borole, Sudhindra Rayaprol
UGC-DAE Consortium for Scientific Research, India

2-0538 **Magnetic Hamiltonian Parameter Specification for the Triple Q Structure in the Triangular Lattice**
Woonghee Cho, Jegeun Park
Seoul National University, Korea

2-0614 **Entanglement Structure of Kondo Cloud in Exotic Kondo Effects**
Donghoon Kim[1], Minsoo Kim[1], Jeongmin Shim[1,2], Heung-Sun Sim[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Ludwig-Maximilians-Universität München, Germany

2-0619 **Spin Screening Cloud in Pseudogap Kondo System**
Minsoo Kim[1], Donghoon Kim[1], Jeongmin Shim[1,2], Heung-Sun Sim[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Ludwig-Maximilians-Universität München, Germany

2-0691 **Investigation of the Multiorbital Kondo Effect in a 5f-electron Compound $(Lu,U)Rh_2Zn_{20}$**
Takafumi Kitazawa[1,2], Yo Tokunaga[2], Yoshinori Haga[2], Petr Opletal[2], Hironori Sakai[2], Yoshifumi Tokiwa[2], Etsuji Yamamoto[2], Shinsaku Kambe[2], Yoichi Ikeda[1], Masaki Fujita[1]
[1]Tohoku University, Japan, [2]Japan Atomic Energy Agency, Japan

02 Kondo effect and valence fluctuations

12:15-13:45, MONDAY, July 3 Premier Ballroom C (2F)

2-0749 **Formation of a Yu-Shiba-Rusinov Band in an f-electron-based 2D Kondo Lattice Proximitized to a Conventional Superconductor**
Howon Kim[1], Dirk K. Morr[2], Roland Wiesendanger[1]
[1]*University of Hamburg, Germany,* [2]*University of Illinois at Chicago, USA*

2-0929 **Coexistence of Charge Order and Antiferromagnetic Order in an Extended Periodic Anderson Model**
Yanting Li, Qinhui Jiang, Qiaoni Chen
Beijing Normal University, China

2-1336 **Unsaturated Large Linear Magnetoresistance in the Quadrupolar Kondo Lattice System $PrTi_2Al_{20}$**
Takachika Isomae[1], Akito Sakai[2], Mingxuan Fu[1,2], Takanori Taniguchi[3], Masashi Takigawa[4,5], Satoru Nakatsuji[1,2]
[1]*Institute for solid state physics, Japan*
[2]*The University of Tokyo, Japan,* [3]*Tohoku University, Japan,* [4]*High Energy Accelerator Research Organization, Japan,* [5]*Toyota Physical and Chemical Research Institute, Japan*

2-1337 **Kondo Effect of Double Quantum Dots Coupled to Quantum Hall Edge States**
Dongsung T. Park[1], Chanuk Yang[2], Changki Hong[3], Uhjin Kim[2], Hwanchul Jung[4], V. Umansky[3], H.-S. Sim[1], Yunchul Chung[4], Hyung Kook Choi[2], Hyoungsoon Choi[1]
[1]*Korea Advanced Institute of Science and Technology, Korea,* [2]*Jeonbuk National University, Korea,* [3]*Weizmann Institute of Science, Israel,* [4]*Pusan National University, Korea*

2-1566 **P-P Dimerization and Kondo Screening in a Layered Oxypnictide $La_3Cu_4P_4O_2$**
Szymon Królak, Michał Jerzy Winiarski, Duygu Yazici, Tomasz Klimczuk
Gdańsk University of Technology, Poland

2-1679 **Transport Properties of Amorphous Alloy Ce-Mn with Low Ce Concentration**
Honoka Watanabe[1], Yusuke Amakai[1], Takahiro Namiki[2], Tomohiko Kuwai[2]
[1]*Muroran Institute of Technology, Japan,* [2]*University of Toyama, Japan*

2-1710 **Evolution of the 4f States in $TmSe_{1-x}Te_x$ from Semimetals to Semiconductors Having Non-integer 4f Occupation Numbers**
Chul-Hee Min
Kiel University, Germany

2-1799 **Core-level and Valence-band Photoemission Study of Au-Ga-Ce and Cd-Ce Quasicrystalline Approximants**
Goro Nozue[1,2], Akane Ose[1,2], Miwa Tsutsumi[1,2], Hidenori Fujiwara[1,2], Takayuki Kiss[1], Satoru Hamamoto[2], Masaki Oura[2], Kenji Tamasaku[2], Makina Yabashi[2], Tetsuya Ishikawa[2], Atsushi Higashiya[2,3], Atsushi Yamasaki[2,4], Shin Imada[2,5], Azusa Motouri[6], Farid Labib[6], Shintaro Suzuki[6], Ryuji Tamura[6], Akira Sekiyama[1,2]
[1]*Osaka University, Japan,* [2]*RIKEN SPring-8 center, Japan,* [3]*Setsunan University, Japan,* [4]*Konan University, Japan,* [5]*Ritsumeikan University, Japan,* [6]*Tokyo University of Science, Japan*

2-1805 **Dipolar-Kondo and Dipolar-RKKY Effect in a Polar Metal**
Xiao Lin
Westlake University, China

2-2388 **Unconventional Fermi Liquid State in the Valence Fluctuating System Yb_3Si_5**
Kentaro Kuga[1,2], Masaharu Matsunami[1,2], Takachika Isomae[3], Satoru Nakatsuji[3], Tsunehiro Takeuchi[1,2]
[1]*Toyota Technological Institute, Japan,* [2]*Japan Science and Technology Agency, Japan,* [3]*The University of Tokyo, Japan*

POSTER PRESENTATION

02 Kondo effect and valence fluctuations

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

2-2403 **Direct Investigation of Valence State in Kondo lattice $YbCuAs_2$ Using Resonant X-ray Emission Spectroscopy**
Heemin Lee[1,2], Seung-Pil Heo[1,2], Byeong-Gwan Cho[3], Tae Yeong Koo[4], Eundeok Mun[5], Changyong Song[1,2]
[1]Pohang University of Science and Technology, Korea, [2]POSTECH Photon Science Center, Korea, [3]Korea Research Institute of Standards and Science, Korea, [4]Pohang Accelerator Laboratory, Korea, [5]Simon Fraser University, Canada

2-2494 **Mean Field Study on Magnetic Hard-Direction Ordering in Anisotropic Kondo Lattice Model**
Huanzhi Hu[1], Michal. P Kwasigroch[1,2]
[1]University College London, UK, [2]Trinity College, UK

2-2597 **Two Routes to Mixed Valency in 4f Rare-1Earth Intermetallic Compounds: Kondo vs Hartree-Fock Resonances**
Hyeong-Do Kim
Pohang Accelerator Laboratory, Korea

03 Strong correlations in actinides

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

3-0658 **Structure of the Normal State in UTe_2 and Analogy to the URu_2Si_2**
Sergii Khmelevskyi
Technical University of Vienna, Austria

3-0724 **Resonant X-ray Scattering Study of Interplay between Charge Density Wave and Antiferromagnetism in UPt_2Si_2**
Fusako Kon[1], Chihiro Tabata[2], Kodai Miura[1], Ruo Hibino[1], Hiroyuki Hidaka[1], Tatsuya Yanagisawa[1], Hironori Nakao[3], Hiroshi Amitsuka[1]
[1]Hokkaido University, Japan, [2]Japan Atomic Energy Agency, Japan, [3]High Energy Accelerator Research Organization, Japan

3-0814 **Possible Realization of Topological Crystalline Superconductivity in UTe_2**
Jushin Tei, Takeshi Mizushima, Satoshi Fujimoto
Osaka University, Japan

3-0891 **NMR Study of Spin Fluctuations Driving Spin-Triplet Superconductivity in UTe_2**
Yo Tokunaga[1], Hironori Sakai[1], Shinsaku Kambe[1], Yoshifumi Tokiwa[1], Petr Opletal[1], Yoshinori Haga[1], Hiroki Fujibayashi[2], Katsuki Kinjo[2], Shunsaku Kitagawa[2], Kenji Ishida[2], Ai Nakamura[3], Yusei Shimizu[3], Yoshiya Homma[3], Dexin Li[3], Fuminori Honda[3,4], Dai Aoki[3]
[1]Japan Atomic Energy Agency, Japan, [2]Kyoto University, Japan, [3]Tohoku University, Japan, [4]Kyushu University, Japan

3-0900 **Physical Properties of Semimetallic Magnets UOX (X = S, Se, Te)**
Petr Opletal[1], Hironori Sakai[1], Yoshinori Haga[1], Atsushi Miyake[2], Masashi Tokunaga[2], Yoshifumi Tokiwa[1], Etsuji Yamamoto[1], Shinsaku Kambe[1], Yo Tokunaga[1]
[1]Japan Atomic Energy Agency, Japan, [2]The University of Tokyo, Japan

POSTER PRESENTATION

03 Strong correlations in actinides

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

3-0962 **Mechanism of Fe Substitution on the Electronic Structure of URu_2Si_2: More than a Chemical Pressure Effect**
Andrea Marino
Max Planck Institute for Chemical Physics of Solids, Germany

3-1069 **5f Electron Occupancy and Hybridization in the UTe_2 Superconductor from XANES and XMCD Studies**
Fabrice Wilhelm[1], Jean-Pierre Sanchez[2], Daniel Braithwaite[2], Georg Knebel[2], Gerard Lapertot[2], Andrei Rogalev[1]
[1]European Synchrotron Radiation Facility, France, [2]University Grenoble Alpes, Grenoble INP, CEA, IRIG-Pheliqs, France

3-1356 **A High Resolution M-edge RIXS Investigation of Semiconducting $U_3Pt_3Sb_4$ and Metallic $U_3Pt_3Sn_4$**
Martin Sundermann[1,2], Andrea Marino[1], Denise Christovam[1], Hlynur Gretarsson[2,3], Bernhard Keimer[3], Maurits W. Haverkort[4], Eteri Svanidze[1], Liu Hao Tjeng[1], Andrea Severing[5]
[1]Max Planck Institute for Chemical Physics of Solids, Germany, [2]Deutsches Elektron Synchtron, Germany, [3]Max Planck Institute for Solid State Research, Germany, [4]Heidelberg University, G09ermany, [5]University of Cologne, Germany

3-1543 **Neutron Scattering Study of $U_2Pt_6X_{15}$ (X = Al, Ga) with Honeycomb Structure**
Kyugo Ota[1], Yuki Watabe[1], Yuji Matsumoto[1], Chihiro Tabata[2], Koji Kaneko[2], Yoshinori Haga[2]
[1]University of Toyama, Japan, [2]Japan Atomic Energy Agency, Japan

3-1630 **Lattice Echoes of Metamagnetic Transition in UTe_2**
Michal Vališka, Tetiana Haidamak, Andrej Cabala, Jiří Pospíšil, Jan Prokleška, Gaël Bastien, Vladimír Sechovský
Charles University, Czech Republic

04 CEF effects and multipolar ordering in SCES

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

4-0458 **Magnetic Order in the Icosahedral Quasicrystal**
Junmo Jeon, SungBin Lee
Korea Advanced Institute of Science and Technology, Korea

4-1293 **Sn Substitution Effect on the Structural and Magnetic Properties of $PrOs_2Zn_{20}$**
Shuto Tamura[1], Kazuhei Wakiya[1], Tatsuma D. Matsuda[2], Ryuji Komatsu[1], Retsu Shimizu[1], Mitsuteru Nakamura[1], Masahito Yoshizawa[1], Yoshiki Nakanishi[1]
[1]Iwate University, Japan, [2]Tokyo Metropolitan University, Japan

4-1349 **Reduction of the Crystal Symmetry in a Chiral Magnet $DyNi_3Ga_9$**
Mitsuru Tsukagoshi[1], Takeshi Matsumura[1], Shota Nakamura[2], Shigeo Ohara[2]
[1]Hiroshima University, Japan, [2]Nagoya Institute of Technology, Japan

4-1363 **Effect of In Substitution on the Structural and Magnetic Properties of $PrOs_2Zn_{20}$**
Ryuji Komatsu, Kazuhei Wakiya, Shuto Tamura, Retsu Shimizu, Mitsuteru Nakamura, Masahito Yoshizawa, Yoshiki Nakanishi
Iwate University, Japan

POSTER PRESENTATION

04 CEF effects and multipolar ordering in SCES

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

4-1371 **Ultrasonic Investigation of the Eu-based Intermetallic System $EuZn_2Ge_2$**
S. Kudo[1], M. Nakamura[1], M. Yoshizawa[1], K. Wakiya[1], H. Hirabayashi[2], S. Michimura[2], M. Kosaka[2], Y. Nakanishi[1]
[1]Iwate University, Japan, [2]Saitama University, Japan

4-1931 **Quasi One-Dimensional Ising-like Antiferromagnetism in the Rare-earth Perovskite Oxide $TbScO_3$**
Nan Zhao, Liusuo Wu
Southern University of Science and Technology, China

4-2267 **Chiral and Polar Quadrupole Orders in URhSn**
Takayuki Ishitobi, Kazumasa Hattori
Tokyo Metropolitan University, Japan

4-2306 **Anisotropic Magnetic Properties of Czochralski Grown $CeRh_6Ge_4$ Single Crystal**
Vikas Saini[1], Rajib Mondal[2], Ruta Kulkarni[1], Thamizhavel Arumugam[1]
[1]Tata Institute of Fundamental Research, India, [2]UGC-DAE Consortium for Scientific Research, India

4-2587 **Quantum Spin Nematic Phase in a Square-Lattice Iridate**
Hoon Kim[1,2], Jin-Kwang Kim[1,2], Jimin Kim[1,2], Hyun-Woo J. Kim[1,2], Geun-hye Ha[1,2], Kwangrae Kim[1,2], Wonjun Lee[1,2], Jonghwan Kim[1,2], Gil Young Cho[1,2], Hyeokjun Heo[3], Joonho Jang[3], J Strempfer[4], G Fabbris[4], Y Choi[4], D Haskel[4], Jungho Kim[4], J. W. Kim[4], B. J. Kim[1,2]
[1]Pohang University of Science and Technology, Korea, [2]Institute for Basic Science, Korea, [3]Seoul National University, Korea, [4]Argonne National Laboratory, USA

05 Quantum phase transitions and related phenomena

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

5-0390 **Dipole Condensations in Tilted Bose-Hubbard Chains**
Hyun-Yong Lee
Korea University, Korea

5-0409 **Phase Diagram and Crossover Phases of Topologically Ordered Graphene Zigzag Nanoribbons**
Hoang Anh Le, In Hwan Lee, Young Heon Kim, S.-R. Eric Yang
Korea University, Korea

5-0566 **Vortex Motion Study on Disordered 8nm Thin Superconducting NbRe Microstrips**
Xingchen Chen[1], Carla Cirillo[2], Mikkel Ejrnaes[2], Loredana Parlato[3], Giovanni Piero Pepe[3], Carmine Attanasio[4], Michiel De Dood[1], Sense Jan Van der Molen[1]
[1]Leiden University, The Netherlands, [2]CNR-SPIN, Italy, [3]Università degli Studi di Napoli Federico II, Italy, [4]Università degli Studi di Salerno, Italy

5-0813 **Emergent Soft-gap Anderson Models at Quantum Criticality in a Lattice Hamiltonian within Dynamical Mean Field Theory**
Sujan K. K.[1], Sudeshna Sen[2]
[1]Jawaharlal Nehru Centre for Advanced Scientific Research, India, [2]Indian Institute of Technology, Dhanbad, India

05 Quantum phase transitions and related phenomena

12:15-13:45, MONDAY, July 3 — Premier Ballroom C (2F)

5-0828 **Strange Metals and Quantum Criticality Driven by Entanglement of Multipolar Moments and Conduction Electrons**
Mingxuan Fu, Satoru Nakatsuji
The University of Tokyo, Japan

5-0859 **Chiral Current Order and C_2 Nematicity in Kagome Metal AV_3Sb_5**
Rina Tazai[1], Hiroshi Kontani[2]
[1]Kyoto University, Japan, [2]Nagoya University, Japan

5-1013 **Transport Signatures of Nematic Phase Transition in Pressurized Kagome Superconductor RbV_3Sb_5**
Qun NIU[1], Shanmin Wang[2]
[1]Hefei Institutes of Physical Science, Chinese Academy of Sciences, China, [2]Southern University of Science and Technology, China

5-1024 **Magnetic Anisotropy and Weak Quantum Phase Transition in Antiferromagnetic $YbNi_4Cd$**
Te Zhang, Junsen Xiang, Zhaotong Zhuang, Shuai Zhang, Peijie Sun
Institute of Physics, Chinese Academy of Sciences, China

