The 5th Conference on Condensed Matter Physics

June 27–30, 2019
Liyang, China

Organized by

Institute of Physics, Chinese Academy of Sciences
School of Physics and Astronomy, Shanghai Jiao Tong University
Department of Physics, Fudan University

CONTENTS

I. About the CCMP

The Conference of Condensed Matter Physics (CCMP) originates from the series conference “International Conference on Condensed Matter Theory and Computational Materials” which has been held annually since 2002. The 1st CCMP was held in July 2015, co-sponsored by Tsinghua University, Collaborative Innovation Center of Quantum Science, Institute of Physics Chinese Academy of Sciences (IOP, CAS), and Peking University. The 2nd CCMP was held in July 2016, co-sponsored by Nanjing University, Collaborative Innovation Center of Advanced Microstructures, and IOP, CAS. The 3rd and 4th CCMP were held in June 2017 and July 2018, respectively, co-sponsored by IOP, CAS, Shanghai Jiao Tong University, and Fudan University. CCMP has English sessions and opens to foreign participants, and those from other Asia countries and regions are particularly welcome. CCMP aims to provide a platform for researchers in this field to report their up-to-date results, exchange ideas and foster collaborations, to promote the development of multiple frontier fields in condensed matter physics and its interdisciplinary fields, and to enhance the international influences of Chinese developments in condensed matter physics and related interdisciplinary fields.

The 5th CCMP, whose sponsors are the same as those of the 3rd and 4th CCMP, has the following eight parallel sessions:

Session 1: Unconventional superconductivity (English Session)

Session 2: Strongly correlated systems and machine learning (English Session)

Session 3: Quantum computations and cold atoms (English Session)

Session 4: Twisted bilayer and multi-layer graphene systems (English Session)

Session 5: Low-dimensional and artificial microstructure physics, topological quantum systems

Session 6: Statistical physics and soft condensed matter physics

Session 7: Multiferroic physics and quantum magnetism

Session 8: Computational condensed matter physics and its applications

II. General Information

Registration:

- Location: Lobby of **HENTIQUE Hotels & Resorts** (6th Floor)
- Time: June 27, 13:00–22:00
  June 28–29, 8:00–20:00
  June 30, 8:00–12:00
- Online payment: The electronic invoice will be sent to you by email within two weeks of your registration. If you have any requests for amendment, please leave the correct invoice information and mailing address at the registration desk.
- On-site payment: Please leave the correct invoice information and mailing address at the registration desk. Invoices will be sent to your mailing address by July 15th. In case of delay in receipt of invoices, please contact the conference administration group at CCMP@iphy.ac.cn.
- **Certificate of Attendance**
  If you need a certificate of attendance, please scan the right QR code.

QR

WiFi:

Username: hantian-Hotel, no password.

Dining

The conference will provide buffet lunch and dinner. Please go to the dining hall on Floor 6 or 9 with voucher.

Lunch time: 11:30–13:30, Dinner time: 18:00–20:00.

Welcome Banquet: 18:00–20:30, June 28th, outdoor banquet in front of the HENTIQUE Hotels & Resorts by the Tianmu Lake.

Poster

- The Poster session will be on June 28th–June 30th.
- Posters should be brought directly to the poster area after 13:00, June 27th. Each poster has been assigned a number (See Page 53 for your poster number) and an individual poster board. Posters should be affixed to the corresponding numbered boards with glue which will be available in the poster area.
- Ten best posters will be selected by the corresponding session conveners, including five best posters like the former conference, and the extra five best posters are especially for posters containing results recently published in the following four journals: *Chinese Physics Letters*, *Chinese Physics B*, *Acta Physica Sinica*, and *Wuli*.
- Please take back your poster before 12:00, June 30th.
- The list of awards will be announced by July 10th on the conference website: http://202.121.178.189/welcome, and the bonus and certificate will be delivered by July 20.
- Rewards: 1500 RMB (per poster) for five best posters, and 2500 RMB (per poster) for the extra five best posters of the four journals.

Volunteers

Volunteers will wear a Red T-shirt (with “CCMP” on it). Please contact volunteers for help during the conference.

Contact Persons:

- Registration, Conference Package: Suhong Yang, 15810105127;
- Payment, Invoice: Ran Wu, 15600177474;
- Dining, Accommodation: Jie Zhang, 13522004646;
- Transportation: Jinping Wang, 13661056278;
- Poster Session: Zhen Zhai, 15210341758.

Warm Tips:

- There is an information desk in the lobby of HENTIQUE Hotels & Resorts. If you have any questions, please go there for consultation.
- To ensure a successful meeting, please set your cell phones to silent mode during the meeting.
- Attendees at HENTIQUE Hotels & Resorts can enjoy the hotel's swimming pool and gym for free.

Maps & Transportation

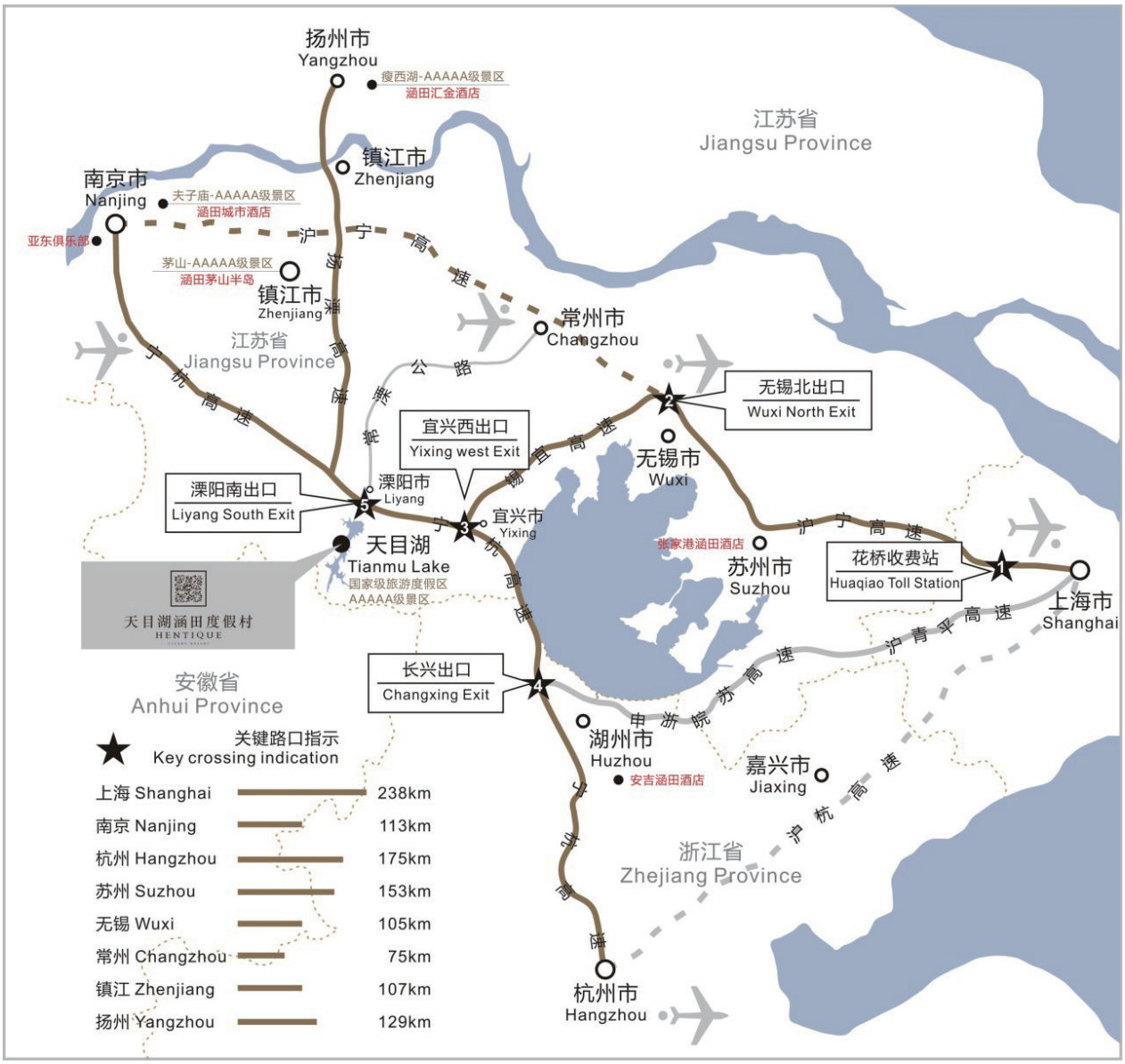
Venue:

HENTIQUE Hotels & Resorts (No. 88 Dong Yuan Road, Tianmu Lake Resort, Liyang, Jiangsu, China)

Maps:

The Location of HENTIQUE Hotels & Resorts

The Location of HENTIQUE Hotels & Resorts relative to those cities such as Shanghai, Nanjing, Hangzhou, Suzhou, Wuxi and Yangzhou



Transportation

1. From Liyang High-Speed Railway Station to the Conference Venue:

About 18 km and 30 minute's driving; it costs about 55 CNY to take a taxi. Alternatively, the conference will arrange a shuttle bus during 14:00-21:00 pm on June 27th, which leaves every half an hour.

2. From Nanjing Lukou International Airport to the Conference Venue:

About 90 km and one and a half hour's driving; it costs about 230 CNY to take a taxi. A shuttle bus from the airport to the conference site will be arranged during 14:00-19:00 pm on June 27th.

3. From Nanjing Lukou International Airport to Nanjing South Railway Station, and then to the Conference Venue:

1) From Nanjing Lukou International Airport to Nanjing South Railway Station: Leave T2 at the arrival gates, and walk eastward for about 100 meters, then take Nanjing subway-airport line (S1, leaving every 15 minutes), and arrive at the Nanjing South Railway Station at the 8th stop. The subway fee is 6 CNY.

2) From Nanjing South Railway Station to Liyang High-speed Railway Station which is closest to the Conference Venue: it takes 30 minutes and costs 45 CNY, and the train leaves every 20 minutes.

4. From Shanghai Pudong International Airport to the Conference Venue:

About 290 km and 3 hour's driving.

III. Organization

Host Institutes

Institute of Physics, Chinese Academy of Sciences

School of Physics and Astronomy, Shanghai Jiao Tong University

Department of Physics, Fudan University

Conference Committee

Kai Chang	Shu Chen	Xianhui Chen	Tian Cui
Zhong Fang	Shiping Feng	Xingao Gong	Jianxin Li
Xiufeng Han	Jinfeng Jia	Haiqing Lin	Zhongyi Lu
Wei Lu	Li Lv	Yuqiang Ma	Jian Shen
Chao Tang	Leihan Tang	Mingliang Tian	Bogen Wang
Xiaoqun Wang	Yayu Wang	Tao Xiang	Xincheng Xie
Hongxing Xu	Zhu'an Xu	Qikun Xue	Dapeng Yu
Fuchun Zhang	Guoqing Zheng		

Session Conveners

Session 1: Unconventional superconductivity (English Session)

Shiyan Li (Fudan University)

Yuan Li (Peking University)

S2: Strongly correlated systems and machine learning (English Session)

Lei Wang (Institute of Physics, CAS)

Yi Zhou (Zhejiang University)

S3: Quantum computations and cold atoms (English Session)

Heng Fan (Institute of Physics, CAS)

Jing Zhang (Shanxi University)

S4: Twisted bilayer and multi-layer graphene systems (English Session)

Xi Dai (Hong Kong University of Science and Technology)

Hongming Weng (Institute of Physics, CAS)

S5: Low-dimensional and artificial microstructure physics, topological quantum systems

Dong Qian (Shanghai Jiao Tong University)

Yuanbo Zhang (Fudan University)

S6: Statistical physics and soft condensed matter physics

Hepeng Zhang (Shanghai Jiao Tong University)

Haijun Zhou (Institute of Theoretical Physics, CAS)

S7: Multiferroic physics and quantum magnetism

Xiufeng Han (Institute of Physics, CAS)

Jiang Xiao (Fudan University)

S8: Computational condensed matter physics and its applications

Xiangang Wan (Nanjing University)

Yugui Yao (Beijing Institute of Technology)

Coordinators

Shu Chen (Institute of Physics, CAS)

Xiaoqun Wang (Shanghai Jiao Tong University)

Jian Shen (Fudan University)

IV. Locations

Plenary Session		F8, Room 8-S1 & Room 8-S2
Parallel Sessions	Session 1	F8, Room 8-S1
	Session 2	F8, Room 8-S2
	Session 3	F7, Room 7-S3
	Session 4	F7, Room 7-S4
	Session 5	F7, Room 7-S5
	Session 6	F7, Room 7-S6
	Session 7	F6, Room 6-S7
	Session 8	F6, Room 6-S8
Exhibition Area		F6/F7/ F8
Posters for Sessions 1,2		F8
Posters for Sessions 3-6		F7
Posters for Sessions 7,8		F6
Dining		F6/ F9

V. Receptions

17:00-18:00, Thursday, June 27, 2019 (F7, Room 7-S6)
Chair: Xincheng Xie Symposium on SCIENCE CHINA Physics Mechanics Astronomy

19:00-20:00, Saturday, June 29, 2019 (F6, Room 6-S7)
Chair: Dongmin Chen Reception of Songshan Lake Materials Laboratory

VI. Plenary Session

9:00-11:30, Friday, June 28, 2019		
(F8, Room 8-S1, 8-S2)		
Time	**Speaker**	**Title**
9:00-9:20	Tao Xiang Institute of Physics, CAS	Welcome and opening remarks
Chair: Xiaoqun Wang, Shanghai Jiao Tong University		
9:20-10:10	Can-Ming Hu University of Manitoba	Cavity spintronics
10:10-10:40	**Break**	
Chair: Jian Shen, Fudan University		
10:40-11:30	Qi Ouyang Peking University	The free energy cost of biological circadian clock

VII. Agenda for Parallel Sessions

Session 1 (F8, Room 8-S1) Unconventional superconductivity		
13:30-17:50, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Shiyan Li (Fudan Univ.)		
13:30-14:00	Pengcheng Dai (Rice Univ.)	Anisotropic spin fluctuations in detwinned FeSe
14:00-14:30	Jian Wang (Peking Univ.)	Quantum metal state in high T_c superconducting films
14:30-15:00	Xingjiang Zhou (Inst. of Physics, CAS)	Insulating parent phase and distinct doping evolution to superconductivity in single-layer FeSe/$SrTiO_3$ films
15:00-15:20	**Break**	
Chair: Pengcheng Dai (Rice Univ.)		
15:20-15:50	Hong Ding (Inst. of Physics, CAS)	New insight from in-situ ARPES studies on continuously doped cuprate surface
15:50-16:20	Dai Aoki (Tohoku Univ.)	Spin-triplet superconductivity and field-induced phenomena in 5f electron system
16:20-16:50	Christopher Stock (Univ. of Edinburgh)	The critical point separating superconducting and incommensurate magnetic phases in $CeCo_{0.5}Rh_{0.5}In_5$
16:50-17:20	Lei Shu (Fudan Univ.)	Broken time-reversal symmetry in superconducting $Pr_{1-x}La_xPt_4Ge_{12}$
17:20-17:50	Michael Smidman (Zhejiang Univ.)	Time-reversal symmetry breaking in fully-gapped superconductors