5-1035 **Quantum Fluctuations and Non-Fermi Liquid in Quasi-One-Dimensional $PrAu_2In_4$**
Zhaotong Zhuang, Meng Lyu, Te Zhang, Junsen Xiang, Shuai Zhang, Peijie Sun
Institute of Physics, Chinese Academy of Sciences, China

5-1174 **Disappearance of Antiferromagnetic Order of CeCoSi Studied by Specific Heat under Pressure**
Kenshin Kurauchi[1], Takeshi Matsumura[1], Suguru Kishida[1], Taichi Tagawa[1], Nonoka Higa[1], Kazunori Umeo[1], Hiroshi Tanida[2]
[1]Hiroshima University, Japan, [2]Toyama Prefectural University, Japan

5-1284 **Confinement of Many-body Bethe Strings**
Jiahao Yang[1], Jianda Wu[1], S. E. Nikitin[2]
[1]Shanghai Jiao Tong University, China, [2]Paul Scherrer Institute, Switzerland

5-1302 **E_8 dynamics in a Perturbed Quantum Critical Ising Chain and its Experimental Realization in $BaCo_2V_2O_8$ Material**
Xiao Wang, Jianda Wu
Shanghai Jiao Tong University, China

5-1428 **Infinite Critical Non-Fermi Liquid and Spin Pumping Effect in Non-Fermi Liquids**
Xiao-Tian Zhang
University of Chinese Academy of Sciences, China

5-1654 **Transverse-Field Quantum Phase Transitions in $CoNb_2O_6$**
Alexander Engelhardt, Christian Pfleiderer
Technical University of Munich, Germany

5-1781 **Flat Band Induced Metal-Insulator Transitions for Weak Magnetic Flux and Spin-Orbit Disorder**
Yeongjun Kim[1], Tilen Cadez[2], Alexei Andreanov[1, 2], Sergej Flach[1, 2]
[1]University of Science and Technology, Korea, [2]Institute for Basic Science, Korea

POSTER PRESENTATION

05 Quantum phase transitions and related phenomena

12:15-13:45, MONDAY, July 3 Premier Ballroom C (2F)

5-1782 **Critical-to-Insulator Transitions and Fractality Edges in Perturbed Flatbands**
Sanghoon Lee[1,2], Alexei Andreanov[1,2], Sergej Flach[1,2]
[1]*University of Science and Technology, Korea,* [2]*Institute for Basic Science, Korea*

5-1895 **SU(4) Valley+Spin Fluctuation in Magic-angle Twisted Bilayer Graphene**
Seiichiro Onari, Daisuke Inoue, Hiroshi Kontani
Nagoya University, Japan

5-1952 **Microscopic Theory of Multi-stage Fermi Surface Reconstruction in Higher-rank Moment Quantum Materials**
SangEun Han, Daniel J. Schultz, Yong Baek Kim
University of Toronto, Canada

5-1959 **First-principles Studies of Multiple CDW Phase in 1T-$TaTe_2$ Monolayer**
Yeongrok Jin, Seongmun Kim, Byungho Lee, Seungjae Hwang, Jaekwang Lee
Pusan National University, Korea

5-2048 **Hidden Quantum Phase Transitions Hosted in the "Mixed-Type" Band Electrons in Kagome Metal AV_3Sb_5**
Jianxin Huang[1], Rina Tazai[2], Youichi Yamakawa[1], Seiichiro Onari[1], Hiroshi Kontani[1]
[1]*Nagoya University, Japan,* [2]*Kyoto University, Japan*

5-2118 **Nematic Fluctuation Driven Quantum Criticality and High-T_c Superconductivity: Fe-based and Cuprate Superconductors**
Youichi Yamakawa, Seiichiro Onari, Hiroshi Kontani
Nagoya University, Japan

5-2180 **Emergent Channel over a Pair of Pockets in Strong Density Waves**
DiZhao Zhu, Yi Zhang
Peking University, China

5-2232 **Synchrotron-radiation-based ^{174}Yb Mössbauer spectroscopy of Au-Al-Yb Approximant**
Yumi Kinoshita[1], Nobumoto Nagasawa[2], Ryo Masuda[3], Yoshitaka Yoda[2], Yuki Nakamura[4], Yuya Sakakibara[4], Yuki Yoneyama[4], Kazuhiko Deguchi[4], Hisao Kobayashi[1]
[1]*University of Hyogo, Japan,* [2]*Japan Synchrotron Radiation Research Institute, Japan,* [3]*Hirosaki University, Japan,* [4]*Nagoya University, Japan*

POSTER PRESENTATION

Poster Presentation: 12:15-13:45, TUESDAY, July 4

06 Theoretical models and methods for strong correlations

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

6-0311 **A Simple Description of Itinerant Weak Ferromagnetism**
Kazuyuki Matsumoto
Hokkaido University of Education, Japan

6-0326 **Enhancement of Flat Band Superconductivity**
Si Min Chan[1], George Batrouni[1,2], Benoît Gremaud[3]
[1]National University of Singapore, Singapore, [2]Université Côte d'Azur, France, [3]Aix-Marseille Université, France

6-0491 **Aspects of Z_N Rank-2 Gauge Theories in (2+1)D: Construction Scheme, Holonomies, and Tensor Network Wavefunction**
Yun-Tak Oh
Korea University, Korea

6-0948 **Exploring Negative Hund Metals with Dynamical Mean-Field Theory Plus Numerical Renormalization Group**
Jihoon Kim, Seung-Sup B. Lee
Seoul National University, Korea

6-1054 **Quantics Tensor Cross Interpolation for High-Resolution, Parsimonious Representations of Multivariate Functions in Physics and Beyond**
Marc Ritter
Ludwig-Maximilians-Universität München, Germany

6-1137 **Material-based Analysis of Organic Mott Insulators**
Ryuta Iwazaki, Takuya Kobayashi, Hiromi Taniguchi, Shintaro Hoshino
Saitama University, Japan

6-1298 **Dynamical Mean-Field Theory Plus Numerical Renormalization Group Study of Twisted Bilayer Graphene**
Seongyeon Youn, Seung-Sup B. Lee
Seoul National University, Korea

6-1327 **Multifractality and Localization in a Disordered Flat-band Superconductor on the Kagome Lattices**
Jicheol Kim, Dong-Hee Kim
Gwangju Institute of Science and Technology, Korea

6-1329 **Generating Function for Tensor Network Summation**
Wei-Lin Tu[1], Laurens Vanderstraeten[2], Norbert Schuch[3], Hyun-Yong Lee[1], Naoki Kawashima[4], Ji-Yao Chen[5]
[1]Korea University, Korea, [2]Ghent University, Belgium, [3]University of Vienna, Austria, [4]The University of Tokyo, Japan, [5]Sun Yat-sen University, China

6-1375 **Symmetric Improved Estimators of General Local Multipoint Functions**
Jae-Mo Lihm[1,2], Seung-Sup Lee[1]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea

06 Theoretical models and methods for strong correlations

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

6-1387 **Machine Learning for Identifying Magnetic Order: Application to Spectral Data Analysis**
Yerin Jang[1], Subin Kim[1], Choong Hyun Kim[2, 3], Ara Go[1]
[1]*Chonnam National University, Korea,* [2]*Institute for Basic Science, Korea,* [3]*Seoul National University, Korea*

6-1461 **Subharmonic Fidelity Revival in a Driven PXP Model**
Haru K. Park, Sungbin Lee
Korea Advanced Institute of Science and Technology, Korea

6-1523 **Frustration Properties of the Dilute Ising Model**
Darya Yasinskaya, Yuri Panov
Ural Federal University, Russia

6-1689 **The Emergent Non-commutative Field Theory of Vortex Lattice**
Dung Xuan Nguyen
Institute for Basic Science, Korea

6-1714 **Thermalization Universality Class Transition Induced by Disorder**
Weihua Zhang[1, 2], Gabriel Lando[1], Barbara Dietz[1], Sergej Flach[1]
[1]*Institute for Basic Science, Korea,* [2]*Lanzhou University, China*

6-1736 **Quantum Oscillations in the Magnetization and Density of States of Insulators**
Animesh Panda[1], Mohit Randeria[2], Sumilan Banerjee[1]
[1]*Indian Institute of Science, India,* [2]*Ohio State Univeristy, USA*

6-1909 **Pattern Description of the Ground State Properties of the One-dimensional Axial Next-nearest-neighbor Ising Model in a Transverse Field**
Yun-Tong Yang, Hong-Gang Luo
Lanzhou University, China

6-1912 **Quantum Many-body States with Convolution Neural Network for General Lattices**
Beom Hyun Kim
Institute for Basic Science, Korea

6-1917 **Possible Chiral Spin Liquid State in the S=1/2 Kagome Heisenberg Model**
Yi Zhou
Institute of Physics, Chinese Academy of Sciences, China

6-2012 **Unconventional Quantized Phase at Enigmatic 5/2 Fractional Quantum Hall State**
Sudipto Das, Sahana Das, Sudhansu Sekhar Mandal
Indian Institute of Technology Kharagpur, India

6-2373 **Variation of Carrier Density in Semimetals via Short-range Correlation: A Case Study with Nickelate $NdNiO_2$**
Ruoshi Jiang[1], Zijian Lang[1], Tom Berlijn[2], Wei Ku[1]
[1]*Shanghai Jiao Tong University, China,* [2]*Oak Ridge National Laboratory, USA*

6-2406 **Comparison of GW, Vertex Corrected, Bethe-Salpeter, and DMFT Calculations of Simple Metal Na and Pnictide LiFeAs**
Vincent Sacksteder
Rutgers University, USA

POSTER PRESENTATION

06 Theoretical models and methods for strong correlations

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

6-2419 **Singular-Mode Functional Renormalization-Group Approach to Electron Nematic State and Unconventional Superconductivity in Two-Dimensional Electron Systems**
Shiono Asai, Masahisa Tsuchiizu
Nara Women's University, Japan

07 Non-equilibrium phenomena in strongly correlated systems

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

7-0362 **Unraveling the Hybridization Process in Single-crystal Cerium Film by Ultrafast Optical Spectroscopy**
Yunhe Pei[1], Yang Liu[2], Jingbo Qi[1]
[1]University of Electronic Science and Technology of China, China, [2]Zhejiang University, China

7-0710 **Nonequilibrium Dynamics of Suppression, Revival, and Loss of Charge Order in a Laser-pumped Electron-phonon System**
Sankha Subhra Bakshi
Harish-Chandra Research Institute, India

7-0840 **A Non Equilibrium Green's Function Formalism Applied to STM/ESR Experiments**
Jose Reina Galvez, Wolf Christoph
Ewha Womans University, Korea

7-0877 **Ultraweak Electron-phonon Coupling Strength in Cubic Boron Arsenide Unveiled by Ultrafast Dynamics**
Zhenyun Tian[1], Jimin Zhao[1], Zhang Qianyu[1], Xiao Yawen[1], Gamage G. A.[2], Tian Fei[2], Yue Shuai[2], Hadjiev V. G.[2], Bao Jiming[2], Ren Zhifeng[2], Liang Erjun[3]
[1]Institute of Physics, Chinese Academy of Sciences, China, [2]University of Houston, USA, [3]Zhengzhou University, China

7-0935 **Point-Gap Topology of Non-Hermitian Many-Body Systems**
Shu Hamanaka, Kazuki Yamamoto, Tsuneya Yoshida
Kyoto University, Japan

7-1049 **Nonlinear Edelstein Effect in Strongly Correlated Electron Systems**
Jun Oike, Robert Peters
Kyoto University, Japan

7-1308 **Non-equilibrium Dynamics of Strongly Correlated 1D Electronic Systems: Symmetry-broken State and its Real-time Dynamics in the Hubbard-Holstein Model**
Hyeong Jun Lee[1], Karin M. Rabe[2], Se Young Park[3], Myung Joon Han[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Rutgers University, USA, [3]Soongsil University, Korea

7-1339 **Electron Transport in Defective Perovskite Oxides: A Non-Equilibrium Green's Functions Investigation**
Victor Rosendal[1], Vladislav Borisov[2], Olle Eriksson[2], Mads Brandbyge[1], Nini Pryds[1], Dirch Hjorth Petersen[1]
[1]Technical University of Denmark, Denmark, [2]Uppsala University, Sweden

07 Non-equilibrium phenomena in strongly correlated systems

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

7-1406 **Ultrafast Interplay of Magnetostriction and Thermal Expansion in $SrRuO_3/SrTiO_3$ Superlattice**
Megha Jain[1], Fardiman Ruli[1], Hongchen Gao[1], Dhawud Razaq[1], Jihyeon Hwang[1], Saehwan Chun[2], S.G. Jeong[3], W.S. Choi[3], Kyungwan Kim[1]
[1]Chungbuk National University, Korea, [2]Pohang Accelerator Laboratory, Korea, [3]Sungkyunkwan University, Korea

7-1569 **Periodically Driven Heavy-Fermion Systems**
Michael Turaev, Johann Kroha
University of Bonn, Germany

7-1680 **Electronic Floquet Liquid Crystals**
Iliya Esin[1], Gaurav Gupta[2], Erez Berg[3], Mark Rudner[4], Netanel Lindner[2]
[1]California Institute of Technology, USA, [2]Technion, Haifa, Israel, [3]Weizmann Institute of Science, Israel, [4]University of Washington, USA

7-1712 **Ultrafast Structural Dynamics of the Kagome Metal CsV_3Sb_5**
Kyoung Hun Oh[1], Honglie Ning[1], Yifan Su[1], Alexander Von Hoegen[1], Zachery Porter[2], Andrea Capa Salinas[3], Quynh Nguyen[2], Takahiro Sato[2], Matthieu Chollet[2], Vincent Espacito[2], Matthias Hoffmann[2], Diling Zhu[2], Stephen Wilson[3], Nuh Gedik[1]
[1]Massachusetts Institute of Technology, USA, [2]SLAC National Accelerator Laboratory, USA, [3]University of California, Santa Barbara, USA

7-1893 **Shapiro Steps and Surface Acoustic Waves in Charge Density Wave Dynamics**
Yu Funami, Kazushi Aoyama
Osaka University, Japan

7-2031 **Kibble-Zurek Scaling in a Homogeneous Strongly Interacting Fermi Gas**
Kyuwhan Lee[1], Taehoon Kim[1], Sol Kim[1], Yong-il Shin[1,2]
[1]Seoul National University, Korea, [2]Institute for Basic Science, Korea

7-2338 **Ultrafast Charge Carrier Dynamics in Dimensionality-controlled Iridate Thin Films**
Seungwook Lee[1], Jongseok Lee[1], Inhyeok Choi[1], Ambrose Sungseok Seo[2]
[1]Gwangju Institute of Science and Technology, Korea, [2]University of Kentucky, USA

7-2368 **Ultrafast Dynamics of Charge Density Wave (CDW) Order in Kagome Metal, CsV_3Sb_5**
Seung-Pil Heo[1], Heemin Lee[1], Jaeyong Shin[1], Junha Hwang[1], Sung Yun Lee[1], Eunyoung Park[1], Sejin Kim[1], Sinwoo Kim[1], ByungJune Lee[1], Choongjae Won[2], Sang-Youn Park[3], Hoyoung Jang[3], Dong-bin Shin[4], Changyong Song[1]
[1]Pohang University of Science and Technology, Korea, [2]Max Planck POSTECH/Korea Research Initiative, Korea, [3]Pohang Accelerator Laboratory, Korea, [4]Gwangju Institute of Science and Technology, Korea

7-2397 **Magnetostriction Effect on Folded-phonon Oscillations in $SrRuO_3$-$SrTiO_3$ Superlattices**
Fardiman Ruli[1], Hongchen Gao[1], Megha Jain[1], Palwinder Singh[1], Seung Gyo Jeong[2], Woo Seok Choi[2], Kyungwan Kim[1]
[1]Chungbuk National University, Korea, [2]Sungkyunkwan University, Korea

7-2460 **Driven Hubbard Model on a Triangular Lattice: Tunable Heisenberg Antiferromagnet with Multiple Ordered and Disordered Phases**
Samudra Sur, Adithi Udupa, Diptiman Sen
Indian Institute of Science, India

POSTER PRESENTATION

08 Unconventional superconductivity

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

8-0340 **Puddle Formation and Persistent Gaps across the Non-Mean-Field Breakdown of Superconductivity in Overdoped $(Pb,Bi)_2Sr_2CuO_{6+\delta}$**
Tjerk Benschop[1], Willem Tromp[1], Jian-Feng Ge[1], Irene Battisti[1], Koen Bastiaans[1,2], Steef Smit[3], Erik Van Heumen[3,4], Mark Golden[3], Yinkai Huang[3], Takeshi Kondo[5], Jennifer Hoffman[6], Miguel Sulangi[7,8], Jan Zaanen[1], Milan Allan[1], Et Al.[9,10]
[1]Leiden University, The Netherlands, [2]Kavli Institute of Nanoscience Delft, The Netherlands, [3]University of Amsterdam, The Netherlands, [4]QuSoft, The Netherlands, [5]The University of Tokyo, Japan, [6]Harvard University, USA, [7]University of Florida, USA, [8]University of the Philippines, Philippines, [9]Nanjing University, China, [10]Toyota Technological Institute, Japan