8:30-17:20, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Changyoung Kim (Seoul National Univ.)		
8:30-9:00	Jinsheng Wen (Nanjing Univ.)	Evidence for singular-phonon-induced nematic superconductivity in a topological superconductor candidate $Sr_{0.1}Bi_2Se_3$
9:00-9:30	Kazuaki Matano (Okayama Univ.)	NMR studies of topological superconductors
9:30-10:00	Rui Peng (Fudan Univ.)	Evidence of cooperative effect on the enhanced superconducting transition temperature at the FeSe/$SrTiO_3$ interface
10:00-10:20	**Break**	
Chair: Jinsheng Wen (Nanjing Univ.)		
10:20-10:50	Changyoung Kim (Seoul National Univ.)	New phased diagram of an electron doped cuprate $Pr_{1-x}LaCe_xCuO_{4-\delta}$: angle resolved photoemission and μSR studies
10:50-11:20	Xuerong Liu (ShanghaiTech Univ.)	Doping evolution of the charge excitations and electron correlations in electron-doped superconducting $La_{2-x}Ce_xCuO_4$
11:20-11:50	Jianwei Sun (Tulane Univ.)	Competing stripe and magnetic phases in the cuprates from a first-principles density functional
11:50-12:20	Yongkang Luo (Huazhong Univ. of Sci. and Technol.)	To *p* or not to *p*? – New ^{17}O NMR results on Sr_2RuO_4
12:20-13:30	**Lunch & Poster**	

Chair: Takasada Shibauchi (Univ. of Tokyo)		
13:30-14:00	Qianghua Wang (Nanjing Univ.)	Theory of chiral p-wave superconductivity with near-nodes for Sr_2RuO_4
14:00-14:30	Wen Huang (Southern Univ. of Sci. and Tech.)	Possible three-dimensional nematic odd-parity pairing in Sr_2RuO_4
14:30-15:00	Youichi Yanase (Kyoto Univ.)	Z4 topological superconductivity in UCoGe
15:00-15:20	**Break**	
Chair: Qianghua Wang (Nanjing Univ.)		
15:20-15:50	Takasada Shibauchi (Univ. of Tokyo)	Novel electronic nematicity in heavily hole-doped iron pnictide superconductors
15:50-16:20	Jun Sung Kim (Pohang Univ. of Sci. and Technol.)	Phase diagram of a hetero-structured iron-based superconductor Sr_2VO_3FeAs
16:20-16:50	Yan Zhang (Peking Univ.)	Gap anisotropy in C4-magnetic phase of $Sr_{1-x}Na_xFe_2As_2$
16:50-17:20	Rui Zhou (Inst. of Physics, CAS)	Quantum criticality in $NaFe_{1-x}Co_xAs$
8:30-16:50, Sunday, June 30		
Time	**Speaker**	**Title**
Chair: Guanghan Cao (Zhejiang Univ.)		
8:30-9:00	Jianxin Li (Nanjing Univ.)	Anomalous excitation spectra and fractional excitations in the two-dimensional Mott insulator

9:00-9:30	Honggang Luo (Lanzhou Univ.)	Rashba-induced Kondo screening of a magnetic impurity in a two-dimensional superconductor
9:30-10:00	Kai Liu (Renmin Univ.)	Electronic structures of quasi-one-dimensional cuprate superconductors $Ba_2CuO_{3+\delta}$
10:00-10:20	**Break**	
Chair: Jianxin Li (Nanjing Univ.)		
10:20-10:50	Guanghan Cao (Zhejiang Univ.)	Contrasting behaviors of hole-doped and electron-doped “12442”-type iron-based superconductors
10:50-11:20	Weiqiang Yu (Renmin Univ.)	Ionic-liquid-gating induced nonvolatile protonation and superconductivity in layered compounds
11:20-11:50	Hechang Lei (Renmin Univ.)	Physical Properties of $Fe_{1-x}Cu_xSe$ and novel iron-based materials
11:50-13:30	**Lunch & Poster**	
Chair: Kui Jin (Inst. of Physics, CAS)		
13:30-14:00	Huan Yang (Nanjing Univ.)	Direct visualization of superconducting-gap-sign change in $Bi_2Sr_2CaCu_2O_{8+\delta}$ and $FeTe_{0.55}Se_{0.45}$ by phase-referenced quasiparticle interference
14:00-14:30	Tao Wu (Univ. of Sci. and Technol. of China)	Observation of spin glass state in heavily hole-doped iron-pnictides superconductors

14:30-15:00	Jun Li (ShanghaiTech Univ.)	Detecting the anisotropic gap symmetry of iron-based superconductors from transport measurements
15:00-15:20	**Break**	
Chair: Huan Yang (Nanjing Univ.)		
15:20-15:50	Kui Jin (Inst. of Physics, CAS)	A new superconductor in spinel oxides
15:50-16:20	Ding Zhang (Tsinghua Univ.)	Superconductor-insulator transitions and isotropic Josephson effect in cuprate flakes
16:20-16:50	Peng Cai (Renmin Univ.)	Visualizing the electronic structure of monolayer Bi2212

Session 2 (F8, Room 8-S2) Strongly correlated systems and machine learning		
13:30-17:10, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Yi Zhou (Zhejiang Univ.)		
13:30-13:55	Hirokazu Tsunetsugu (Univ. of Tokyo)	The hydrodynamics of correlated electrons in one dimension
13:55-14:20	Yukitoshi Motome (Univ. of Tokyo)	Fractional Majorana excitations in kitaev spin liquids
14:20-14:45	Junwei Liu (Hong Kong Univ. of Sci. and Technol.)	Self-learning Monte Carlo method and structured self-attention network
14:45-15:10	Yi Zhang (ICQM, Peking Univ.)	Machine learning in electronic quantum matter imaging experiments
15:10-15:30	**Break**	
Chair: Lei Wang (Inst. of Physics, CAS)		
15:30-15:55	Hui Zhai (Tsinghua Univ.)	Machine learning for quantum experiment
15:55-16:20	Yusuke Nomura (RIKEN)	Machine learning for studying strongly correlated systems
16:20-16:45	Ke Liu (Univ. of Munich)	Fast diagnosing hidden orders and complex phase diagrams of frustrated magnets
16:45-17:10	Yuan Wan (Inst. of Physics, CAS)	Resolving spinon continuum by spinon echo in THz 2D coherent spectroscopy

9:00-17:10, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Zi Cai (Shanghai Jiao Tong Univ.)		
9:00-9:25	Dongling Deng (Tsinghua Univ.)	Machine learning meets quantum physics
9:25-9:50	Nana Liu (Shanghai Jiao Tong Univ.)	A future quantum internet: Quantum data, security and machine learning
9:50-10:15	Xin Wang (City Univ. of Hong Kong)	Application of reinforcement learning to quantum control problems
10:15-10:40	**Break**	
Chair: Hiroshi Shinaoka (Saitama Univ.)		
10:40-11:05	Zhao Liu (Zhejiang Univ.)	Geometric quench and non-equilibrium dynamics of fractional quantum Hall states
11:05-11:30	Grigory Bednik (UC Santa Cruz)	Probing topological properties of 3D lattice dimer model with neural networks
11:30-11:55	Xiaopeng Li (Fudan Univ.)	Quantum adiabatic doping with incommensurate optical lattices
11:55-13:30	**Lunch & Poster**	
Chair: Wei Li (Beihang Univ.)		
13:30-13:55	Kedar Damle (Tata Insit. of Fundamental Research)	Zero modes and monomer correlations on diluted bipartite graphs

13:55-14:20	Hidemaro Suwa (Univ. of Tokyo)	Machine learning for molecular dynamics with strongly correlated electrons
14:20-14:45	Hiroshi Shinaoka (Saitama Univ.)	Sparse QMC sampling of two-particle Green's function and tensor learning: Application to DMFT
14:45-15:10	Hongki Min (Seoul National Univ.)	Emergent anisotropic non-Fermi liquid at a topological phase transition in three dimensions
15:10-15:30	**Break**	
Chair: Haijun Liao (Inst. of Physics, CAS)		
15:30-15:55	Adam Smith (Technical Univ. of Munich)	Simulating quantum many-body dynamics on a current quantum computer
15:55-16:20	Yohei Yamaji (Univ. of Tokyo)	Hidden origin of high-temperature superconductivity revealed by Boltzmann-machine self-energy inference
16:20-16:45	Bohmjung Yang (Seoul National Univ.)	Two dimensional Peierls instability via zone boundary Dirac line nodes in layered perovskite oxides
16:45-17:10	Kookrin Char (Seoul National Univ.)	2DEG state at $LaInO_3/BaSnO_3$ polar interface
9:00-16:45, Sunday, June 30		
Time	**Speaker**	**Title**
Chair: Pan Zhang (Inst. of Theoretical Physics, CAS)		
9:00-9:25	Zhengcheng Gu (Chinese Univ. of Hong Kong)	Anomalous symmetry protected topological states in interacting fermion systems