8-0406 **Fully Gapped Pairing State in Spin-triplet Superconductor UTe_2**
Shota Suetsugu[1], Masaki Shimomura[1], Masashi Kamimura[1], Tomoya Asaba[1], Hiroto Asaeda[1], Yuki Kosuge[1], Yuichi Kasahara[1], Yuhki Kohsaka[1], Minhyea Lee[2], Youichi Yanase[1], Hironori Sakai[3], Petr Opletal[3], Yoshifumi Tokiwa[3], Yoshinori Haga[3], Yuji Matsuda[1]
[1]Kyoto University, Japan, [2]University of Colorado Boulder, USA, [3]Japan Atomic Energy Agency, Japan

8-0441 **Fulde–Ferrell–Larkin–Ovchinnikov State Induced by Antiferromagnetic Order in κ-type Organic Conductors**
Shuntaro Sumita[1,2], Makoto Naka[3], Hitoshi Seo[2]
[1]The University of Tokyo, Japan, [2]RIKEN, Japan, [3]Tokyo Denki University, Japan

8-0453 **Quantum-geometry-induced Superconductivity with Finite Center of Mass Momenta**
Taisei Kitamura, Akito Daido, Michiya Chazono, Shoto Kanasugi, Youichi Yanase
Kyoto University, Japan

8-0460 **NMR Study on Multiple Superconducting Phases of UTe_2 under Pressure**
Katsuki Kinjo[1], Hiroki Fujibayashi[1], Hiroki Matsumura[1], Fumiya Hori[1], Shunsaku Kitagawa[1], Kenji Ishida[1], Yo Tokunaga[2], Hironori Sakai[2], Shinsaku Kambe[2], Ai Nakamura[3], Yusei Shimizu[3], Yoshiya Homma[3], Dexin Li[3], Fuminori Honda[3,4], Dai Aoki[3,5]
[1]Kyoto University, Japan, [2]Japan Atomic Energy Agency, Japan, [3]Tohoku University, Japan, [4]Kyushu University, Japan, [5]Université Grenoble Alpes, France

8-0507 **Pair-breaking Effects on Nb Thin Films under an In-plane Magnetic Field**
Ji Eun Lee[1], Joonyoung Choi[2], Taek Sun Jung[1], Kyung Ik Sim[3], Younjung Jo[2], Jae Hoon Kim[1]
[1]Yonsei University, Korea, [2]Kyungpook National University, Korea, [3]Institute for Basic Science, Korea

8-0605 **In-plane Field Angle Dependence of London Penetration Depth Using a Vector-field Cryogenic Magnetic Force Microscope**
Jinyoung Yun[1], Geunyong Kim[1,2], Yeonkyu Lee[1], Jeehoon Kim[1]
[1]Pohang University of Science and Technology, Korea, [2]Samsung Advanced Institute of Technology, Korea

8-0634 **^{121}Sb-NQR Study on the Superconducting Kagome Metal CsV_3Sb_5**
Hidemitsu Takahashi[1], Masaki Shibata[1], Shunsaku Kitagawa[1], Kenji Ishida[1], Yongkai Li[2], Yugui Yao[2], Zhiwei Wang[2]
[1]Kyoto University, Japan, [2]Beijing Institute of Technology, China

8-0641 **Superconducting Piezoelectric Effect in Anapole and Monopole Superconductors**
Michiya Chazono, Shota Kanasugi, Taisei Kitamura, Youichi Yanase
Kyoto University, Japan

POSTER PRESENTATION

08 Unconventional superconductivity

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

8-0686 **Nuclear Spin Relaxation Rate of Nonunitary Dirac and Weyl Superconductors**
Shingo Kobayashi[1], Koki Maeno[2], Yasuhiro Asano[3], Yuki Kawaguchi[2]
[1]RIKEN, Japan, [2]Nagoya University, Japan, [3]Hokkaido University, Japan

8-0836 **Physics of Superconductor Junctions with Bogoliubov Fermi Surface**
Tatsuya Miki[1], Shun Tamura[2], Yukio Tanaka[3], Shintaro Hoshino[1]
[1]Saitama University, Japan, [2]Universität Würzburg, Germany, [3]Nagoya University, Japan

8-0854 **NMR Study of Superconducting Multiphase and Magnetism in a Novel Heavy Fermion Superconductor $CeRh_2As_2$**
Shiki Ogata[1], Shunsaku Kitagawa[1], Katsuki Kinjo[1], Kenji Ishida[1], Manuel Brando[2], Elena Hassinger[2], Christoph Geibel[2], Seunghyun Khim[2]
[1]Kyoto University, Japan, [2]Max Planck Institute for Chemical Physics of Solids, Germany

8-0887 **^{125}Te-NMR Knight Shift Measurement on UTe_2 with T_c = 2.1 K**
Hiroki Matsumura[1], Hiroki Fujibayashi[1], Katsuki Kinjo[1], Shunsaku Kitagawa[1], Kenji Ishida[1], Yo Tokunaga[2], Hironori Sakai[2], Shinsaku Kambe[2], Ai Nakamura[3], Yusei Shimizu[3], Yoshiya Homma[3], Dexin Li[3], Fuminori Honda[3,4], Dai Aoki[3,5]
[1]Kyoto University, Japan, [2]Japan Atomic Energy Agency, Japan, [3]Tohoku University, Japan, [4]Kyushu University, Japan, [5]Université Grenoble Alpes, France

8-0898 **Interface-enhanced Superconductivity in Monolayer FeSe on $SrVO_3$ (SVO)**
Dyon Van Dinter, Markel Pardo Almanza, Anjana Krishnadas, Yukiko Obata, Keita Harada, Yuita Fujisawa, Yoshinori Okada
Okinawa Institute of Science and Technology, Japan

8-0904 **Temperature and Doping Dependence of the Singlet and Triplet Pair Susceptibilities in the Two-Band Hubbard Model Based on the Dynamical Mean-Field Theory**
Yusuke Inokuma, Yoshiaki Ono
Niigata University, Japan

8-0925 **Linear Optical Response from the Odd-Parity Bardasis-Schrieffer Mode in Locally Non-Centrosymmetric Superconductors**
Changhee Lee[1], Suk Bum Chung[2,3]
[1]Seoul National University, Korea, [2]University of Seoul, Korea, [3]Korea Institute for Advanced Study, Korea

8-0959 **Theoretical Study for κ-type BEDT-TTF Charge Transfer Salts Based on Density Functional and Spin Fluctuation Theory**
Makoto Shimizu[1], Daniel Guterding[2], Junya Otsuki[1], Harald Jeschke[1]
[1]Okayama University, Japan, [2]Technische Hochschule Brandenburg, Germany

8-1101 **Data-driven Fermi Surface Fitting in the Unconventional Superconductor UTe_2**
Theodore Weinberger[1], Alexander Eaton[1], Nicholas Popiel[1], Zheyu Wu[1], Alexander Hickey[1], Andrej Cabala[2], Jiří Pospíšil[2], Jan Prokleška[2], Tetiana Haidamak[2], Gaël Bastien[2], Petr Opletal[3], Hironori Sakai[3], Yoshinori Haga[3], Robert Nowell[4], Shermane Benjamin[4], Vladimir Sechovsky[2], Gilbert Lonzarich[1], Malte Grosche[1], Michal Valiska[2]
[1]University of Cambridge, UK, [2]Charles University, Czech Republic, [3]Japan Atomic Energy Agency, Japan, [4]National High Magnetic Field Laboratory, USA

8-1145 **Revealing the Band Folding in $YBa_2Cu_3O_{7-d}$ Films with Calcium Doping by ARPES**
Anjana Krishnadas, Yoshinori Okada
Okinawa Institute of Science and Technology, Japan

POSTER PRESENTATION

08 Unconventional superconductivity

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

8-1162 **Superconducting Gap Symmetry from Spin Fluctuation Pairing in Sr_2RuO_4**
Jae-Ho Han[1], Bongjae Kim[2]
[1]*Institute for Basic Science, Korea,* [2]*Kunsan National University, Korea*

8-1164 **Theory of BCS-BEC Crossover in Strongly-Correlated Electron Systems: Organic Superconductors and Cuprates**
Hiroshi Watanabe, Hiroaki Ikeda
Ritsumeikan University, Japan

8-1202 **Field Reentrant Odd-parity Superconductivity in Strongly Correlated Electron Systems**
Kosuke Nogaki, Youichi Yanase
Kyoto University, Japan

8-1203 **Interaction Effects on j=3/2 Bogoliubov Fermi Surfaces**
Tatsuaki Mori, Hiroshi Watanabe, Hiroaki Ikeda
Ritsumeikan University, Japan

8-1217 **Thermal Expansion of Superconducting CsV_3Sb_5**
Shuai Zhang, Peijie Sun
Institute of Physics, Chinese Academy of Sciences, China

8-1276 **Magnetoresistance of YBCO in Ultrahigh Magnetic Fields**
Shiyue Peng, Yasuhiro Matsuda
The University of Tokyo, Japan

8-1285 **Robust Topological Superconductivity in Spin-orbit Coupled Systems at Higher-order Van Hove Filling**
Xinloong Han[1], Jiangping Hu[2], Xianxin Wu[3]
[1]*University of Chinese Academy of Sciences, China,* [2]*Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, China,* [3]*Institute of Theoretical Physics, China*

8-1291 **Josephson Current-Phase Relations of Finite Size Effect Between the Kitaev Ladder**
Chengrong Xie[1], Hiroki Tsuchiura[1], Yukio Tanaka[2]
[1]*Tohoku University, Japan,* [2]*Nagoya University, Japan*

8-1451 **Pairing Symmetry and the Edge States in the Ordered Honeycomb Network Superconductor BaPtSb**
Tsuyoshi Imazu[1], Masafumi Kudo[1], Shohei O. Shingu[1], Jun Goryo[1], Yoshiki Imai[2]
[1]*Hirosaki University, Japan,* [2]*Okayama University of Science, Japan*

8-1474 **Mixed Singlet-triplet Pairing in the Flat Band of Twisted WSe_2 Bilayer**
Michal Zegrodnik, Andrzej Biborski
AGH University of Science and Technology, Poland

8-1493 **Eliashberg Theory Calculations for Magnetically Mediated Superconductivity**
Ran Tao, Malte Grosche
University of Cambridge, UK

POSTER PRESENTATION

08 Unconventional superconductivity

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

8-1496 **Mapping the Phase Diagram of Ultraclean UTe_2**
Zheyu Wu[1], Theodore Weinberger[1], Jiasheng Chen[1], Patricia Alireza[1], A. Cabala[2], J. Pospísil[2], J. Prokleska[2], T. Haidamak[2], G. Bastien[2], Alex Hickey[1], M. J. Mancera-Ugarte[1], Yurii Skourski[3], S. Benjamin[4], V. Sechovsky[2], Michal Valiska[2], Friedrich Malte Grosche[1], Alex Eaton[1]
[1]University of Cambridge, UK, [2]Charles University, Czech Republic, [3]Hochfeld-Magnetlabor Dresden, Germany, [4]National High Magnetic Field Laboratory, USA

8-1515 **Classical Monte Carlo Simulation of a Pseudospin Model of Cuprates**
Vasiliy Ulitko, Yuri Panov, Alexander Moskvin
Ural Federal University, Russia

8-1530 **Pressure Enhanced Superconductivity in $LaNiGa_2$**
Zhang Yanan[1], Dajun Su[1], Yunshu Shi[2], Jinyu Wu[1], Valentin Taufour[2], Michael Smidman[1], Huiqiu Yuan[1]
[1]Zhejiang University, China, [2]University of California, Davis, USA

8-1561 **Non-Hermitian Skin Effect in Dissipative Superconductors with Supercurrent**
Kenji Shimomura, Masatoshi Sato
Kyoto University, Japan

8-1629 **Charge Density Waves in Infinite-layer Nickelates**
Charles Tam[1,2], Jaewon Choi[1], Xiang Ding[3], Dan Porter[1], Gareth Nisbet[1], Alessandro Bombardi[1], Stefano Agrestini[1], Abhishek Nag[1,4], Mei Wu[5], Bing Huang[6], Huiqian Luo[7,8], Peng Gao[5], Mirian García-Fernández[1], Liang Qiao[3], Ke-Jin Zhou[1]
[1]Diamond Light Source, UK, [2]University of Bristol, UK, [3]University of Electronic Science and Technology of China, China, [4]Paul Scherrer Institut, Switzerland, [5]Peking University, China, [6]Beijing Computational Science Research Center, China, [7]Institute of Physics, Chinese Academy of Sciences, China, [8]Songshan Lake Materials Laboratory, China

8-1862 **The Low-temperature Specific Heat and Thermal Expansion of YFe_2Ge_2**
Manuel Brando
Max Planck Institute for Chemical Physics of Solids, Germany

8-1904 **Two-stage Superconductivity in the Hatsugai–Kohmoto-BCS Model**
Yu Li[1], Vivek Mishra[1], Yi Zhou[2], Fuchun Zhang[1]
[1]Kavli Institute for Theoretical Sciences, University of Chinese Academy of Sciences, China, [2]Institute of Physics, Chinese Academy of Sciences, China

8-1911 **Observation of Dynamics of Orbital Degrees of Freedom by Isotope Sb-NMR in Sb Doped La1111-based Compounds**
Takayoshi Kouchi[1,2], Kyohei Yoshinaga[1], Tomoya Asano[1], Sotaro Nishioka[1], Mitsuharu Yashima[1], Hidekazu Mukuda[1], Tsuyoshi Kawashima[1], Hirokazu Tsuji[1], Shigeki Miyasaka[1], Akira Iyo[3]
[1]Osaka University, Japan, [2]Tokyo University of Science, Japan, [3]National Institute of Advanced Industrial Science and Technology, Japan

8-1976 **Investigation of Trapped Fields in $GdBa_2Cu_3O_{7-\delta}$ Using a Pulsed Magnet**
Chung Ha Park, Jungwoo Lee, Jeonghun Kang, Dong-Hyeon Gim, Sukhho Kim, Kee Hoon Kim
Seoul National University, Korea

8-2017 **Field-induced Half-quantum-shift in the Little-Parks Oscillation in Spin-triplet Superconductors**
Kazushi Aoyama
Osaka University, Japan

POSTER PRESENTATION

08 Unconventional superconductivity

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

8-2251 **Spontaneous Breaking of Mirror Symmetry Beyond Critical Doping in Pb-Bi2212**
Saegyeol Jung[1], Byeongjun Seok[1], Dongjoon Song[2], Changyoung Kim[1]
[1]*Seoul National University, Korea,* [2]*The University of British Columbia, Canada*

8-2329 **Anderson Localization of in-gap BdG Quasiparticles in Disordered Fe-based Superconductor**
Hae Ryong Park[1,2], Ki-Seok Kim[1,3], Jhinhwan Lee[1,2]
[1]*Pohang University of Science and Technology, Korea,* [2]*Institute for Basic Science, Korea,* [3]*Asia Pacific Center for Theoretical Physics, Korea*

8-2509 **Bound States around Impurities in a Superconducting Bilayer**
Yufei ZHU, Nico Hackner, Philip Brydon
University of Otago, New Zealand

8-2580 **Effects of Orbital Selective Dynamic Correlation on the Spin Susceptibility and Superconducting Symmetries in Sr2RuO4**
Chang-Youn Moon
Korea Research Institute of Standards and Science, Korea

09 Superconductivity in novel materials

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

9-0321 **Enhancement of Vortex Pinning in Spark Plasma Sintered Medium Entropy Alloy and Universal Scattering Mechanism in Entropy Mixing Alloys**
Rahmatul Hidayati, Jin Hee Kim, Jong-Soo Rhyee
Kyung Hee University, Korea

9-0512 **Terahertz Properties of High-entropy Alloy Superconductors**
Jieun Seok[1], Ji Eun Lee[1], Soon-Gil Jung[2], Yoonseok Han[3], Tuson Park[3], Jae Hoon Kim[1]
[1]*Yonsei University, Korea,* [2]*Sunchon National University, Korea,* [3]*Sungkyunkwan University, Korea*

9-0593 **Nodeless Superconductivity in Kagome Metal CsV_3Sb_5 with and without Time Reversal Symmetry Breaking**
Wei Zhang, Kwing To Lai, Swee Kuan Goh
The Chinese University of Hong Kong, Hong Kong (SAR of China)

9-0650 **Observation of Robust Zero-energy State and Enhanced Superconducting Gap in a Trilayer Heterostructure of MnTe/Bi2Te3/Fe(Te,Se)**
Chen Chen[1], Tong Zhang[1], Donglai Feng[2]
[1]*Fudan University, China,* [2]*University of Science and Technology of China, China*

9-0986 **Characterizing the Upper Critical Field of the Layered Superconductor $LaO_{0.8}F_{0.2}BiS_{2-x}Se_x$ (x = 0.5 and 1.0)**
Jelle Lorenz
University of Amsterdam, The Netherlands

09 Superconductivity in novel materials

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

9-1071 **Phase Diagram and Magnetostriction of Layered Superconductor 2H-NbS_2**
Davide Pizzirani[1], Thom Ottenbros[1], Maró Van Rijssel[1], Jasper Linnartz[1], Nigel Hussey[1,2], Steffen Wiedmann[1], Maarten Van Delft[1]
[1]Radboud University, The Netherlands, [2]University of Bristol, UK

9-1124 **Characterising the Ground State of the Equiatomic High Entropy Alloy Superconductor NbMoRuReIr**
Rhea Stewart[1], Roshan Kushwaha[2], Ravi Singh[2], Adrian Hillier[1]
[1]Science and Technology Facilities Council, UK, [2]Indian Institute of Science Education and Research, India

9-1212 **Low-Temperature Anomalies in Novel Layered Superconductor $NaSn_2As_2$ Detected by NMR/NQR**
Shota Nakanishi[1], Yusuke Nakai[1], Takeshi Mito[1], Yosuke Goto[2], Yoshikazu Mizuguchi[3]
[1]University of Hyogo, Japan, [2]National Institute of Advanced Industrial Science and Technology, Japan, [3]Tokyo Metropolitan University, Japan

9-1215 **Elastoresistance Measurements of Kagome Superconductor $CsV_3Sb_{5-x}Sn_x$**
Asato Onishi[1], Yoichi Kageyama[1], Kenichiro Hashimoto[1], Masaki Roppongi[1], Kota Ishihara[1], Yuzki Oey[2], Brenden Ortiz[2], Stephen D. Wilson[2], Takasada Shibauchi[1]
[1]The University of Tokyo, Japan, [2]University of California, Santa Barbara, USA

9-1288 **Effects of F Substitutions on the Crystal Structure and Superconducting Properties in $La(O,F)BiS_2$**
Sora Kobayashi[1], Kanako Noguchi[1], Tomoko Takeda[1], Takeshi Hara[2], Satoshi Demura[3], Atsushi Nomura[1], Hiroshi Sawa[2], Hideaki Sakata[1]
[1]Tokyo University of Science, Japan, [2]Nagoya University, Japan, [3]Nihon University, Japan

9-1447 **Superconductivity in the van der Waals Crystal SnS_2 Up to 105 GPa**
Binbin Yue[1], Wei Zhong[1], Xiaohui Yu[2], Fang Hong[2]
[1]Center for High Pressure Science & Technology Advanced Research, China, [2]Institute of Physics, Chinese Academy of Sciences, China

9-1608 **The Discovery of Bulk Superconductivity in the Quasi-one-dimensional Ternary $(K, Rb)Mn_6Bi_5$**
Bosen Wang, Jin-Guang Cheng
Institute of Physics, Chinese Academy of Sciences, China

9-1662 **Hybrid S-wave Superconductivity in CrB_2**
Andreas Kreisel
University of Copenhagen, Denmark

9-1998 **Commensurate Stacking Phase Transitions in an Intercalated Transition Metal Dichalcogenide**
Xiaohui Yang[1], Jinke Bao[2], Zhefeng Lou[3], Peng Li[4], Chenxi Jiang[5], Jialu Wang[3], Tulai Sun[6], Yabin Liu[5], Wei Guo[7], Sitaram Ramakrishnan[8], Surya Rohith Kotla[9], Carsten Paulmann[10], Guang-Han Cao[5], Yuefeng Nie[7], Wenbin Li[3], Yang Liu[10], Sander Van Smaalen[9], Xiao Lin[3], Zhu-An Xu[5]
[1]China Jiliang University, China, [2]Shanghai University, China, [3]Westlake University, China, [4]Chinese Academy of Sciences, China, [5]Zhejiang University, China, [6]Zhejiang University of Technology, China, [7]Nanjing University, China, [8]Hiroshima University, Japan, [9]University of Bayreuth, Germany, [10]University Hamburg, Germany

9-2078 **Explore the Electronic Structure of the Superconducting Nickelates by First Principle Simulation**
Litong Jiang[1], Jimin Zhao[1], Xu He[2]
[1]Institute of Physics, Chinese Academy of Sciences, China, [2]Université de Liège, France

POSTER PRESENTATION

09 Superconductivity in novel materials

12:15-13:45, TUESDAY, July 4 — Premier Ballroom C (2F)

9-2167 **Spectroscopic Evidence for the Isotropic Superconducting Gap in $LaRu_3Si_2$**
Hong Vuong Thi Anh, Samreen Rashid, Harim Jang, Jihuyn Kim, Tuson Park
Sungkyunkwan University, Korea

9-2187 **Strong Paramagnetic Centers Induced by Intensive 60Co Gamma-quanta in Coated YBaCuO and GdBaCuO Tapes in Liquid Nitrogen**
Elvira Ibragimova[1], Malika A Mussaeva[1], Ulugbek T Kurbanov[1], Khamdam T Nazarov[2], Mihail S Novikov[3]
[1]Institute of Nuclear Physics, Academy of Sciences of Uzbekistan, Uzbekistan, [2]Ministry of Education, Science & Innovations Uzbekistan, Uzbekistan, [3]Joint Institute for Nuclear Research, Russia

9-2193 **Superconductivity and Magnetism in $RbEuFe_4As_4$: Electronic Structure of the Iron-Based Superconductor with Helical Antiferromagnetic Order**
Timur Kim
Diamond Light Source, UK

9-2278 **Anomalous Local Structural Coupling in Cuprate/manganite Epitaxial Bilayers**
Junyung Oh, Dongseok Yang, Byeongwon Kang
Chungbuk National University, Korea

9-2409 **Electronic Structure and Anharmonic Phonon Mode in $BaIr_2Ge_7$ with Two-dimensional Networks Studied by Photoemission Spectroscopy**
Tatsuhiro Ishida[1], Daiki Ootsuki[1], Shigeyuki Ishida[2], Miho Kitamura[3], Koji Horiba[3], Yasumasa Takagi[4], Akira Yasui[4], Eiji Ikenaga[4], Kenji Kawashima[2, 5], Yousuke Yanagi[2, 5], Akira Iyo[2], Hiroshi Eisaki[2], Teppei Yoshida[1]
[1]Kyoto University, Japan, [2]National Institute of Advanced Industrial Science and Technology, Japan, [3]High Energy Accelerator Research Organization, Japan, [4]Japan Synchrotron Radiation Research Institute, Japan, [5]IMRA Material R&D Company, Limited, Japan

9-2442 **Superconductivity in Sn Substituted TaS_2**
Mainpal Singh, Satyabrata Patnaik
Jawaharlal Nehru University, India

9-2563 **Comparative Study of Superconducting Critical Properties for High- and Medium-Entropy Alloys**
Yoonseok Han[1], Soon-Gil Jung[2], Jaegu Song[1], Jin Hee Kim[3], Jong-Soo Rhyee[3], Tuson Park[1]
[1]Sungkyunkwan University, Korea, [2]Sunchon National University, Korea, [3]Kyung Hee University, Korea

9-2589 **Characterization of Lanthanum-based Ternary-Superhydride Superconductor**
Seokmin Choi[1], Zi-Yu Cao[1], Jia-Feng Yan[2], Yeonhak Jung[3], Yongjae Lee[3], Jaegu Song[1], Hanoh Lee[1], Soon-gil Jung[4], Anir S. Sharbirin[1], Jeongyoung Kim[1], Jian-Bo Zhang[5], Tuson Park[1]
[1]Sungkyunkwan University, Korea, [2]Hanyang University, Korea, [3]Yonsei University, Korea, [4]Sunchon National University, Korea, [5]Center for High-Pressure Science & Technology Advanced Research, China

Poster Presentation: 12:15-13:45, WEDNESDAY, July 5

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

10-0237 **Bulk Properties of Chiral Metallic Triangular Antiferromagnet $Ni_{1/3}NbS_2$ and $Ni_{1/3}TaS_2$**
Yeochan An[1], Pyeongjae Park[1], Kaixuan Zhang[1], Hyeoncheol Kim[1], Maxim Avdeev[2], Jaewon Kim[3], Myung-Joon Han[3], Han-Jin Noh[4], Seungho Seong[5], Jeongsoo Kang[5], Hyeong-Do Kim[6], Je-Geun Park[1]
[1]Seoul National University, Korea, [2]Austrailian Nuclear Science and Technology Organisation, Australia, [3]Korea Advanced Institute of Science and Technology, Korea, [4]Chonnam National University, Korea, [5]The Catholic University of Korea, Korea, [6]Pohang Accelerator Laboratory, Korea

10-0242 **Bond-dependent Anisotropy and Magnon Breakdown in Cobalt Kitaev Triangular Antiferromagnet**
Chaebin Kim[1], Sujin Kim[2], Pyeongjae Park[1], Taehun Kim[3], Jaehong Jeong[1], Seiko Ohira-Kawamura[4], Naoki Murai[4], Kenji Nakajima[4], Alexander Chernyshev[5], Martin Mourigal[6], Sung-Jin Kim[2], Je-Geun Park[1]
[1]Seoul National University, Korea, [2]Ewha Womans University, Korea, [3]Brookhaven National Laboratory, USA, [4]Japan Atomic Energy Agency, Japan, [5]University of California, Irvine, USA, [6]Georgia Institute of Technology, USA

10-0354 **Lu Substitution Effect on Ordered State and Magnetic Excitation in a Yb Zigzag Chain Semiconductor $YbCuS_2$**
Fumiya Hori[1], Shunsaku Kitagawa[1], Kenji Ishida[1], Hirotaka Shirai[2], Soichiro Mizutani[2], Takahiro Onimaru[2]
[1]Kyoto University, Japan, [2]Hiroshima University, Japan

10-0364 **Collinear Antiferromagnet $SmPt_6Al_3$ with a Honeycomb Structure**
Ryohei Oishi, Kazunori Umeo, Takahiro Onimaru, Toshiro Takabatake
Hiroshima University, Japan

10-0426 **Collective Magnetic Higgs Excitation in a Pyrochlore Magnet**
Dirk Wulferding[1], Junkyoung Kim[2], Mi Kyung Kim[1], Yang Yang[3], Jae Hyuck Lee[1], Heung-Sik Kim[4], Li Ern Chern[5], Yong Baek Kim[5], Minji Noh[1], Hyunyong Choi[1], Sungkyun Choi[6], Natalia B. Perkins[3], Changyoung Kim[1], Seung Ryong Park[2]
[1]Seoul National University, Korea, [2]Incheon National University, Korea, [3]University of Minnesota, USA, [4]Kangwon National University, Korea, [5]University of Toronto, Canada, [6]Sungkyunkwan University, Korea

10-0464 **Field-Induced Quantum Spin Liquids in the S=1/2 Distorted Diamond Spin Chain with Anisotropic Ferromagnetic Interaction**
Masaru Hashimoto, Rito Furuchi, Hiroki Nakano, Kiyomi Okamoto, Toru Sakai
University of Hyogo, Japan

10-0465 **Non-local Spin Correlation as a Signature of Ising Anyons Trapped in Vacancies of the Kitaev Spin Liquid**
Masahiro O. Takahashi[1], Masahiko G. Yamada[1,2], Masafumi Udagawa[2], Takeshi Mizushima[1], Satoshi Fujimoto[1]
[1]Osaka University, Japan, [2]Gakushuin University, Japan

10-0467 **Direct Observation of the Orbital Hall Effect in a Light Metal Ti**
Young-Gwan Choi[1,2], Daegeun Jo[3], Kyung-Hun Ko[1], Dongwook Go[4,5], Kyung-Han Kim[3], Hee Gyum Park[6], Changyoung Kim[7,8], Byoung-Chul Min[6], Uri Vool[2], Gyung-Min Choi[1,8], Hyun-Woo Lee[3,9]
[1]Sungkyunkwan University, Korea, [2]Max Planck Institute for Chemical Physics of Solids, Germany, [3]Pohang University of Science and Technology, Korea, [4]Forschungszentrum Jülich GmbH, Germany, [5]Johannes Gutenberg University Mainz, Germany, [6]Korea Institute of Science and Technology, Korea, [7]Seoul National University, Korea, [8]Institute for Basic Science, Korea, [9]Asia Pacific Center for Theoretical Physics, Korea

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

10-0493 **Kondo Screening in a Majorana Metal**
Suheon Lee[1], Youngsu Choi[2], Seung-Hwan Do[3], Wonjun Lee[1], Chanhyeon Lee[2], Minseong Lee[4], Matthias Vojta[5], Chennan Wang[6], Hubertus Luetkens[6], Zurab Guguchia[6], Kwang-Yong Choi[7]
[1]Institute for Basic Science, Korea, [2]Chung-Ang University, Korea, [3]University of Tennessee, USA, [4]Los Alamos National Laboratory, USA, [5]Technische Universität Dresden, Germany, [6]Paul Scherrer Institute, Switzerland, [7]Sungkyunkwan University, Korea

10-0525 **Jahn-Teller Driven Magnetic Phase Associated with 5th Order Susceptibility in Rare Earth Orthovanadate $TbVO_4$**
Dheeraj Ranaut, Kaustav Mukherjee
Indian Institute of Technology Mandi, India

10-0578 **Spectroscopic Signatures of Fractionalization in Octupolar Quantum Spin Ice**
Félix Desrochers, Yong-Baek Kim
University of Toronto, Canada

10-0587 **Sublattice-dependent Skyrmion Crystals by Itinerant Frustration**
Ryota Yambe[1], Satoru Hayami[2]
[1]The University of Tokyo, Japan, [2]Hokkaido University, Japan

10-0591 **A First-order Magnetic Transition in Distorted Kagome Lattice Compound HoPtSn**
Hongxiong Liu, Youguo Shi
Chinese Academy of Sciences, China

10-0616 **Emergent Excitation Continuum with Quadratic Frequency Dependence in $TbInO_3$**
Taek Sun Jung[1], Xianghan Xu[2], Jaewook Kim[2,3], Beom Hyun Kim[4], Hyun Jun Shin[1], Young Jai Choi[1], Eun-Gook Moon[5], Sang-Wook Cheong[2], Jae Hoon Kim[1]
[1]Yonsei University, Korea, [2]Rutgers University, USA, [3]Korea Atomic Energy Research Institute, Korea, [4]Korea Institute for Advanced Study, Korea, [5]Korea Advanced Institute of Science and Technology, Korea

10-0665 **Geometrical Frustration Versus Kitaev Interactions in $BaCo_2(AsO_4)_2$**
Emily Zinnia Zhang[1], Felix Desrochers[1], Thomas Halloran[2], Collin Broholm[2], Yong Baek Kim[1]
[1]University of Toronto, Canada, [2]Johns Hopkins University, USA

10-0735 **Geometrically Frustrated Magnetism and Isothermal Magnetization Plateau in a Metallic Compound, Er_2RhSi_3**
Karthik Iyer[1], Kalobaran Maiti[1], Sudhindra Rayaprol[2], Ram Kumar[1], Sampathkumaran E V[3]
[1]Tata Institute of Fundamental Research, India, [2]UGC-DAE Consortium for Scientific Research, India, [3]Homi Bhabha Centre for Science Education, India

10-0769 **Tuning the Chiral Spin Liquid in the Triangular Lattice Ring Exchange Model with an External Field**
Daniel Schultz, Omid Tavakol, Félix Desrochers, Alexander Khoury, Emily Zhang, Yong Baek Kim
University of Toronto, Canada

10-0778 **Anisotropic Transport Properties of Rare Earth Compounds RPt_2B (R = Rare Earth) with a Chiral Crystal Structure**
Hikari Manako[1], Yoshiki J. Sato[1], Ryuji Okazaki[1], Dai Aoki[2], Yukio Yasui[3]
[1]Tokyo University of Science, Japan, [2]Tohoku University, Japan, [3]Meiji University, Japan

POSTER PRESENTATION

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

10-0804 **Emergent Electric Field in a One-dimensional Chiral Magnet Driven by an AC Magnetic Field**
Kotaro Shimizu, Shun Okumura, Yasuyuki Kato, Yukitoshi Motome
The University of Tokyo, Japan

10-0902 **Exploring a Possible Field-induced Spin-liquid in Kitaev Candidate Material $Na_2Co_2TeO_6$**
Chanhyeon Lee[1], Suheon Lee[2], Youngsu Choi[2], Zeehoon Jang[3], Kwang Yong Choi[2]
[1]Chung-Ang University, Korea, [2]Sungkyunkwan University, Korea, [3]Kookmin University, Korea