9:25-9:50	Chenjie Wang (The Univ. of Hong Kong)	Rotation symmetry-protected topological phases of fermions
9:50-10:15	Nobuyuki Yoshioka (Univ. of Tokyo)	Approximate and exact representation of physical states by neural networks
10:15-10:40	**Break**	
Chair: Hao Shi (CCQ, Flatiron Inst., Simons Foundation)		
10:40-11:05	Dario Poletti (Singapore Univ. of Technology and Design)	Transfer learning for neural network quantum states
11:05-11:30	Pan Zhang (Inst. of Theoretical Physics, CAS)	Generative modeling using tensor networks
11:30-11:55	Haijun Liao (Inst. of Physics, CAS)	Differentiable programming tensor networks
11:55-13:30	**Lunch & Poster**	
Chair: Mingpu Qin (Shanghai Jiao Tong Univ.)		
13:30-13:55	Hao Shi (CCQ, Flatiron Inst., Simons Foundation)	Auxiliary field quantum Monte Carlo in Simons many-electron collaboration: Hubbard model, hydrogen chain, and transition metal systems
13:55-14:20	Yoshi Kamiya (Shanghai Jiao Tong Univ.)	Quantum Monte Carlo simulation of interacting Majorana fermions on the square lattice with an emergent symmetry

14:20-14:45	Rubem Mondaini (Beijing Computational Science Research Center)	Investigating many-body mobility edges in isolated quantum systems
14:45-15:10	Zi Cai (Shanghai Jiao Tong Univ.)	Universal dynamical classes towards infinite temperature states
15:10-15:30	**Break**	
Chair: Yoshi Kamiya (Shanghai Jiao Tong Univ.)		
15:30-15:55	Wei Li (Beihang Univ.)	Efficient thermal tensor network simulation for low-dimensional quantum lattice models
15:55-16:20	Mingpu Qin (Shanghai Jiao Tong Univ.)	Recent development in constrained path auxiliary field quantum Monte Carlo
16:20-16:45	Qingrui Wang (Chin. Univ. of Hong Kong)	Classification of fermionic symmetry-protected topological phases

Session 3 (F7, Room 7-S3) Quantum computations and cold atoms		
13:30-17:35, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Shiliang Zhu (Nanjing Univ.)		
13:30-14:00	Hui Zhai (Tsinghua Univ.)	Realizing Hayden-Preskill protocol with Dicke model
14:00-14:30	Shizhong Zhang (Univ. of Hong Kong)	p-wave Fermi gas and its Fermi liquid description
14:30-15:00	Gyu-Boong Jo (Hong Kong Univ. of Sci. and Technol.)	Quantum simulation with interacting fermions of ^{173}Yb: From topological matter to large spin fermions
15:00-15:20	**Break**	
Chair: Jing Zhang (Shanxi Univ.)		
15:20-15:50	Yuju Lin (Inst. of Atomic and Molecular Sci., Academia Sinica)	Synthetic azimuthal gauge potentials and spin-orbital-angular-momentum coupling in atomic Bose-Einstein condensates
15:50-16:05	Huayong Zhang (Dynasense Photonics Co., Ltd)	New application of C-wave laser
16:05-16:35	Man-Hong Yung (Southern Univ. Sci. & Technol.)	Quantum computing for the near future
16:35-17:05	Christian Miniatura (National Univ. of Singapore)	Matter waves in disordered potentials: From localization to thermalization and condensation
17:05-17:35	Xinyu Luo (Max Planck Inst. of Quantum Optics)	Towards quantum many-body physics with ultracold polar molecules

8:30-17:20, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Zhensheng Yuan (Univ. Sci. & Technol. China)		
8:30-9:00	Qijin Chen (Zhejiang Univ.)	Enhancement and destruction of superfluidity: Unusual effects of population imbalance of atomic Fermi gases on a 1D optical lattice
9:00-9:30	Wenhui Li (National Univ. of Singapore)	Electromagnetically induced transparency in an interacting Rydberg gas
9:30-10:00	Kaijun Jiang (Wuhan Inst. Phys. & Math.)	Phase transition in a spin-orbital-angular-momentum coupled Bose-Einstein condensate
10:00-10:20	**Break**	
Chair: Heng Fan (Inst. of Physics, CAS)		
10:20-10:50	Zhensheng Yuan (Univ. Sci. & Technol. China)	Entangled atoms in a spin-dependent optical superlattice
10:50-11:05	Jan Benhelm (Zurich Instruments)	Linking analog to digital: Scalable instrumentation for quantum computing and sensing
11:05-11:35	Leong Chuan Kwek (National Univ. of Singapore)	Atomtronics: Towards sensors and devices with ultracold atoms and optical lattices
11:35-12:05	Ippei Danshita (Kindai Univ.)	Kondo transport dynamics of alkaline-earth-like atoms at finite temperatures
12:05-13:30	**Lunch & Poster**	

Chair: Jianming Cai (Huazhong Univ.Sci.&Technol.)		
13:30-14:00	Feng Mei (Shanxi Univ.)	Topological magnon insulator and quantized pumps from strongly-interacting bosons in optical superlattices
14:00-14:30	Takeshi Fukuhara (RIKEN)	Towards quantum simulation of frustrated systems with ultracold atoms
14:30-15:00	Yuanyao He (CCQ, Flatiron Institute, Simons Foundation)	Ab initio quantum Monte Carlo study of finite-temperature properties of strongly interacting Fermi gases in two dimensions
15:00-15:20	**Break**	
Chair: Qing Ai (Beijing Normal Univ.)		
15:20-15:50	Fazhan Shi (Univ. Sci.& Technol. China)	Magnetic resonance spectroscopy and imaging based on a quantum sensor
15:50-16:20	Jianming Cai (Huazhong Univ. Sci. & Technol.)	Nanotube double quantum dot spin transducer for scalable quantum information processing
16:20-16:50	Cheol Hwan Park (Seoul National Univ.)	Spin modulation of photoelectrons from spin-orbit coupled materials
16:50-17:20	Dohun Kim (Seoul National Univ.)	Electron and nuclear spin control in semiconductors: Progress towards robust environment Hamiltonian engineering

8:30-17:20, Sunday, June 30		
Time	**Speaker**	**Title**
Chair: Zhigang Cheng (Inst. of Physics, CAS)		
8:30-9:00	Shiliang Zhu (Nanjing Univ.)	Quantum geometric tensor and its experimental measurement with a superconducting qubit
9:00-9:30	Fanming Qu (Inst. of Physics, CAS)	Andreev bound states in InAsSb nanowires
9:30-10:00	Qing Ai (Beijing Normal Univ.)	Efficient quantum simulation of photosynthetic energy transfer and non-Markovian quantum dynamics
10:00-10:20	**Break**	
Chair: Guoyong Xiang (Univ Sci. & Technol. China)		
10:20-10:50	Liang Jin (Nankai Univ.)	Non-Hermitian topological phases
10:50-11:20	Bobo Wei (Chinese Univ. of Hong Kong, Shenzhen)	Probing many-body physics by central spin decoherence
11:20-11:50	Zhangqi Yin (Beijing Inst. of Technology)	Nonadiabatic dynamics and geometric phase of an ultrafast rotating electron spin
11:50-13:30	**Lunch & Poster**	
Chair: Zhangqi Yin (Beijing Inst. of Technol.)		
13:30-14:00	Guoyong Xiang (Univ. Sci. & Technol. China)	A new type of quantum measurement: Quantum collective measurement

14:00-14:30	Dawei Lu (Southern Univ. Sci. & Technol.)	Experimental implementation of efficient quantum pseudorandomness on a 12-spin system
14:30-15:00	Le Luo (Sun Yat-sen Univ.)	TBD
15:00-15:20	**Break**	
Chair: Dawei Lu (Southern Univ. Sci. & Technol.)		
15:20-15:50	Gangqin Liu (Inst. of Physics, CAS)	Coherent quantum control of nitrogen-vacancy center spins near 1000 Kelvin
15:50-16:20	Mahdi Sameti (Imperial College London)	A superconducting quantum simulator for topological order and the toric code
16:20-16:50	Shunyao Zhang (Univ. Sci.& Technol. China)	Anomalous relaxation and multiply time scales in the quantum XY model with boundary dissipation
16:50-17:20	Chengran Yang (Nanyang Technological Univ.)	Matrix product states for quantum stochastic modelling

Session 4 (F7, Room 7-S4) Twisted bilayer and multi-layer graphene systems		
13:30-16:50, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Xi Dai (Hong Kong Univ. of Sci. and Technol.)		
13:30-14:00	Mikito Koshino (Osaka Univ.)	Electronics properties in twisted 2D materials
14:00-14:30	Jianpeng Liu (Hong Kong Univ. of Sci. and Technol.)	Topological aspects of twisted bilayer and multilayer graphene systems
14:30-15:00	Fan Yang (Beijing Inst. of Technology)	Chiral spin density wave and d + id superconductivity
15:00-15:20	**Break**	
Chair: Mikito Koshino (Osaka Univ.)		
15:20-15:50	Guorui Chen (UC Berkeley)	Tunable correlated and topological phenomena in ABC trilayer graphene on boron nitride moiré superlattice
15:50-16:20	Wei Chen (Nanjing Univ.)	Topological phase transitions of the Kitaev model in a magnetic field
16:20-16:50	Jinhua Gao (Huazhong Univ. of Sci. & Technol.)	Topological flat bands in twisted trilayer graphene

8:30-17:20, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Bitan Roy (Max Planck Inst. for the Physics of Complex Systems)		
8:30-9:00	Lin He (Beijing Normal Univ.)	Our recent experimental results on twisted bilayer graphene and ABC trilayer graphene
9:00-9:30	Je-Geun Park (Seoul National Univ.)	Why magnetic Van der Waals materials?
9:30-10:00	Zhiqiang Li (Sichuan Univ.)	Infrared nanoimaging of lattice reconstruction and domain wall states in twisted bilayer graphene
10:00-10:20	**Break**	
Chair: Lin He (Beijing Normal Univ.)		
10:20-10:50	Zhenhua Qiao (Univ. of Sci. and Technol. of China)	Electronic transport properties in twisted bilayer graphene with topological networks
10:50-11:20	Bitan Roy (Max Planck Inst. for the Physics of Complex Systems)	Superconductivity in correlated Dirac metal: Possible application to twisted bilayer graphene
11:20-11:50	Jong Yeon Lee (Harvard Univ.)	Flat band physics in twisted (double) bilayer graphene
11:50-13:30	**Lunch & Poster**	

Chair: Zhenhua Qiao (Univ. of Sci. and Technol. of China)		
13:30-14:00	Rong Yang (Inst. of Physics, CAS)	Observation of superconductivity with T_c onset at 12 K in electrically tunable twisted double bilayer graphene
14:00-14:30	Yiwen Liu (Beijing Normal Univ.)	Magnetism near half-filling of a Van Hove singularity in twisted graphene bilayer
14:30-15:00	Junyi Zhu (Chinese Univ. of Hong Kong)	Stability investigation and interlayer scattering mechanism of 30 degree twisted bilayer graphene
15:00-15:20	**Break**	
Chair: Junyi Zhu (Chinese Univ. of Hong Kong)		
15:20-15:50	Pilkyung Moon (New York Univ. Shanghai)	Quasicrystalline electronic states in 30° rotated twisted bilayer graphene
15:50-16:20	Zhen Zhan (Wuhan Univ.)	Intrinsic pseudo-magnetic field in low-angle twisted bilayer graphene
16:20-16:50	Minggang Xia (Xi'an Jiaotong Univ.)	Phonon and specific heat in strained grapheme, phonon in graphene nanoribbon with topological defects, and thermal conductivity of Si_xGe_{1-x} nanowire
16:50-17:20	Tianxing Ma (Beijing Normal. Univ.)	Magnetic and superconducting correlation in monolayer and twisted bilayer graphene

Session 5 (F7, Room 7-S5) Low-dimensional and artificial microstructure physics, topological quantum systems		
13:30-18:05, Friday, June 28		
Time	**Speaker**	**Title**
Majorana Physics-1 **Chair: Dong Qian (Shanghai Jiao Tong Univ.)**		
13:30-13:55	Lingyuan Kong (Inst. of Physics, CAS)	Topological superconductivity and Majorana bound state in Fe-based superconductor
13:55-14:20	Jianhao Chen (Peking Univ.)	Transport and optical studies of transition metal tellurides
14:20-14:45	Yeliang Wang (Beijing Inst. of Technol.)	Epitaxial growth and properties of 2D topological antimonene & heterostructures
14:45-15:10	Jian Wang (Peking Univ.)	Quantum metal state and quantum phase transitions in type-II Ising superconducting films
15:10-15:35	Chingkai Chiu (Kavli Inst. for Theoretical Sciences, UCAS)	Scalable Majorana vortex modes in iron-based superconductors
15:35-15:55	**Break**	

2D materials-1 Chair: Yuanbo Zhang (Fudan Univ.)		
15:55-16:20	Kaihui Liu (Peking Univ.)	Interfacial engineering in the growth and property of 2D single crystals
16:20-16:45	Feng Miao (Nanjing Univ.)	Electronic transport and device applications of 2D materials
16:45-17:10	Jing Wang (Fudan Univ.)	Intrinsic magnetic topological states in $MnBi_2Te_4$ family
17:10-17:35	Yugui Yao (Beijing Inst. of Technol.)	Recent progress in the study of topological materials Bi_4X_4 (X = I, Br)
17:35-17:50	Qingjun Tong (Hunan Univ.)	Engineering novel physics in moiré superlattices of van der Waals heterostructure
17:50-18:05	Yi Zhang (Nanjing Univ.)	Epitaxial growth and structure phase transition of metastable monolayer 1T'-WSe_2 thin film
8:30-17:55, Saturday, June 29		
Time	**Speaker**	**Title**
Topological Materials-1 Chair: Shiwei Wu (Fudan Univ.)		
8:30-8:55	Xiangang Wan (Nanjing Univ.)	Comprehensive search for topological materials using symmetry indicators
8:55-9:20	Chen Fang (Inst. of Physics, CAS)	Real-space recipes of topological crystalline states
9:20-9:45	Qingfeng Sun (Peking Univ.)	Controlling and braiding operation of chiral Majorana fermions

9:45-10:00	Huiqian Luo (Inst. of Physics, CAS)	Spin excitations in the ferromagnetic Weyl semimetal $Co_3Sn_2S_2$
10:00-10:20	**Break**	
2D materials-2 Chair: Xiangang Wan (Nanjing Univ.)		
10:20-10:45	Hugen Yan (Fudan Univ.)	Tuning of the interlayer coupling in few-layer black phosphorus
10:45-11:10	Shiwei Wu (Fudan Univ.)	Tunable nonlinear optical response from 2D materials
11:10-11:35	Yuefeng Nie (Nanjing Univ.)	Freestanding 2D oxide perovskites—A new playground for strongly correlated 2D phases
11:35-11:50	Liang He (Nanjing Univ.)	Electrical detection of the spin-momentum locking in Dirac semimetal $ZrTe_5$ nanowires
Lunch & Poster		
Topological materials-2 Chair: Wei Ji (Renmin Univ. of China)		
13:30-13:55	Haizhou Lu (Southern Univ. of Sci. and Technol.)	Nonlinear Hall effect
13:55-14:20	Ke He (Tsinghua Univ.)	Realizing an intrinsic magnetic topological insulator
14:20-14:45	Zhengfei Wang (Univ. of Sci. and Technol. of China)	Intrinsic quantum anomalous Hall effect with in-plane magnetization