10-0992 **Magnetic and Spin-orbit Excitons in the Kitaev Honeycomb Lattice Compounds $Ru(Br,I)_3$**
Youngsu Choi, Kwang-Yong Choi
Sungkyunkwan University, Korea

10-1020 **Quantum Oscillations in a Centrosymmetric Skyrmion-hosting Magnet $GdRu_2Si_2$**
Naofumi Matsuyama[1], Toshihiro Nomura[1], Shusaku Imajo[1], Takuya Nomoto[1], Ryotaro Arita[1,2], Kenta Sudo[3], Motoi Kimata[3], Nguyen Duy Khanh[2], Rina Takagi[1], Yoshinori Tokura[1,2], Shinichiro Seki[1], Koichi Kindo[1], Yoshimitsu Kohama[1]
[1]The University of Tokyo, Japan, [2]RIKEN Center for Emergent Matter Science, Japan, [3]Tohoku University, Japan

10-1029 **Quantum Spin Liquid and Magnetization Plateaus in Kagome Antiferromagnets**
Sungmin Jeon, Kwang-Yong Choi
Sungkyunkwan University, Korea

10-1065 **Non-trivial Spin Structures and Multiferroic Properties of the DMI-Compound $Ba_2CuGe_2O_7$**
Peter Wild, Michał Dembski-Villalta, Sebastian Mühlbauer
Technical University of Munich, Germany

10-1120 **The Kagome Spin Liquid Near the Mott Transition**
Tanmoy Mondal
Harish Chandra Research Institute, India

10-1279 **Variational Monte Carlo Study of J_1-J_d-J_x Model on the Kagome Lattice**
Hee Seung Kim[1], Hyeok-Jun Yang[1], Karlo Penc[2], SungBin Lee[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Institute for Solid State Physics and Optics, Hungary

10-1317 **Magnetism in Kitaev Quantum Spin Liquid Candidate $RuBr_3$**
Rajib Sarkar
Technical University of Dresden, Germany

10-1369 **Magnetic-field Induced Transitions in the Kitaev Model Coupled to the Environment**
Kiyu Fukui, Yasuyuki Kato, Yukitoshi Motome
The University of Tokyo, Japan

10-1379 **Photon-Magnon Coupling Mediated Negative Refraction**
Junyoung Kim, Bojong Kim, Bosung Kim, Haechan Jeon, Sang-Koog Kim
Seoul National University, Korea

10-1479 **Thermodynamic Properties of Magnetic Excitation in One-dimensional Spin Chain $NiTe_2O_5$**
Jin Ho Kim[1], Heejun Yang[2], Je-Geun Park[2], Yoon Seok Oh[1]
[1]Ulsan National Institute of Science and Technology, Korea, [2]Seoul National University, Korea

POSTER PRESENTATION

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 Premier Ballroom C (2F)

10-1489 **Field-Driven Nonlinear Chaotic Dynamics of Magnetic Skyrmions**
Gyuyoung Park, Sang-Koog Kim
Seoul National University, Korea

10-1510 **Controllable Skyrmion Islands in a Moire Magnet**
Jemin Park, Haru.K Park, Sungbin Lee
Korea Advanced Institute of Science and Technology, Korea

10-1575 **Observation of Polar Structures and Electric Properties of Bi2WO6 Thin Films**
YongJun Kwon, Chan-Ho Yang
Korea Advanced Institute of Science and Technology, Korea

10-1585 **Suppression of Geometrical Frustration in a Defective Yb Triangular Lattice of $Yb_2Cu_{2n}S_{n+3}$ with n = 2.2 and 3.6**
Satoshi Okajima, Soichiro Mizutani, Yasuyuki Shimura, Takahiro Onimaru
Hiroshima University, Japan

10-1590 **Complex Magnetic Behaviour in Nd_3Pd_4 Single Crystal**
Gourav Dwari, Bishal Maity, Ruta Kulkarni, Arumugam Thamizhavel
Tata Institute of Fundamental Research, India

10-1671 **Exploring and Tuning of Magnetic Order in Rare-Earth Tritellurides**
Thom Ottenbros[1], Claudius Mueller[1], Shiming Lei[2], Ratnadwip Shingha[3], Leslie Schoop[3], Steffen Wiedmann[1], Nigel Hussey[1, 4]
[1]Radboud University, The Netherlands, [2]Rice University, USA, [3]Princeton University, USA, [4]HH Wills Physics Laboratory, UK

10-1729 **Possible Spin Liquid Ground State of 3D Frustrated Lattice Compound KSrFe2(PO4)3 with S = 5/2**
Kiwan Nam[1], Krishnamraju Boya[2], Kee Hoon Kim[1], Bommisetti Koteswararao[2]
[1]Seoul National University, Korea, [2]Indian Institute of Technology Tirupati, India

10-1787 **Magnetic Order of a Mono-Axial Chiral Compound $LnRhC_2$(Ln = La, Ce)**
Kentaro Mori, Yu Yamane, Akira Yamaguchi, Akihiko Sumiyama
University of Hyogo, Japan

10-1807 **One-Dimensional Magnetism in Hexagonal Compounds La_3TrGaS_7 (Tr : Transition Metal) with a Chiral Structure**
Yu Yamane, Yuta Kobayashi, Kentaro Mori, Akira Yamaguchi, Akihiko Sumiyama
University of Hyogo, Japan

10-1815 **Multifarious Magnetic Orders in Icosahedral-Quasicrystal Approximants**
Takanori Sugimoto[1], Shintaro Suzuki[2], Ryuji Tamura[2], Takami Tohyama[2]
[1]Osaka University, Japan, [2]Tokyo University of Science, Japan

10-1874 **Magnon Dynamics in a Skyrmion-textured Domain Wall of Antiferromagnets**
Seungho Lee[1], Kouki Nakata[2], Oleg Tchernyshyov[3], Se Kwon Kim[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Japan Atomic Energy Agency, Japan, [3]Johns Hopkins University, USA

POSTER PRESENTATION

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

10-1969 **Magnetic and Electrical Properties of $Ln_3Ag_4Mg_{12}$ (Ln: La, Ce, Nd, Sm, Gd)**
Noriyuki Kabeya
Tohoku University, Japan

10-2043 **Giant Anomalous Hall Response Induced by Spin Chirality Fluctuation in an Ultraclean Frustrated Antiferromagnet**
Hoseong Jeon[1,2], Jong Mok Ok[3], Jun Sung Kim[1,2]
[1]Pohang University of Science and Technology, Korea, [2]Institute for Basic Science, Korea, [3]Pusan National University, Korea

10-2070 **Elastic Anomalies Associated with Multiple Magnetic-phase Transitions in $EuAl_4$ Probed by Ultrasonic Measurements**
Kazuki Saito[1], Takuto Sato[1], Kazuhei Wakiya[1], Mitsuteru Nakamura[1], Masahito Yoshizawa[1], Masato Hedo[2], Ai Nakamura[2], Yoshichika Onuki[2], Yoshiki Nakanishi[1]
[1]Iwate University, Japan, [2]University of the Ryukyus, Japan

10-2085 **Control of the Twisted Domain Wall Motion by a Transverse Magnetic Field**
Seong Tae Kim[1], Hee-Sung Han[2], Mi-Young Im[2], Soong-Geun Je[1]
[1]Chonnam National University, Korea, [2]Lawrence Berkeley National Laboratory, USA

10-2088 **Frustrated Quantum Magnetism in a Triangular Lattice Antiferromagnet $CePtAl_4Ge_2$**
Tiantian Li
Southern University of Science and Technology, China

10-2103 **Room Temperature Skyrmion Lattice in a Kagome Centrosymmetric Ferromagnet Mn_4Ga_2Sn**
Dola Chakrabartty, Ajaya Kumar Nayak
National Institute of Science Education and Research Bhubaneswar, India

10-2137 **Domain Wall Chirality Reversal by Interfacial Engineering in Pt/Co/Pt Based Perpendicular Magnetized Systems**
Saikat Maji, Ankan Mukhopadhyay, Soubhik Kayal, P S Anil Kumar
Indian Institute of Science, India

10-2145 **Transport Behavior in 3d-5d Based $Pr_{0.6}Sr_{0.4}MnO_3/SrIrO_3$ Bilayer Heterostructures**
Arzuman Gulnas Arifa Rahman, Ashim Kumar Pramanik
Jawaharlal Nehru University, India

10-2175 **Multiple Field-Induced States and Pomeranchuk Effect in the Intermetallic Triangular-Lattice Antiferromagnet**
Han Ge
Southern University of Science and Technology, China

10-2215 **A New Double-layered Kagome Antiferromagnet $ScFe_6Ge_4$**
Mohamed Ahmed Kassem, Yoshikazu Tabata, Takeshi Waki, Hiroyuki Nakamura
Kyoto University, Japan

10-2340 **A Magnetocaloric Study of the Magnetostructural Transitions in NiCr2O4**
Shagufta Parveen
Chaudhary Charan Singh University, India

POSTER PRESENTATION

10 Quantum magnetism, skyrmions and frustration

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

10-2383 **Chemical Disorder Induced Electronic Orders in Correlated Metals**
Jinning Hou, Wei Ku
Shanghai Jiao Tong University, China

10-2392 **Single Crystal Growth of the Gd-based Intermetallic Compound $Gd_2Rh_3Al_9$**
Hiroaki Hayashi[1], Hiroyuki K. Yoshida[2], Kazunari Yamaura[1]
[1]National Institute for Materials Science, Japan, [2]Hokkaido University, Japan

10-2449 **Frustrated Low-dimensional Copper Compound Rouaite $Cu_2(NO_3)(OH)_3$: A Spin ½ Triangular Lattice Magnet**
Aswathi Mannathanath Chakkingal
Technische Universität Dresden, Germany

10-2481 **Topological Edge Modes in the Many-Body Spectrum of a Ladder Quantum Paramagnet**
Niclas Heinsdorf
Max Planck Institute for Solid State Research, Germany

10-2519 **Exchange Bias in the van der Waals Heterostructure $MnBi_2Te_4/Cr_2Ge_2Te_6$**
Jing-Zhi Fang[1], Ha-Nan Cui[2], Shuo Wang[1], Jing-Di Lu[3], Guang-Yu Zhu[1], Xin-Jie Liu[1], Mao-Sen Qin[1], Jian-Kun Wang[1], Ze-Nan Wu[1], Yan-Fei Wu[4], Shou-Guo Wang[4], Zheng-Sheng Zhang[1], Zhongming Wei[5], Jinxing Zhang[3], Ben-Chuan Lin[1], Zhi-Min Liao[2], Dapeng Yu[1]
[1]Southern University of Science and Technology, China, [2]Peking University, China, [3]Beijing Normal University, China, [4]University of Science and Technology Beijing, China, [5]Institute of Semiconductors, Chinese Academy of Sciences, China

10-2554 **Emergent Glassiness in Disorder-free Kitaev Model**
Kale Balayogendra Babu[1], Tanmoy Das[1], Ganapathy Baskaran[2, 3]
[1]Indian Institute of Science, India, [2]The Institute of Mathematical Sciences, India, [3]Indian Institute of Technology Madras, India

10-2574 **Emergent SU(3) Gauge Field of Magnons in Antiferromagnetic Skyrmion Phases**
Masataka Kawano
Technical University of Munich, Germany

11 Metal-insulator transitions

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

11-0494 **Dynamical Mean-field Theory for Pairing and Metal-insulator Transitions in the Holstein Model Away from Half-filling**
Tae-Ho Park, Han-Yong Choi
Sungkyunkwan University, Korea

11-1089 **Electronic Structure Changes in Ca_2RuO_4 under DC Current as Observed with Transport-ARPES**
Cissy Suen[1, 2], Igor Marković[2], Marta Zonno[2, 3], Sergey Zhdanovich[2], Pascal Puphal[1], Maximilian Krautloher[1], Sergey Gorovikov[3], Christopher Jozwiak[4], Aaron Bostwick[4], Eli Rotenberg[4], Bernhard Keimer[1], Andrea Damascelli[2]
[1]Max Planck Institute for Solid State Research, Germany, [2]The University of British Columbia, Canada, [3]Canadian Light Source, Canada, [4]Lawrence Berkeley National Laboratory, USA

POSTER PRESENTATION

11 Metal-insulator transitions

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

11-1106 **Tracking Electronic and Structural Dynamics of Photoinduced Insulator-to-Metal Transition in $NdNiO_3$**
Oleg Dogadov[1], Grace Pan[2], Dan Ferenc Segedin[2], Andrea Villa[1], Julia Mundy[2], Giulio Cerullo[1], Stefano Dal Conte[1]
[1]Politecnico di Milano, Italy, [2]Harvard University, USA

11-1246 **Correlation Effects due to Hund's Coupling *J* in Half-filled Metallic NiS_2**
Ina Park[1], Bo Gyu Jang[2], Dong Wook Kim[1], Ji Hoon Shim[1]
[1]Pohang University of Science and Technology, Korea, [2]Los Alamos National Laboratory, USA

11-1641 **Robust Antiferromagnetism in NaOsO3 under Pressure**
Prasun Boyal
S N Bose National Centre for Basic Sciences, India

11-1768 **Theoretical Modeling of Valence-skipping Perovskite Oxides $PbCrO_3$ and $PbCoO_3$**
Mizuki Furo[1], Kyo-Hoon Ahn[2], Tatsuya Yamaguchi[1], Jan Kuneš[3], Atsushi Hariki[1]
[1]Osaka Metropolitan University, Japan, [2]Czech Academy of Sciences, Czech Republic, [3]TU Wien, Austria

11-1840 **Direct Comparison of the Electrical, Optical, and Structural Phase Transitions of VO_2**
Sang-Wook Han[1], Jai-Min Choi[1], In-Hui Hwang[2], Youngdo Park[1], Youngwoo Park[1]
[1]Jeonbuk National University, Korea, [2]Argonne National Laboratory, USA

11-1854 **Structural and Electrical Phase Transitions of VO_2 under an Electric Field**
Joon Ho Kang[1], Sang-Wook Han[1], In-Hui Hwang[2], Chang-In Park[1], Chen-Jun Sun[2], Dale Brewe[2], Zhenlan Jin[1]
[1]Jeonbuk National University, Korea, [2]Argonne National Laboratory, USA

11-1861 **Huge Permittivity and Premature Metallicity in Bi_2O_2Se Single Crystals**
Zhuokai Xu, Jialu Wang, Tao Wang, Wanghua Hu, Xiaohui Yang, Xiao Lin
Westlake University, China

11-2150 **Gradual Charge Order Melting in $Bi_{0.5}Ca_{0.5}MnO_3$ Induced by Ultrahigh Magnetic Fields**
Yuto Ishii
The University of Tokyo, Japan

11-2334 **Decoupled Pressure-induced Layer-sliding Transition and Semiconductor-semimetal Transition in Ta$_2$NiS$_5$**
Chang Il Kwon[1,2], Jun Sung Kim[1,2]
[1]Pohang University of Science and Technology, Korea, [2]Institute for Basic Science, Korea

11-2344 **Evolution of Charge Carrier Dynamics during Metal-insulator Transition of $SrRu_xTi_{1-x}O_3$**
Yongjin Kwon[1], In Hyeok Choi[1], Hyo Seok Kim[1], Seung Gyo Jeong[2], Woo Seok Choi[2], Jong Seok Lee[1]
[1]Gwangju Institute of Science and Technology, Korea, [2]Sungkyunkwan University, Korea

11-2378 **Density Wave-like Behavior in Optical Response of 9R $BaRuO_3$ Thin Film**
Hyungwon Nam[1], Dongwook Kim[1], Sang A Lee[2], Jong Mok Ok[3], Woo Seok Choi[4], Soonjae Moon[1]
[1]Hanyang University, Korea, [2]Pukyong National University, Korea, [3]Pusan National University, Korea, [4]Sungkyunkwan University, Korea

POSTER PRESENTATION

12 Large research facilities and novel technique for SCES investigations

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

12-0703 **Unusual Mixed Spin-State of Co^{3+} in the Ground State of $LaSrCoO_4$: Combined High-Pressure and High-Temperature Study**
Jin-Ming Chen[1], Shu Chih Haw[1], Zhiwei Hu[2], Jenn Min Lee[3], Hirofumi Ishii[1], Nozomu Hiraoka[1], Florin Radu[4], Chen Luo[4], Alexander C. Komarek[2], Liu Hao Tjeng[2]
[1]National Synchrotron Radiation Research Center, Taipei, [2]Max Planck Institute for Chemical Physics of Solids, Germany, [3]Max IV Laboratory, Sweden, [4]Helmholtz-Zentrum Berlin für Materialien und Energie, Germany