14:45-15:10	Xi Dai (Hong Kong Univ. of Sci. and Technol.)	Chiral magnetic effect and collective modes in topological semimetals
15:10-15:25	Dongmin Chen (Peking Univ.)	New Trend of APL
15:25-15:40	Feng Liu (Kwansei Gakuin Univ.)	Topological dipoles and quadrupoles
15:40-15:55	Chuizhen Chen (Soochow Univ.)	Effects of random domains on the zero Hall plateau in quantum anomalous Hall effect
15:55-16:15	**Break**	
2D materials-3 Chair: Haizhou Lu (Southern Univ. of Sci. and Technol.)		
16:15-16:40	Wei Ji (Renmin Univ. of China)	Interlayer magnetic coupling mechanism in CrX_n (X=I, S, Se; n=2, 3) bilayers
16:40-17:05	Lin He (Beijing Normal Univ.)	Realizing valley polarization and valley inversion in graphene by using a valley magnet
17:05-17:30	Xiang Li (Beijing Inst. of Technol.)	Pressure-induced phase transitions and superconductivity in a black phosphorus single crystal
17:30-17:55	Xiaomu Wang (Nanjing Univ.)	Observation of ballistic avalanche phenomena in nanoscale vertical InSe/BP heterostructures

8:30-17:20, Sunday, June 30		
Time	**Speaker**	**Title**
Majorana Physics-2 **Chair: Wentao Zhang (Shanghai Jiao Tong Univ.)**		
8:30-8:55	Dong Liu (Tsinghua Univ.)	Transport schemes to reveal Majorana non-local coherent signatures and readout qubit state
8:55-9:20	Wei Li (Tsinghua Univ.)	Probable Majorana bound states in WS_2
9:20-9:45	Tong Zhang (Fudan Univ.)	Evidence of Majorana zero mode in the vortex of (Li, Fe)OHFeSe and conventional CdGM states in 1ML FeSe/$SrTiO_3$
9:45-10:00	Hua Jiang (Soochow Univ.)	Majorana zero modes by engineering topological kink state in two dimensional electron gas
10:00-10:15	Xiaoyu Zhu (Xi'an Jiaotong Univ.)	Second-order topological superconductors with mixed pairing
10:15-10:35	**Break**	
2D materials-4 **Chair: Hua Jiang (Soochow Univ.)**		
10:35-11:00	Yanqing Wu (Peking Univ.)	High performance electronics based on two dimensional materials and heterostructures
11:00-11:25	Tian Qian (Inst. of Physics, CAS)	Observation of new types of chiral topological nodes in CoSi

11:25-11:40	Xiaoqin Yu (Hunan Univ.)	Topological nonlinear anomalous Nernst effect in strained transition metal dichalcogenides
Lunch & Poster		
Low dimensional materials Chair: Wenjie Liang (Inst. of Physics, CAS)		
13:30-13:55	Mingliang Tian (High Magnetic Field Laboratory of CAS)	Thickness-induced magnetic reversal and suppression of the second transition in $Sr_4Ru_3O_{10}$
13:55-14:20	Xiaofang Zhai (Univ. of Sci. and Technol. of China)	Ferromagnetism and growth of high-quality $LaCoO_3$ films
14:20-14:45	Wentao Zhang (Shanghai Jiao Tong Univ.)	Photo-induced hidden semimetallic state in Ta_2NiSe_5 revealed by time- and angle-resolved photoemission spectroscopy
14:45-15:00	Zhi Wang (Sun Yat-sen Univ.)	Topological Josephson junction and the quantum RSJ model
15:00-15:15	Liangcai Xu (Huazhong Univ. Sci. and Technol.)	Finite-temperature violation of the anomalous transverse Wiedemann-Franz law in absence of inelastic scattering
15:15-15:35	**Break**	

2D materials-5 Chair: Xiaofang Zhai (Univ. of Sci. and Technol. of China)		
15:35-16:00	Wenjie Liang (Inst. of Physics, CAS)	Two stage Kondo studies using a single molecule
16:00-16:25	Jianhui Zhou (High Magnetic Field Laboratory of CAS)	Novel plasmons in topological materials
16:25-16:50	Zheng Han (Inst. of Metal Research, CAS)	Novel tunable functionalities in van der Waals vertical heterostructures
16:50-17:05	Longjing Yin (Hunan Univ.)	High-magnetic-field tunneling spectra of ABC-stacked trilayer graphene
17:05-17:20	Bin Cheng (Nanjing Univ.)	Transport and opto-eletronical properties in in-plane and out-of-plane superlattice comprised of two dimensional materials

Session 6 (F7, Room 7-S6) Statistical physics and soft condensed matter physics		
13:30-17:10, Friday, June 28		
Time	**Speaker**	**Title**
Statistical Physics Chair: Liang Huang (Lanzhou Univ.)		
13:30-13:55	Tiezheng Qian (Hong Kong Univ. of Sci. and Technol.)	Onsager's variational principle and its applications to interfacial dynamics
13:55-14:20	Wenan Guo (Beijing Normal Univ.)	Random-singlet phase in disordered two-dimensional quantum magnets
14:20-14:45	Jinhua Zhao (South China Normal Univ.)	Greedy leaf removal procedure and its implication in combinatorial optimization problems
14:45-15:05	Hao Fu (Nanjing Normal Univ.)	The effects of KSEA interaction on the ground-state properties of some quasi XY models in a transverse field
15:05-15:30	**Break**	
Diffusion and Colloids Chair: Tiezheng Qian (Hong Kong Univ. of Sci. and Technol.)		
15:30-15:55	Hong Zhao (Xiamen Univ.)	A formula of Brownian motion: Connecting kinetic and hydrodynamic regions
15:55-16:20	Yunyun Li (Tongji Univ.)	Non-Gaussian normal diffusion in a fluctuating corrugated channel
16:20-16:45	Mingcheng Yang (Inst. of Physics, CAS)	Universal scaling law for colloidal diffusion in complex media
16:45-17:10	Liang Luo (Huazhong Agricultural Univ.)	How does anomalous diffusion arise in static disordered media? Insights from a quenched trap model

8:30-17:15, Saturday, June 29		
Time	**Speaker**	**Title**
Statistical Physics Chair: Wenan Guo (Beijing Normal Univ.)		
8:30-8:55	Liang Huang (Lanzhou Univ.)	Relativistic quantum chaos—Recent progress
8:55-9:20	Pan Zhang (Inst. of Theoretical Physics, CAS)	Solving statistical mechanics using variational autoregressive networks
9:20-9:45	Zhengchuan Wang (Univ. of Chinese Academy of Sciences)	Spinor Boltzmann equation and its application on spintronics
9:45-10:05	Xin Zhang (Hefei Institutes of Physical Science, CAS)	Low frequency rotating magnetic fields affect F-actin and ROS to inhibit breast cancer metastasis
10:05-10:30	**Break**	
Active Matter Chair: Yujie Wang (Shanghai Jiao Tong Univ.)		
10:30-10:55	Yilin Wu (Chinese Univ. of Hong Kong)	Self-organization of swimmers drives long-range fluid transport in bacterial colonies
10:55-11:20	Hepeng Zhang (Shanghai Jiao Tong Univ.)	Data-driven quantitative modeling of bacterial active nematics
11:20-11:45	Xiaqing Shi (Soochow Univ.)	Dynamical subclasses of dry active nematics
11:45-12:05	Shuo Guo (ShanghaiTech Univ.)	Symmetric shear banding and swarming vortices in bacterial superfluids
12:05-13:30	**Lunch & Poster**	

Granular Matter Chair: Hepeng Zhang (Shanghai Jiao Tong Univ.)		
13:30-13:55	Yujie Wang (Shanghai Jiao Tong Univ.)	Crystal nucleation process in cyclically sheared granular materials
13:55-14:20	Zexin Zhang (Soochow Univ.)	Two-step glass transition in suspensions of colloidal rods
14:20-14:45	Jie Zhang (Shanghai Jiao Tong Univ.)	Study of an athermal quasi static plastic deformation in a 2D granular material
14:45-15:05	Hui Cai (Yancheng Inst. of Technology)	Flowing resonances in vibrated granular systems
15:05-15:25	Meiying Hou (Institute of Physics, CAS)	Drag force measurement of a rod in glass beads under microgravity
15:25-15:40	**Break**	
Soft Matter Chair: Xiaqing Shi (Soochow Univ.)		
15:40-16:05	Yingying Huang (Shanghai Advanced Research Inst., CAS)	A new phase diagram of water: The rise of the ultralow-density clathrate ices and high-density ferroelectric ice
16:05-16:30	Xin Zhou (Univ. of Chinese Academy of Sciences)	Ice nucleation on nanosized substrates
16:30-16:55	Jue Shi (Hong Kong Baptist Univ.)	Single cell dynamics unravel the core regulatory module of complex signaling network
16:55-17:15	Zhaoru Sun (ShanghaiTech Univ.)	Electron-hole theory of the effect of quantum nuclei on the x-ray absorption spectra of liquid water

8:30-17:05, Sunday, June 30		
Time	**Speaker**	**Title**
Soft Matter and Fluid Dynamic Chair: Yunyun Li (Tongji Univ.)		
8:30-8:55	Lei Xu (Chinese Univ. of Hong Kong)	Diffusion-dominated pinch-off of ultralow surface tension fluids
8:55-9:20	Xinliang Xu (Beijing Computational Science Research Center)	Active suspensions of bacteria and passive objects: A model for the near field hydrodynamic interactions
9:20-9:45	Leiming Chen (China Univ. of Mining and Technol.)	Hydrodynamic theory of incompressible polar active fluid
9:45-10:05	Jinbo Wu (Shanghai Univ.)	Guided evaporative droplet self-assembly based on discontinuous dewetting
10:05-10:30	**Break**	
Bio Physics Chair: Xinliang Xu (Beijing Computational Science Research Center)		
10:30-10:55	Junhua Yuan (Univ. of Sci. and Technol. of China)	Non-equilibrium dynamics in bacterial motility
10:55-11:20	Yi Cao (Nanjing Univ.)	Molecular engineering of metal-coordination interactions for strong, tough and fast-recovery hydrogels

11:20-11:45	Fangfu Ye (Inst. of Physics, CAS)	TBA
11:45-12:05	Long Qian (Peking Univ.)	Global background selection —The shaping of genome-wide transcription factor binding landscape by weak selective forces
12:05-13:30	**Lunch & Poster**	
Soft Materials Chair: Leiming Chen (China Univ. of Mining and Technol.)		
13:30-13:55	Ning Xu (Univ. of Sci. and Technol. of China)	A new approach to realize auxetic materials
13:55-14:20	Jie Ren (Tongji Univ.)	Complex structure and function design based on evolutionary optimization and artificial neural networks
14:20-14:45	Xiangying Shen (Chinese Univ. of Hong Kong/Comput. Sci. Res. Center of Beijing)	Tunable mechanical metamaterial based on packing derived networks' liquid-solid transition governed by graph topology
14:45-15:05	Duanduan Wan (Wuhan Univ.)	Thermal stiffening of clamped elastic ribbons
15:05-15:30	**Break**	

Statistical Physics Chair: Ning Xu (Univ. of Sci. and Technol. of China)		
15:30-15:55	Haiping Huang (Sun Yat-sen Univ.)	Minimal data size to trigger concept formation in neural networks: from mean-field theory to algorithm
15:55-16:20	Tianhui Zhang (Soochow Univ.)	Dynamics of microscopic stepwise nucleation
16:20-16:40	Baoming Xu (Dezhou Univ.)	Work statistics with quantum coherence
16:40-17:05	Haijun Zhou (Inst. of Theoretical Physics, CAS)	Entropy inflection and discontinuous phase transition to disordered ground states

Session 7 (F6, Room 6-S7) Magnetism and multiferroic physics		
13:30-17:30, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Guoqiang Yu (Inst. of Physics, CAS)		
13:30-14:00	Guanghua Guo (Central South Univ.)	Left-handed polarized spin waves in ferromagnets induced by spin-transfer torque
14:00-14:30	Weichao Yu (Fudan Univ.)	A spin-wave logic gate for all Boolean operations and in-memory computing
14:30-15:00	Minghui Qin (South China Normal Univ.)	Theoretical studies on antiferromagnetic domain wall dynamics
15:00-15:30	**Break**	
Chair: Guanghua Guo (Central South Univ.)		
15:30-16:00	Shishen Yan (Shandong Univ.)	Multilevel nonvolatile memory device
16:00-16:30	Wenjie Kong (Inst. of Physics, CAS)	Spin orbit torque switching in a T-type magnetic configuration with current orthogonal to easy axes
16:30-17:00	Weijin Hu (Inst. of Metal Research, CAS)	Emerging non-volatile memories based on ferroelectric/semiconducting interface
17:00-17:30	Xiao Wang (Inst. of Physics, CAS)	Coherent resonant tunneling through double metallic quantum well states

8:30-17:30, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Haifeng Ding (Nanjing Univ.)		
8:30-9:00	Kaiyou Wang (Inst. of Semiconductors, CAS)	Electrically switching ferromagnets: From science to technology
9:00-9:30	Zhiyong Quan (Shanxi Normal Univ.)	Spin-orbit torque and topological Hall effect in Pt/*X*/Ta heterostructures
9:30-10:00	Houfang Liu (Tsinghua Univ.)	Magnetic configurations and state diagram of nano-ring magnetic tunnel junctions
10:00-10:30	**Break**	
Chair: Kaiyou Wang (Inst. of Semiconductors, CAS)		
10:30-11:00	Daoxin Yao (Sun Yat-sen Univ.)	Magnetic excitations of Heisenberg models with checkerboard structure
11:00-11:30	Huaiyang Yuan (Southern Univ. of Sci. and Technol.)	Enhancement of magnon-magnon entanglement inside a cavity
11:30-12:00	Zhixiong Li (Univ. of Electronic Sci. and Technol. of China)	Higher-order topological states in breathing kagome lattice of magnetic solitons
12:00-13:30	**Lunch & Poster**	

Chair: Daoxin Yao (Sun Yat-sen Univ.)		
13:30-14:00	Wenbo Mi (Tianjin Univ.)	Two dimensional intrinsic magnetic materials based multiferroic heterostructure: A first-principles study
14:00-14:30	Jun Miao (Univ. of Sci. & Technol. Beijing)	Polarizations dependence on tunneling behaviors and spin-orbit torque in a multiferroic spintronic heterostructures
14:30-15:00	Ka Shen (Beijing Normal Univ.)	Interfacial spin Hall effect and spin swapping in Fe-Au bilayers from first principles
15:00-15:30	**Break**	
Chair: Shishen Yan (Shandong Univ.)		
15:30-16:00	Desheng Xue (Lanzhou Univ.)	Twisted magnon beams carrying orbital angular momentum
16:00-16:30	Jingbo Qi (Univ. of Electronic Sci. and Technol. of China)	Chiral terahertz wave emission from the Weyl semimetals
16:30-17:00	Haibin Zhao (Fudan Univ.)	Control of magnetization precession excitation via tuning ultrafast laser polarization direction
17:00-17:30	Guoying Gao (Huazhong Univ. of Sci. and Technol.)	Spin transport properties based on spin gapless semiconductors and half-metals