12-1038 **High-frequency Shot-noise STM to Study Correlated Electron Systems**
Maialen Ortego Larrazabal
Utrecht University, The Netherlands

12-1271 **Construction of Low Temperature Magnetic Force Microscope Based on Piezoresistive Cantilever with 5 T Superconducting Magnet**
Jungsub Lee, Jeehoon Kim
Pohang University of Science and Technology, Korea

12-1318 **Time-resolved Resonant Soft X-ray Scattering of Strongly Correlated Systems at PAL-XFEL**
Hoyoung Jang
Pohang Accelerator Laboratory, Korea

12-1425 **Ultrafast Structural Dynamics in Bi_2Se_3 by X-ray Free-Electron Laser**
Sung Soo Ha, Jaeseung Kim, Sungwook Choi, Hyunjung Kim
Sogang University, Korea

12-2571 **ReMade@ARI: A Central Hub For Materials Research For A Circular Economy**
Sven Luther
Helmholtz-Zentrum Dresden-Rossendorf, Germany

13 Devices and applications of SCES

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

13-0815 **Thermally-robust Spatiotemporal Parallel Reservoir Computing in Magnetic Materials**
Kaito Kobayashi, Yukitoshi Motome
The University of Tokyo, Japan

13-0995 **Microwave Nonreciprocity from the Weyl-Kondo Response**
Sue Shi, Andrew Higginbotham
Institute of Science and Technology Austria, Austria

13-1198 **Field Free Spin Orbit Torque Switching Device $Fe_3GTe_2/SrTiO_3$**
Jihoon Keum, Je-Geun Park, Kaixuan Zhang
Seoul National University, Korea

13-2305 **Multiple Exciton Generation in VO_2**
Shikha Rani Sahu[1], Dinesh Kumar Shukla[1], Salahuddin Khan[2], Abinash Tripathy[1]
[1]UGC-DAE Consortium for Scientific Research, India, [2]Raja Ramanna Centre for Advanced Technology, India

POSTER PRESENTATION

13-2411 **Investigation of Resistive Switching Behavior Change in $LaAlO_3/SrTiO_3$ Heterostructure by Controlling Oxygen Vacancy**
JinYoung Maeng, JongHyun Song
Chungnam National University, Korea

14 Correlated materials with geometrical peculiarity

12:15-13:45, WEDNESDAY, July 5 Premier Ballroom C (2F)

14-0610 **Transport Properties of Cobalt Oxide $Ba_3Co_2O_6(CO_3)_{0.7}$ with Quasi-One-Dimensional Structure**
Asuka Komatsu, Yoshiki J. Sato, Ryuji Okazaki
Tokyo University of Science, Japan

14-1040 **Large Crystalline Electric Field Splitting in a New Geometrically Frustrated Antiferromagnetic Compound Ho_2IrSi_3**
Sudip Chakraborty[1], Santanu Pakhira[2], Shovan Dan[3], Chandan Mazumdar[1]
[1]Homi Bhaba National Institute, India, [2]Iowa State University, USA, [3]Tata Institute of Fundamental Research, India

14-1193 **Tunability of Coherent Versus Dissipative Coupling in Physically Separated Two Hybrid YIG/ISRR Resonators**
Haechan Jeon[1], Biswanath Bhoi[2], Sang-Koog Kim[1]
[1]Seoul National University, Korea, [2]Indian Institute of Technology, India

14-1350 **Reflectionless Unidirectional Absorption in Two Inverted Split Ring Resonators by Traveling-Wave-Induced Coupling**
Bojong Kim, Junyoung Kim, Haechan Jeon, Sangkoog Kim
Seoul National University, Korea

14-1540 **Orbital Fluctuation and Unconventional Charge Density Waves in Kagome Metal, AV_3Sb_5**
Hyeok-Jun Yang, SungBin Lee
Korea Advanced Institute of Science and Technology, Korea

14-1639 **Features of the Magnetic Structure in the $Li_2Mn^{2+}Mn^{3+}TeO_6$ Compound with Mixed Valence**
Anna Susloparova, Alexander Kurbakov
Petersburg Nuclear Physics Institute named by B.P. Konstantinov of National Research Centre, Russia

14-1753 **Superconductivity Optimization Near a Nematic Quantum Critical Point in the Kagome Superconductor $Cs(V_{1-x}Ti_x)_3Sb_5$**
Yeahan Sur, Kee Hoon Kim
Seoul National University, Korea

14-1892 **Magnetic Properties of the Approximant $GdCd_6$ Proved by Magnetization Measurement**
Masaki Ito[1], Taichi Yoshida[1], Kensuke Jin[1], Kazuhei Wakiya[1], Mitsuteru Nakamura[1], Masahito Yoshizawa[1], Yuji Muro[2], Yoshiki Nakanishi[1]
[1]Iwate University, Japan, [2]Toyama Prefectural University, Japan

14-2036 **Investigation of Time-reversal Symmetry Breaking in Charge Density Wave of Kagome Metal CsV_3Sb_5**
Yamane Soichiro[1], Yajian Hu[1,2], Giordano Mattoni[1,3], Yongkai Li[4], Yugui Yao[4], Zhiwei Wang[4], Jingyuan Wang[5], Camron Farhang[5], Jing Xia[5], Yoshiteru Maeno[1,3], Shingo Yonezawa[1]
[1]Kyoto University, Japan, [2]RIKEN Center for Emergent Matter Science, Japan, [3]Toyota Riken-Kyoto University Research Center, Japan, [4]Beijing Institute of Technology, China, [5]University of California, Irvine, USA

POSTER PRESENTATION

14 Correlated materials with geometrical peculiarity

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

14-2089 **Chiral Crystal Structures and Magnetic Orderings in the Remeika Phase Compounds $Eu_3T_4Sn_{13}$ (T = Rh and Ir)**
Takanobu Kumada[1], Yohtaroh Suzuki[1], Ami Shimoda[1], Hiromasa Imazeki[1], Wataru Kurosawa[1], Kazuaki Iwasa[1], Keitaro Kuwahara[1], Kenji Ohoyama[1], Akinori Hoshikawa[1], Toru Ishigaki[1], Hajime Sagayama[2], Daisuke Okuyama[2], Hironori Nakao[2], Motoyuki Ishikado[3]
[1]Ibaraki University, Japan, [2]High Energy Accelerator Research Organization, Japan, [3]Comprehensive Research Organization for Science and Society, Japan

14-2568 **Study of Single Crystal $YbCr_6Ge_6$ with Kagome Lattice**
Taehee Lee[1], Jaegu Song[1], Saqlain Yousuf[1], Hanoh Lee[1,2], Churlhi Lyi[1], Jaekyung Jang[1], Youngkuk Kim[1], Tuson Park[1,2]
[1]Sungkyunkwan University, Korea, [2]Center for Quantum Materials and Superconductivity, Korea

18 Strong spin-orbit interaction in correlated systems

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

18-0499 **SU(2) Gauge Field and Band Structures in Strongly Spin-Orbit Coupled 5d Electron Systems**
Hiroki Nakai[1], Masataka Kawano[2], Chisa Hotta[1]
[1]The University of Tokyo, Japan, [2]Technical University Munich, Germany

18-0579 **Single- and Multimagnon Dynamics in Antiferromagnetic α-Fe_2O_3 Thin Films**
Atsushi Hariki
Osaka Metropolitan University, Japan

18-0742 **Exotic Phases Induced by Off-diagonal Exchanges in Honeycomb Lattice Antiferromagnet**
Qiang Luo[1,2], Jize Zhao[3], Xiaoqun Wang[4], Hae-Young Kee[2]
[1]Nanjing University of Aeronautics and Astronautics, China, [2]University of Toronto, Canada, [3]Lanzhou University, China, [4]Shanghai Jiao Tong University, China

18-1045 **Magnetic Phase Diagram of $Fe_{1-x}Cu_xCr_2S_4$(x = 0 - 1) Studied by Muon Spin Rotation and Relaxation and Mössbauer Spectroscopy**
Elaheh Sadrollahi[1], F. Jochen Litterst[2]
[1]Technische Universität Dresden, Germany, [2]Technische Universität Braunschweig, Germany

18-1286 **Thermal Hall Effect of Interacting Magnons**
Shinnosuke Koyama, Joji Nasu
Tohoku University, Japan

18-1464 **Symmetry-breaking and Emergent Phase-transition Driven by Spin-orbit Coupling: 4d Ruthanate Quantum Materials**
Arvind Kumar Yogi
UGC-DAE, Consortium for Scientific Research, India

18-1505 **Quasi Two Dimensional Anti-ferromagnetism in the Half-filled Square-Planar Iridate $Cs_2Na_2IrO_4$**
Roumita Roy, Sudipta Kanungo
Indian Institute of Technology Goa, India

POSTER PRESENTATION

18 Strong spin-orbit interaction in correlated systems

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

18-1593 **Effect of Manganese Concentration on the Anomalous Hall Effect in Mn_3Sn Single Crystals**
Bishal Maity, Gourav Dwari, Arumugam Thamizhavel
Tata Institute of Fundamental Research, India

18-1816 **Structural Investigation of $BaIrO_3$ by Neutron Diffraction**
Bin Chang, Han-Jin Noh
Chonnam National University, Korea

18-2021 **Large Anomalous Hall Effect and Nernst Effect in Honeycomb and Kagome Magnet $LaCo_5$**
Sheng Xu[1], Liqin Zhou[2], Shu-Xiang Li[1], Xiang-Yu Zeng[3], Chenxi Jiang[1], Junjian Mi[1], Zheng Li[1], Hongming Weng[2], Tian-Long Xia[3], Zhu-An Xu[1]
[1]Zhejiang University, China, [2]Chinese Academy of Sciences, China, [3]Renmin University of China, China

18-2140 **Studies on the Effect of R-site Magnetic Moment in Pyrochlore Iridates $R_2Ir_2O_7$ (R = Dy, $Dy_{0.5}Gd_{0.5}$, Gd)**
Arnab Kar, Suja Elizabeth
Indian Institute of Science, India

18-2603 **Fully Relativistic DFT with Extended Hubbard Interactions**
Wooil Yang, Young-Woo Son
Korea Institute for Advanced Study, Korea

19 Multiferroics and related materials

12:15-13:45, WEDNESDAY, July 5 — Premier Ballroom C (2F)

19-0306 **Unveiling a Hidden Multiferroic State under Magnetic Fields in $BaHoFeO_4$**
Rahul Kumar, Sundaresan Athinarayanan
Jawaharlal Nehru Centre for Advanced Scientific Research, India

19-0516 **Thermomagnetic Properties of Double Perovskite Oxides A_2MnTiO_6 (A = Sr, Ba)**
Smita Borole, Sudhindra Rayaprol, Nilofar Kurawle
UGC-DAE Consortium for Scientific Research, India

19-0682 **Synthesis and Characterization of BNKT Thin Films Synthesized by Hydrothermal Method**
Eun-Young Kim, Sang Don Bu
Jeonbuk National University, Korea

19-0842 **Quantum Theory of the Intrinsic Orbital Magnetoelectric Response in Intinerant Electron Systems**
Koki Shinada, Akira Kofuji, Robert Peters
Kyoto University, Japan

19-0934 **High-field Magnetization and Magnetoelectric Effect of Polar Magnet $Fe_2Mo_3O_8$**
Qian Chen, Masashi Tokunaga
The University of Tokyo, Japan

18 Strong spin-orbit interaction in correlated systems

12:15-13:45, WEDNESDAY, July 5 Premier Ballroom C (2F)

19-1039 **Anisotropy of the Orbital Texturing and Coexisting Antiferromagnetic Orders in Orthorhombic (001)- and (100)-$YMnO_3$ Thin Films**
Jenh-Yih Juang
National Yang Ming Chiao Tung University, Taipei

19-1191 **Unconventional Ferroelectric Domain Wall of Negative Piezoelectric HfO_2**
Yungyeom Kim, Jun Hee Lee
Ulsan National Institute of Science and Technology, Korea

19-1228 **Laser-PEEM Imaging of Ferroelectric Fine Structures in Multiferroic $BiFeO_3$**
Yoichi Kageyama[1], Hirokazu Fujiwara[1], Asato Onishi[1], Cédric Bareille[1], Anjana Krishnadas[2], Yuita Fujisawa[2], Toshiyuki Taniuchi[1], Yoshinori Okada[2], Kenichiro Hashimoto[1], Takasada Shibauchi[1]
[1]The University of Tokyo, Japan, [2]Okinawa Institute of Science and Technology Graduate School, Japan

19-1266 **Intrinsic Electronic Structure of Ilmenite $MnTiO_3$**
Asif Ali, Rajiv Kumar Maurya, Sakshi Bansal, B. H. Reddy, Ravi Shankar Singh
Indian Institute of Science Education and Research Bhopal, India

19-1701 **Spontaneous Non-reciprocal Resistance in a Zig-zag Antiferromagnet $NdRu_2Al_{10}$**
Kenta Sudo[1], Hiroshi Tanida[2], Yuki Yanagi[2], Motoi Kimata[1]
[1]Tohoku University, Japan, [2]Toyama Prefectural University, Japan

19-1738 **Possible Piezomagnetism in the Ising Itinerant Ferromagnet URhGe Studied with Fiber Bragg Grating**
Mikiya Tomikawa[1], Ryo Araki[1], Ai Nakamura[2], Dai Aoki[2, 3]
[1]Kyoto University, Japan, [2]Tohoku University, Japan, [3]CEA-Grenoble, France

19-2313 **Partial Molecular Orbitals in Face-sharing 3d Manganese Trimer: Comparative Studies on $Ba_4TaMn_3O_{12}$ and $Ba_4NbMn_3O_{12}$**
Anzar Ali[1, 2], Sungkyun Choi[1, 2]
[1]Institute for Basic Science, Korea, [2]Sungkyunkwan University, Korea

19-2317 **Noncollinear Magnetic Order, In-plane Anisotropy, and Magnetoelectric Coupling in a Pyroelectric Honeycomb Antiferromagnet $Ni_2Mo_3O_8$**
Poonam Yadav[1, 2], Sungkyun Choi[2, 3]
[1]Institute for Basic Science, Korea, [2]Sungkyunkwan University, Korea, [3]Rutgers University, USA

POSTER PRESENTATION

Poster Presentation: 12:15-13:45, THURSDAY, July 6

15 Dirac/Weyl semimetals and topologically nontrivial materials

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

15-0137 **ARPES Study of a vdW Triangular Antiferromagnet Metal $Co_{1/3}TaS_2$**
Woori Ju[1], Han-Jin Noh[1], En-Jin Cho[1], Yoon-Gu Kang[2], Myung Joon Han[2], Ki Hoon Lee[3], Pyeongjae Park[4], Je-Geun Park[4]
[1]Chonnam National University, Korea, [2]Korea Advanced Institute of Science and Technology, Korea, [3]Incheon National University, Korea, [4]Seoul National University, Korea

15-0317 **Coexistence of Kondo Effect and Weyl Semimetallic States in Mn-doped Mn_xVAl_3 Compounds**
Kwan-young Lee[1], Jae-Hyun Yun[1], Jin-Hee Kim[1], Yusuff Adeyemi Salawu[2], Heon-Jung Kim[2], Jae Jun Lee[1], Hosun Lee[1], Jong-Soo Rhyee[1]
[1]Kyung Hee University, Korea, [2]Daegu University, Korea

15-0500 **Drastic Enhancement of the Superconducting Temperature in Type-II Weyl Semimetal Candidate $MoTe_2$ via Biaxial Strain**
King Yau Yip[1], Siu Tung Lam[1], Kai Ham Yu[1], Wing Shing Chow[1], Jiayu Zeng[1], Kwing To Lai[1,2], Swee K. Goh[1]
[1]The Chinese University of Hong Kong, Hong Kong (SAR of China), [2]The University of Hong Kong, Hong Kong (SAR of China)

15-0627 **Topologically Nontrivial Quasicrystalline Superconductors**
Masahiro Hori[1,2], Takanori Sugimoto[3], Takami Tohyama[2], K. Tanaka[1]
[1]University of Saskatchewan and quanTA, Canada, [2]Tokyo University of Science, Japan, [3]Osaka University, Japan

15-0714 **Interplay of Magnetism and Band Topology in $Eu_{1-x}Ca_xMg_2Bi_2$ (x=0, 0.5) from First Principles Study**
Amarjyoti Choudhury
Indian Institute of Technology Roorkee, India

15-0720 **Giant Magnetoresistance and Quantum Oscillations in the Nodal Line Semimetal $ZrAs_2$**
JunJian Mi, Zhu-An Xu, Sheng Xu, ShuXiang Li, ChengXi Jiang, Zheng Li, Qian Tao
Zhejiang University, China

15-0753 **Pressure-driven Tunable Properties of the Small-gap Chalcopyrite Topological Quantum Material ZnGeSb2**
Surasree Sadhukhan
Indian Institute of Technology Goa, India

15-0792 **Boundary Obstructed Topological Superconductor in Buckled Honeycomb Lattice under Perpendicular Electric Field**
Rasoul Ghadimi, Seung Hun Lee, Bohm-Jung Yang
Seoul National University, Korea

15-0824 **Magnetic Wallpaper Dirac Fermions and Topological Magnetic Dirac Insulators**
Yoonseok Hwang[1,2], Yuting Qian[1,2], Junha Kang[1,2], Jehyun Lee[1,2], Dongchoon Ryu[1,2], Hong Chul Choi[1,2*], Bohm-Jung Yang[1,2]
[1]Institute for Basic Science, Korea, [2]Seoul National University, Korea

15-0875 **The Diffuse Scattering and the Crystal Structure of Low-temperature Phase of τ-type Molecular Conductor**
Takeshi Hara[1], Harukazu Yoshino[2], Hiroshi Sawa[1]
[1]Nagoya University, Japan, [2]Osaka Metropolitan University, Japan

15 Dirac/Weyl semimetals and topologically nontrivial materials

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15-0882 **Laser-induced Hole Coherence and Spatial Self-phase Modulation in the Anisotropic 3D Weyl Semimetal TaAs**
Yixuan Huang, Hui Zhao, Zhilin Li, LiLi Hu, Yanling Wu, Fei Sun, Sheng Meng, Jimin Zhao
Institute of Physics, Chinese Academy of Sciences, China

15-0908 **Yu-Shiba-Rusinov Band Dispersion of an Infinite Chain on a Semi-infinite Surface**
Rik Broekhoven, Artem Pulkin, Antonio Manesco, Sander Otte, Michael Wimmer, Anton Akhmerov
Delft University of Technology, The Netherlands

15-0914 **Effect of Excess Mn on the Magneto-transport Properties in Weyl Antiferromagnet Mn_3Sn**
Shunichiro Kurosawa, Muhammad Ikhlas, Mingxuan Fu, Satoru Nakatsuji
The University of Tokyo, Japan

15-0940 **Static and Dynamic Magnetic Properties of RAlSi Weyl Semimetals**
Tillmann Weinhold
Technische Universität Dresden, Germany

15-1003 **Observation of Different Hinges States on Various Facets of Bismuth**
Dongming Zhao[1], Tong Zhang[1], Donglai Feng[1,2]
[1]Fudan University, China, [2]University of Science and Technology of China, China

15-1032 **Evolution of Electronic Properties of a Weyl Semimetal WTe_2 via Mn-doping**
Abhishek Singh, S. Sasmal, K. K. Iyer, A. Thamizhavel, Kalobaran Maiti
Tata Institute of Fundamental Research, India

15-1104 **Large Magnetoresistance in $ZrAs_2$ Single Crystal**
Suman Nandi, Arumugam Thamizhavel
Tata Institute of Fundamental Research, India

15-1129 **Occupancy Tuning the Fermi-surface of $LaCu_{1-x}Sb_2$**
Suyoung Kim, Eundeok Mun
Simon Fraser University, Canada

15-1344 **Superconductivity in the Weyl State of $Bi_{0.96}Sb_{0.04}$ under Pressure**
Yeonkyu Lee[1], Zhongyan Wu[2], Jaeyong Kim[2], Jeehoon Kim[1]
[1]Pohang University of Science and Technology, Korea, [2]Hanyang University, Korea

15-1473 **Suppression of Both Superconductivity and Structural Transition in Hole-doped $MoTe_2$ Induced by Ta Substitution**
Siu Tung LAM, K. Y. Yip, Swee K. Goh, Kwing To Lai
The Chinese University of Hong Kong, Hong Kong (SAR of China)

15-1502 **Bulk-Interface Correspondence from Quantum Distance in Flat Band Systems**
Changgeun Oh[1], Doohee Cho[2], Se Young Park[3], Jun-Won Rhim[4]
[1]The University of Tokyo, Japan, [2]Yonsei University, Korea, [3]Soongsil University, Korea, [4]Ajou University, Korea

15-1648 **Topological Superconductivity in Twisted Nodal Superconductors**
Kevin Lucht[1], Jedediah H. Pixley[1,2], Pavel Volkov[3,4]
[1]Rutgers University, USA, [2]Flatiron Institute, USA, [3]University of Connecticut, USA, [4]Harvard University, USA

POSTER PRESENTATION

15 Dirac/Weyl semimetals and topologically nontrivial materials

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

15-1690 **Topological Josephson Effect in Hinge State of WTe_2**
Yong-Bin Choi[1], Jinho Park[1,2], Woochan Jung[1], Sein Park[1], Mazhar Ali[3], Gil-Ho Lee[1]
[1]Pohang University of Science and Technology, Korea, [2]Raytheon BBN Technologies, Quantum Information Processing Group, USA, [3]Max-Planck Institute for Microstructure Physics, Germany

15-1734 **Observation of Pressure-induced Large Anomalous Hall Effects in a Layered Ferromagnet $CrSiTe_3$**
Yoonhan Lee[1], Chang Bae Park[1], Jiafeng Yan[2], Sungmo Kang[1], Jaejun Yu[1], Jaeyong Kim[2], Kee Hoon Kim[1]
[1]Seoul National University, Korea, [2]Hanyang University, Korea

15-1824 **Theory of the Spin-Orbit Coupling and Topological Flat Band in the Polyhedral π-Conjugated Molecules**
Saya Nakano, Masahisa Tsuchiizu
Nara Women's University, Japan

15-1960 **Two-dimensional Type-II Dirac Points in a $LaAlO_3/LaCuO_3/LaAlO_3$ Quantum Well**
Jaejin Hwang, Byungkwon Oh, Kwanhong Park, Jaekwang Lee
Pusan National University, Korea

15-1993 **Field-controlled Quantum Anomalous Hall Effect in Electron-doped $CrSiTe_3$ Monolayer**
Sungmo Kang[1,2], Seungjin Kang[2], Heung-Sik Kim[3], Jaejun Yu[2]
[1]Korea Institute for Advanced Study, Korea, [2]Seoul National University, Korea, [3]Kangwon National University, Korea

15-2050 **Magnetic and Transport Properties of GdAlSi with LaPtSi-type Structure**
Zheng Lee, Chenxi Jiang, Sheng Xu, Jinjin Wang, Zhuan Xu
Zhejiang University, China

15-2053 **Large Anomalous Hall Effect and Intrinsic Berry Curvature in Magnetic Weyl Semimetal NdAlGe**
Keunki Cho[1,2], Hyuk Shon Won[3], Seungha Yoon[2], Jong-Soo Rhyee[4], Beongki Cho[1]
[1]Gwangju Institute of Science and Technology, Korea, [2]Korea Institute of Industrial Technology, Korea, [3]Korea Atomic Energy Research Institute, Korea, [4]Kyung Hee University, Korea

15-2112 **Topological Phase Transitions Induced by the Variation of Exchange Couplings in Graphene**
Jihyeon Park, Gun Sang Jeon
Ewha Womans University, Korea

15-2132 **Phase Transitions in the Chiral Ferromagnetic MnSi**
Alexander Povzner, Maria Chernikova, Arkadij Volkov, Tatiana Nogovitsyna
The Ural Federal University, Russia

15-2204 **Berry Curvature Induced Spontaneous and Topological-like Hall Effect in Magnetic Weyl Semimetallic $Nd_2Ir_2O_7$ (111) Thin Films**
Mithun Ghosh, P S Anil Kumar
Indian Institute of Science, India

15-2214 **Valley-filtering in Irradiated Graphene**
Rekha Kumari[1], Gopal Dixit[2], Arijit Kundu[1]
[1]Indian Institute of Technology Kanpur, India, [2]Indian Institute of Technology Bombay, India

15 Dirac/Weyl semimetals and topologically nontrivial materials

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15-2255 **Electronic Structure of Topological Bi/Sb/Bi Heterojunction**
Kazuki Koie
The University of Electro-Communications, Japan

15-2263 **Transport Properties of $(Cd_{1-x}Zn_x)_3As_2$ Devices as Varying the Fermi- level**
Hyebin Son[1], Sang Eon Lee[1], Joon Young Choi[2], Kirstin Alberi[3], Myung-Hwa Jung[1], Youn Jung Jo[2]
[1]Sogang University, Korea, [2]Kyungpook National University, Korea, [3]National Renewable Energy Laboratory, USA

15-2284 **Galvanomagnetic Effect of Dirac Electrons Based on the Kubo Formula**
Shuto Tago
University of Electro-Communications, Japan

15-2455 **Probing the Topological Dirac Magnetism of $TaCoTe_2$**
Wonhyuk Shon[1], Kyung-Tae Ko[2], Kyoo Kim[1]
[1]Korea Atomic Energy Research Institute, Korea, [2]Korea Basic Science Institute, Korea

15-2462 **Topological Phase Transition of Generalized Brillouin Zone**
Sonu Verma
Institute for Basic Science, Korea

16 Two dimensional materials

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

16-0238 **Sizable Suppression of Magnon Hall Effect by Magnon Damping in $Cr_2Ge_2Te_6$**
Ysun Choi, Heejun Yang, Jaena Park, Je-Geun Park
Seoul National University, Korea

16-0251 **Inversion Symmetry Breaking Revealed in Fe3-xGeTe2 by Second Harmonic Response**
Kaixuan Zhang, Je-Geun Park
Seoul National University, Korea

16-0252 **Rapid Suppression of Quantum Many-body Magnetic Exciton in Doped van der Waals Antiferromagnet (Ni,Cd)PS_3**
Junghyun Kim[1], Woongki Na[2], Jonghyeon Kim[3], Pyeongjae Park[1], Kaixuan Zhang[1], Young-Woo Son[4], Jae Hoon Kim[3], Hyeonsik Cheong[2], Je-Geun Park[1]
[1]Seoul National University, Korea, [2]Sogang University, Korea, [3]Yonsei University, Korea, [4]Korea Institute for Advanced Study, Korea

16-0276 **Large Single-ion Anisotropy in Few-layer van der Waals Antiferromagnet $FePS_3$**
Youjin Lee[1], Suhan Son[1], Chaebin Kim[1], Armin Kleibert[2], Je-Geun Park[1]
[1]Seoul National University, Korea, [2]Paul Scherrer Institut, Switzerland

16-0286 **Universal Method for Twisted van der Waals Homostructures**
Giung Park[1], Suhan Son[2], Je-Geun Park[1]
[1]Seoul National University, Korea, [2]University of Michigan, USA

POSTER PRESENTATION

16 Two dimensional materials

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16-0420 **Characterization of the Low-Dimensional Antiferromagnet $[Cu(H_2O)_2(pyz)_2]Cr_2O_7$**
Lukas Beddrich, Markos Skoulatos
Technical University of Munich, Germany

16-0592 **Fabrication of Low-layered Cobalt Oxide $[Ca_2CoO_3]_{0.62}[CoO_2]$ and the Figure of Merit as a Transparent Conducing Oxide**
Reiji Okada, Hiroto Isomura, Yoshiki J. Sato, Ryuji Okazaki, Masayuki Inoue, Shinya Yoshioka
Tokyo University of Science, Japan

16-0661 **Study of Electronic Band Gap Tuning in 1L-$MoSe_2$ and 1L-WSe_2 by Heterostructuring ($MoSe_2$ /WSe_2) and Biaxial Straining**
Mayur Khan, Ambuj Tripathi
Inter University Accelerator Centre, India

16-0694 **Twisted Cuprate van der Waals Heterostructures with Controlled Josephson Coupling**
Mickey Martini
Leibniz Institute for Solid State and Materials Research Dresden, Germany

16-0731 **Moiré Heterostructure in Graphene by Xenon Adsorption**
Hayoon Im[1], Suji Im[1], Kyoo Kim[2], Jieun Lee[3, 4], Jinwoong Hwang[3, 5], Sung-Kwan Mo[3], Choongyu Hwang[1]
[1]Pusan National University, Korea, [2]Korea Atomic Energy Research Institute, Korea, [3]Lawrence Berkeley National Laboratory, USA, [4]Max Planck POSTECH/Korea Research Initiative, Korea, [5]Kangwon National University, Korea

16-0779 **Self-doped Double-exchange Ferromagnetism and Hund's Metallicity in 1T-$CrTe_2$**
Dong Hyun David Lee, Taek Jung Kim, Min Yong Jeong, Myung Joon Han
Korea Advanced Institute of Science and Technology, Korea

16-0788 **Nonlinear Optical Responses in Superconductors under Magnetic Fields**
Hiroto Tanaka[1], Hikaru Watanabe[2], Youichi Yanase[1]
[1]Kyoto University, Japan, [2]The University of Tokyo, Japan

16-0795 **Observation of In-gap States Dependent on the Stacking Order in the Insulating Phase of 1T-TaS_2**
Hyungryul Yang, Doohee Cho, Byeongin Lee, Junho Bang, Eunseo Kim
Yonsei University, Korea

16-0822 **Acousto-magnonic Valley Hall Effect in Atomically Thin van der Waals Antiferromagnets**
Ryotaro Sano[1], Yuya Ominato[2], Mamoru Matsuo[2]
[1]Kyoto University, Japan, [2]University of Chinese Academy of Sciences, China

16-0865 **Domain Wall States and Valley Chern Phase in Large Angle Twisted Bilayer Graphene and Related Materials**
Chiranjit Mondal, Bohm-Jung Yang
Seoul National University, Korea

16-0896 **Chiral Lattice Distortions in the Gyrotropic Semimetal 1T-$TiSe_2$**
Kwangrae Kim, Hyunwoo J. Kim, Seunghyeok Ha, BJ Kim
Pohang University of Science and Technology, Korea

POSTER PRESENTATION

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16-0915 **Enhancement of Magnetic Anisotropy Energy in Heavy Metal/layered Magnet Heterostructure Induced by Strong Spin Orbit Coupling**
Inhak Lee[1], Yeong Gwang Khim[2], Jae Un Eom[1,3], Jung Yun Kee[1,4], Hyuk Jin Kim[2], Younghak Kim[5], Kook Tae Kim[4], Ilwan Seo[4], Dong Ryeol Lee[4], Yongseong Choi[6], Woo-Suk Noh[5], Young Jun Chang[2], Jun Woo Choi[1]
[1]Korea Institute of Science and Technology, Korea, [2]University of Seoul, Korea, [3]Seoul National University, Korea, [4]Soongsil University, Korea, [5]Pohang Accelerator Laboratory, Korea, [6]Argonne National Laboratory, USA

16-1047 **Observation of Interface Induced CDW State in Single-layer $MnTe_2/NbSe_2$**
Xu Wang, Tong Zhang
Fudan University, China

16-1142 **Electronic and Magnetic Properties of Fe_3GeTe_2 at High Magnetic Fields**
Shroya Vaidya
University of Warwick, UK

16-1177 **Magneto-absorption Spectroscopy in van der Waals Antiferromagnet $NiPS_3$**
Kaiyang Huang[1], Yasuhiro H. Matsuda[1], Je-Geun Park[2]
[1]The University of Tokyo, Japan, [2]Seoul National University, Korea

16-1205 **Dynamical Mean-field Theory Study of a Two-dimensional Ferromagnetic CrI_3 System**
Chang-Jong Kang
Chungnam National University, Korea

16-1240 **Structural and Electronic Phase Transition in van der Waals Crystal HfS_2 under High Pressure**
Wei Zhong[1], Wen Deng[1], Binbin Yue[1], Fang Hong[2]
[1]Center for High Pressure Science and Technology Advanced Research, China, [2]Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, China

16-1247 **0-Pi Transitions and Subgap Modes in S-F-S Josephson Junctions**
Yinan Fang[1], Seungju Han[2], Stefano Chesi[3,4], Mahn-Soo Choi[2]
[1]Yunnan University, China, [2]Korea University, Korea, [3]Beijing Computational Science Research Center, China, [4]Beihang University, China

16-1255 **Investigating the Domain Walls of the Unidirectional Charge-density-wave in $GdTe_3$**
Eunseo Kim[1], Doohee Cho[1], Sanghun Lee[1], Junho Bang[1], Changyoung Kim[2], Dirk Wulferding[2], Jongho Park[2]
[1]Yonsei University, Korea, [2]Seoul National University, Korea

16-1334 **NiI_2 Multiferroic van der Waals Material Exhibiting Non-Reciprocal Tunneling Resistance**
Hyuncheol Kim, Je-Geun Park
Seoul National University, Korea

16-1399 **Competition between Stripe and 3 x 3 Structure in the Low Temperature Phase of $TaTe_2$**
Tomoko Takeda, Sora Kobayashi, Atsushi Nomura, Hideaki Sakata
Tokyo University of Science, Japan

16-1426 **Phase Transitions and Coherent Oscillations of $IrTe_2$**
Hongchen Gao[1], Palwinder Singh[1], Fardiman Ruli[1], Yoon Seok Oh[2], Sang-Wook Cheong[3], Kyungwan Kim[1]
[1]Chungbuk National University, Korea, [2]Ulsan National Institute of Science and Technology, Korea, [3]Rutgers University, USA

POSTER PRESENTATION

16 Two dimensional materials

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16-1442 **Optical Probe of Magnetic Ordering Orientation in $Ni_{1-x}Mn_xPS_3$**
Seungyeol Lee[1], Je-Ho Lee[2], Wei-Tin Chen[3], Kalaivanan Raju[4], Raman Sankar[4], Maeng-Je Seong[2], Kwang-Yong Choi[1]
[1]Sungkyunkwan University, Korea, [2]Chung-Ang University, Korea, [3]National Taiwan University, Taipei, [4]Academia Sinica, Taipei

16-1448 **Encapsulating High-temperature Superconducting Twisted van der Waals Heterostructures Blocks Detrimental Effects of Disorder**
Yejin Lee[1], Mickey Martini[1], Tommaso Confalone[1], Sanaz Shokri[1], Christian Saggau[1], Daniel Wolf[1], Genda Gu[2], Kenji Watanabe[3], Takashi Taniguchi[3], Domenico Montemurro[4], Valerii Vinokur[5], Kornelius Nielsch[1], Nicola Poccia[1]
[1]Leibniz Institute for Solid State and Materials Science Dresden, Germany, [2]Brookhaven National Laboratory, USA, [3]National Institute for Materials Science, Japan, [4]University of Naples Federico II, Italy, [5]Terra Quantum AG, Switzerland

16-1558 **Lattice and Magnetic Excitations in van der Waals Ferromagnet VI3**
Dávid Hovančík
Charles University, Czech Republic

16-1675 **Intrinsic Correlation between Carrier Concentration and Magnetic Phase Transition in 2-Dimensional Ferromagnetic van der Waals Thin Films**
Ryan Roemer, Ke Zou
University of British Columbia, Canada

16-1694 **Electrical Transport and Structural Modulation in a Chiral Antiferromagnet $Co_{1/3}TaS_2$ under High Pressure**
Jeonghun Kang[1], Hengbo Cui[1], Pyeongjae Park[1], Qing Dong[2], Yoon Han Lee[1], Je-Geun Park[1], Jaeyong Kim[2], Kee Hoon Kim[1]
[1]Seoul National University, Korea, [2]Hanyang University, Korea

16-1709 **A Quasi-1 D Charge-density-wave Suppression and a Structural Phase Transition Induced by High Pressures in CuTe**
Kwang-Tak Kim, Yeahan Sur, Ingyu Choi, Dilip Bhoi, Kee Hoon Kim
Seoul National University, Korea

16-1743 **Mechanical Manipulation of Moiré Ferroelectric Domain Structures in Twisted Bilayer WSe_2**
Sang Hwa Park, Ayoung Yuk, Hyobin Yoo, Sang Mo Yang
Sogang University, Korea

16-1777 **Activating Magnetoelectric Optical Properties by Twisting Antiferromagnetic Bilayers**
Kunihiro Yananose[1,2], Paolo G. Radaelli[3], Mario Cuoco[4], Jaejun Yu[2], Alessandro Stroppa[5]
[1]Korea Institute for Advanced Study, Korea, [2]Seoul National University, Korea, [3]University of Oxford, UK, [4]Università degli Studi di Salerno, Italy, [5]Università degli Studi dell'Aquila, Italy

16-1788 **Spatial Evolution of the Electronic States Near the Domain Wall on Different Stacking Surfaces in 1*T*-TaS_2**
Yuto Nakashima, Atsushi Nomura, Hideaki Sakata
Tokyo University of Science, Japan

16-1838 **Introducing Spin-orbit Coupling in Reversibly Fluorinated Graphene**
Chae-Gun Lee, SeungHyun Shin, Gil-Ho Lee
Pohang University of Science and Technology, Korea

POSTER PRESENTATION

16 Two dimensional materials

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16-1886 **Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions**
Jin Yong An[1], Chul-Ho Lee[2]
[1]Korea University, Korea, [2]Seoul National University, Korea

16-2075 **Algorithm for Finding Quasiparticle Self-energy on a Complex Plane from Photoemission Spectrum**
Mingi Jho, Yeongkwan Kim
Korea Advanced Institute of Science and Technology, Korea

16-2107 **Helicity-resolved Raman Scattering in Hexagonal FeTe Nanosheets**
Prashant Vijay Gaikwad, Ikhwan Nur Rehman, Gwang Hwi An, Su Jin Kim, Kyungwan Kim, Dong-Hyun Kim, Hyun Seok Lee, Junhyeok Bang
Chungbuk National University, Korea

16-2116 **Evidence of Charge-Phonon Coupling in Dilute Anti-ferromagnetic van der Waals Material $Ni_{1-x}Zn_xPS_3$**
Nashra Pistawala, Surjeet Singh
Indian Institute of Science Education and Research, Pune, India

16-2176 **Achieving Ferroelectricity in a Centrosymmetric High-performance Semiconductor (Bi_2O_2Se) by Strain Engineering**
Zhefeng Lou[1], Xiao Lin[1], Xiaorui Zheng[1], Wenbin Li[1], Mengqi Wu[1], Chen-Min Dai[2], Jiaqi Wang[1], Ziye Zhu[1], Tao Wang[1], Zhuokai Xu[1], Tulai Sun[3]
[1]Westlake University, China, [2]Suzhou University of Science and Technology, China, [3]Zhejiang University of Technology, China

16-2199 **Quantum Volume as a Probe of Topology in Euler Insulators**
Soonhyun Kwon, Bohm-Jung Yang
Seoul National University, Korea

16-2290 **Fabrication of Flexible Electrodes and Their Application as a Flexible Supercapacitor**
Jimin Lee, Han Sung Lee, Gil Hwan Lim, Yung Ho Kahng
Chonnam National University, Korea

16-2298 **Vibration Coupled Gap Opening in Black Phosphorous**
In Kee Park, Geunsik Lee
Ulsan National Institute of Science and Technology, Korea

16-2343 **Controlling Spin-orbit Coupling to Tailor the Type-II Dirac Bands of $NiTe_{2-x}Se_x$**
Nguyen Huu Lam, Jungdae Kim
University of Ulsan, Korea

16-2353 **Electronic Properties and Berry Curvatures of γ-Ge_2XY (X/Y = S, Se, Te) for Valleytronics Applications**
Dongchul Sung, Yunjae Kim, Suklyun Hong
Sejong University, Korea

16-2362 **STM Investigation on Multiple Charge Density Wave Phases in Monolayer VSe_2**
Ganbat Duvjir[1], Byoung Ki Choi[2], Young Jun Chang[2], Jungdae Kim[1]
[1]University of Ulsan, Korea, [2]University of Seoul, Korea

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16 Two dimensional materials

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16-2402 **Converting the Bulk Transition Metal Dichalcogenides Crystal into Stacked Monolayers via Ethylenediamine Intercalation**

Yeojin An[1], Gyubin Lee[1], Namgyu Noh[1], Chulwan Lee[1], Duc Duy Le[1], Sunghun Kim[2], Yeonghoon Lee[3], Jounghoon Hyun[1], Chan-young Lim[1], Jaehun Cha[1], Mingi Jho[1], Seonggeon Gim[1], Jonathan D. Denlinger[4], Chan-Ho Yang[1], Jong Min Yuk[1], Myung Joon Han[1], Yeongkwan Kim[1]

[1]Korea Advanced Institute of Science and Technology, Korea, [2]Ajou University, Korea, [3]Korea Research Institute of Standards and Science, Korea, [4]Lawrence Berkeley National Laboratory, USA

17 Fermi surfaces and electronic structure of correlated phase

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17-0502 **Orbital Selective Mott Transition in Relation to Topological Superconductivity: Iron Chalcogenides**

Minjae Kim[1], Sangkook Choi[1], Walber Hugo Brito[2], Gabriel Kotliar[3]

[1]Korea Institute for Advanced Study, Korea, [2]Universidade Federal de Minas Gerais, Brazil, [3]Rutgers University, USA

17-0599 **Seebeck Coefficient of Electron-Doped $Sr_{2-y}La_yRuO_4$**

Rei Nishinakayama[1], Yoshiki J. Sato[1], Ryuji Okazaki[1], Takayoshi Yamanaka[2], Hiroshi Yaguchi[1], Naoki Kikugawa[3], Yoshiteru Maeno[4]

[1]Tokyo University of Science, Japan, [2]Tohoku University, Japan, [3]National Institute for Materials Science, Japan, [4]Kyoto University, Japan

17-0601 **High-Temperature Thermoelectric Properties of Sr_2RuO_4 Single Crystals**

Ryota Otsuki, Yoshiki J. Sato, Ryuji Okazaki, Tomoya Komine, Ryosuke Kurihara, Hiroshi Yaguchi

Tokyo University of Science, Japan

17-0785 **Emergence of Almost-Flat Bands via Orbital-Selective Electron Correlations in Mn-Based Kagome Metal**

Subhasis Samanta[1], Hwiwoo Park[2], Chanhyeon Lee[3], Sungmin Jeon[2], Jungseek Hwang[2], Kwang-Yong Choi[2], Heung-Sik Kim[1]

[1]Kangwon National University, Korea, [2]Sungkyunkwan University, Korea, [3]Chung-Ang University, Korea

17-0843 **Similarities and Differences of Band Structures in Kagome Superconductors AV_3Sb_5 (A=K, Rb, Cs)**

Zheyu Wang[1], Zhang Wei[1], Lingfei Wang[1], Tsz Fung Poon[1], Chun Wai Tsang[1], Wenyan Wang[1], Jianyu Xie[1], Siu Tung Lam[1], Xuefeng Zhou[2], Yusheng Zhao[2], Shanmin Wang[2], Ming-zhong Ai[1], Kwing To Lai[1,3], Swee Kuan Goh[1]

[1]The Chinese University of Hong Kong, Hong Kong (SAR of China), [2]Southern University of Science and Technology, China, [3]Shenzhen Research Institute, The Chinese University of Hong Kong, Hong Kong (SAR of China)

17-0848 **Observation of Large Polaron in a Surface-doped WS_2**

Yoonseok Oh, Changmo Kang, Keun Su Kim

Yonsei University, Korea

17-0852 **Pseudogap in Surface-doped Black Phosphorus**

Yoonyi Kim, Soobin Park, Keun Su Kim

Yonsei University, Korea

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17 Fermi surfaces and electronic structure of correlated phase

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17-1076 **Correlation Effects in $LaNiO_3$ as Seen by Bulk-sensitive SX-ARPES**
Johannes Falke[1], Yi-Ting Tseng[2], Cheng-En Liu[1,3], Keng-Yung Lin[1,4], Hanjie Guo[1], Alexander Komarek[1], Chun-Fu Chang[1], Liu Hao Tjeng[1], Philipp Hansmann[2]
[1]Max Planck Institute for Chemical Physics of Solids, Germany, [2]Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, [3]National Yang Ming Chiao Tung University, Taipei, [4]National Taiwan University, Taipei

17-1231 **Berry Curvature Dipole in the Group-IV Monochalcogenides**
Changmin Jin, Keun Su Kim, Yoonah Chung
Yonsei University, Korea

17-1265 **Sublattice Interference of 2D Materials**
Yoonah Chung, Gijeong An, Keun Su Kim
Yonsei University, Korea

17-1658 **Quantum Oscillations of the Quasiparticle Lifetime in a Metal**
Nico Huber
Technical University Munich, Germany

17-1831 **Tomonaga-Luttinger Liquid Characters in $NbSe_3$ across Charge Density Wave Transition**
Jounghoon Hyun[1], Yeongkwan Kim[1], Sunghun Kim[2]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Ajou University, Korea

17-2356 **Observation of Time-reversal Symmetry Breaking under Charge Density Wave Phase of CsV_3Sb_5 by Circular Dichroism ARPES**
Jaehun Cha[1], Yeahan Sur[2], Sangjun Sim[1], Sun-woo Kim[1], Gyubin Lee[1], Jounghoon Hyun[1], Chan-young Lim[1], Jonathan D. Denlinger[3], Myung Joon Han[1], Kee Hoon Kim[2], Yeongkwan Kim[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Seoul National University, Korea, [3]Lawrence Berkeley National Laboratory, USA

17-2380 **Evidence for Antiferromagnetic Spin Fluctuation in LiFeAs**
Seonggeon Gim[1], Sunghun Kim[2], Yeongkwan Kim[1]
[1]Korea Advanced Institute of Science and Technology, Korea, [2]Ajou University, Korea

20 Materials and devices for qubits

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20-1149 **Self-Purification and Entanglement Revival in Lambda Matter**
Dongni Chen[1], Stefano Chesi[2], Mahn-Soo Choi[1]
[1]Korea University, Korea, [2]Beijing Computational Science Research Center, China

20-1867 **III-V Semiconductor-based Nano-structures Grown by KIST MBE for the Application to Quantum Technology**
Jindong Song
Korea Institute of Science and Technology, Korea

21 Emergent phenomena at the nanoscale

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

21-0831 **Evolution of Half-metallic Ferromagnetism in (111)-oriented Manganite Superlattices**
Fabrizio Cossu[1], Heung-Sik Kim[1], Igor Di Marco[2], Julio Do Nascimento[3], Vlado Lazarov[3]
[1]Kangwon National University, Korea, [2]Asia Pacific Center for Theoretical Physics, Korea, [3]University of York, UK

21-0895 **Real-space Observation of the Domain Wall Structure of Spin-density-wave State**
Yining Hu[1], Tong Zhang[1], Donglai Feng[2]
[1]Fudan University, China, [2]University of Science and Technology of China, China

21-1855 **Alignment of Tilt-focal series for Atomic-scale Low-dose 3D Phase Contrast Tomography of Single-Crystal Nanoparticles by Estimating Particle Shape and Crystal Orientation**
Jaehyu Shim, Yongsoo Yang
Korea Advanced Institute of Science and Technology, Korea

21-1921 **Determination of Three-dimensional Structures in Aggregated Nanoparticle System**
Seokjo Hong, Juhyeok Lee, Yongsoo Yang
Korea Advanced Institute of Science and Technology, Korea

21-2448 **Giant Electron-Phonon Coupling and Resistivity Saturation in Nanostructured Hybrid of Noble Metals**
Shreya Kumbhakar, Tuhin Kumar Maji, T. Phanindra Sai, Arindam Ghosh
Indian Institute of Science, India

22 Materials design and novel advanced materials

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

22-0870 **Hydrogen Annealing Effect on WO_3 Thin Films**
Minho Kang, Chanho Yang
Korea Advanced Institute of Science and Technology, Korea

22-0920 **Effect of Electron Correlations on Magnetic Properties of Mn_2NiAl Heusler Alloy**
Evgeniy Chernov[1], Alexey Lukoyanov[1, 2]
[1]M.N. Mikheev Institute of Metal Physics of Ural Branch of Russian Academy of Sciences, Russia, [2]Ural Federal University, Russia

22-1300 **3-dimensional Visualization of Oxygen-vacancy Migration and Redistribution in Ionic $BiFeO_3$-parent Oxides**
Bingqian Song, Chang-Ho Yang
Korea Advanced Institute of Science and Technology, Korea

22-1688 **Efficient Discovery of Multiple Minimum Action Pathways Using Gaussian Process**
JaeHwan Shim, Juyong Lee, Jaejun Yu
Seoul National University, Korea

22-1763 **High-Throughput Prediction for Functional Antiferromagnets Based on the Cluster Multipole Theory**
Takuya Nomoto
The University of Tokyo, Japan

POSTER PRESENTATION

22 Materials design and novel advanced materials

12:15-13:45, THURSDAY, July 6 — Premier Ballroom C (2F)

22-1879 **Enhancement of Thermoelectric Property by Magnetic Impurity in Half-Metallic Ferromagnet**
Dongwook Kim, Ji Hoon Shim
Pohang University of Science and Technology, Korea

22-1889 **Photo-striction in Lead Halide Perovskites $FAPbI_3$**
Thu Thuy Hoang, Junhyeok Bang
Chungbuk National University, Korea

22-1935 **Reversible Hydrogen Control of Superconducting State in $La_{2-x}Ce_xCuO_4$ Thin Films**
Jaehyun Lee, Chan-Ho Yang
Korea Advanced Institute of Science and Technology, Korea

22-2294 **Tuning the Anomalous Hall Effect in MnPt(Ir)Sn Heusler System**
Sekh Jamaluddin, Ajaya Kumar Nayak
National Institute of Science Education and Research Bhubaneswar, India