8:30-12:10, Sunday, June 30		
Time	**Speaker**	**Title**
Chair: Wenbo Mi (Tianjin Univ.)		
8:30-9:00	Ying Zhang (Inst. of Physics, CAS)	The generation and stability of zero-field skyrmions studied via Lorentz TEM
9:00-9:30	Na Lei (Beihang Univ.)	Manipulation of magnetic skyrmions with high efficiency
9:30-10:00	Xianmin Zhang (Northeastern Univ.)	Interfacial magnetic interactions for L10 magnetic binary alloys with Fe(Co, Ni) atomic underlayers
10:00-10:30	**Break**	
Chair: Jiang Xiao (Fudan Univ.)		
10:30-11:00	Fazhan Shi (Univ. Sci. and Technol. of China)	Nanoscale magnetic imaging with a single spin sensor and its applications
11:00-11:30	Hongxin Yang (Ningbo Inst. of Materials Technology & Engineering, CAS)	Dzyaloshinskii-Moriya interaction from heterostructure to a single layer of 2D ferromagnet
11:30-12:00	Liang He (Nanjing Univ.)	Magnetic two-dimensional materials and devices
12:00-12:10	Closing Remarks	

Session 8 (F6, Room 6-S8) Computational condensed matter physics and its applications		
13:30-17:15, Friday, June 28		
Time	**Speaker**	**Title**
Chair: Yugui Yao (Beijing Inst. of Technology)		
13:30-13:55	Xingao Gong (Fudan Univ.) **CPL Invited Talk**	Hybrid halide perovskite semiconductor for solar cell: a perspective view from a computational physicist
13:55-14:20	Chungang Duan (East China Normal Univ.)	Chirality dependent dielectricity and spin-texture in Moiré antiferromagnet
14:20-14:45	Maozhi Li (Renmin Univ. of China)	Machine learning approach for prediction and understanding of glass-forming ability
14:45-15:10	Shiyou Chen (East China Normal Univ.)	Defect-induced non-radiative recombination in multinary and low-symmetry photovoltaic semiconductors
15:10-15:25	Yuliang Mao (Xiangtan Univ.)	A two-dimensional GeSe/SnSe heterostructure for high performance thin-film solar cells
15:25-15:45	**Break**	
Chair: Xingao Gong (Fudan Univ.)		
15:45-16:10	Yanming Ma (Jilin Univ.)	Sodalite-like clathrate hydrides at high pressure and its fate to room-temperature superconductivity

16:10-16:35	Xinzheng Li (Peking Univ.)	Ferroelectric problem beyond the conventional scaling Law
16:35-17:00	Yinwei Li (Jiangsu Normal Univ.)	Computational design of high-energy density materials at high pressure
17:00-17:15	Cong Liu (Nanjing Univ.)	Multipole superionic states in helium-water compounds
8:30-17:50, Saturday, June 29		
Time	**Speaker**	**Title**
Chair: Haiqing Lin (Beijing Computational Science Research Center)		
8:30-8:55	Jinlong Yang (Univ. of Sci. and Technol. of China)	Molecular design of spintronic material
8:55-9:20	Dajun Shu (Nanjing Univ.)	Intrinsic interaction between in-plane ferroelectric polarization and surface adsorption
9:20-9:45	Ruifeng Lu (Nanjing Univ. of Sci. & Technol.)	The role of transition dipole moment in photocatalysis and strong laser field driven dynamics
9:45-10:00	Robert Wieser (Nanjing Univ. of Information Sci. & Technol.)	Computer simulations to describe the manipulations of magnetic skyrmions with an STM
10:00-10:20	**Break**	

Chair: Jinlong Yang (Univ. of Sci. and Technol. of China)		
10:20-10:45	Haiqing Lin (Beijing Computational Science Research Center)	Detecting quantum phase transitions and deducing order parameter for a quantum state
10:45-11:10	Hong Jiang (Peking Univ.)	Towards first-principles approaches to strongly correlated d- and f-electron materials
11:10-11:35	Li Huang (Inst. of Materials, China Academy of Engineering Physics)	Combining density functional theory with dynamical mean-field theory: Applications to the correlated actinide
11:35-11:50	Dongzhe Li (Univ. of Konstanz, Germany)	Complete spin filtering in molecular junctions by quantum interference
11:50-13:30	**Lunch & Poster**	
Chair: Shengyuan Yang (Singapore Univ. of Technol. and Design)		
13:30-13:55	Hongming Weng (Inst. of Physics, CAS)	Topological crystalline insulators with C2 rotation anomaly
13:55-14:20	Gang Xu (Huazhong Univ. of Sci. & Technol.)	New type of topological superconductors in 1-dimensional magnetic groups
14:20-14:45	Wanxiang Feng (Beijing Inst. of Technol.)	Topological magneto-optical effects and their quantization in noncoplanar antiferromagnets
14:45-15:10	Yong Xu (Tsinghua Univ.)	Intrinsic magnetic topological insulators in van der Waals layered $MnBi_2Te_4$-family materials

15:10-15:25	Yongping Du (Nanjing Univ. of Sci. & Technol.)	Robust stacking-independent ferroelectric-gated field effect transistors with two-dimensional van der Waals heterostructures
15:25-15:45	**Break**	
Chair: Hongming Weng (Inst. of Physics, CAS)		
15:45-16:10	Shengyuan Yang (Singapore Univ. of Technol. and Design)	Hourglass Weyl loops in two dimensions
16:10-16:35	Jianwei Sun (Tulane Univ.)	The strongly-constrained and appropriately-normed (SCAN) density functional
16:35-17:00	Zhijun Wang (Inst. of Physics, CAS)	Topological quantum chemistry and its applications in materials search
17:00-17:25	Zhongqin Yang (Fudan Univ.)	Valley-polarized electronic states in two-dimensional materials
17:25-17:50	Xianlei Sheng (Beihang Univ.)	Two-dimensional second-order topological insulator in graphdiyne
8:30-17:00, Sunday, June 30		
Time	**Speaker**	**Title**
Chair: Jinlan Wang (Southeast Univ.)		
8:30-8:55	Yujun Zhao (South China Univ. of Technology)	Novel structure representation and comparison for cluster, quasicrystal, and crystal

8:55-9:20	Youqi Ke (ShanghaiTech Univ.)	Exact muffin-tin orbital based first-principles method for electronic structure and electron transport simulation
9:20-9:45	Wu Li (Shenzhen Univ.)	Anomalous phonon transport in metals
9:45-10:00	Botao Fu (Sichuan Normal Univ.)	Hourglass-like nodal net semimetal in Ag_2BiO_3
10:00-10:20	**Break**	
Chair: Xi Dai (Hong Kong Univ. of Sci. and Technol.)		
10:20-10:45	Jinlan Wang (Southeast Univ.)	Accelerated discovery of stable lead-free photovoltaic perovskites via machine learning
10:45-11:10	Shengjun Yuan (Wuhan Univ.)	A new approach for modeling of complex quantum systems
11:10-11:35	Wenguang Zhu (Univ. of Sci. and Technol. of China)	Inter-correlated in-plane and out-of-plane 2D Ferroelectricity
11:35-11:50	Hongyan Lu (Qufu Normal University)	Novel electronic properties in hydrogenated graphene systems
11:50-13:30	**Lunch & Poster**	
Chair: Changgan Zeng (Univ. of Sci. and Technol. of China)		
13:30-13:55	Rui Yu (Wuhan Univ.)	4D topological states in electric circuits

13:55-14:20	Qihang Liu (Southern Univ. of Sci. and Technol.)	Routes to quantum anomalous Hall effect from superlattice-like magnetic topological insulators
14:20-14:45	Yuanchang Li (Beijing Inst. of Technol.)	Excitonic insulators in direct-gap solids
14:45-15:10	Douxing Pan (Beijing Inst. of Nanoenergy and Nanosystems, CAS)	A unique ~70.5 degree twisted bilayer α-phosphorene stacking phase: 2O-tαP
15:10-15:30	**Break**	
Chair: Ruifeng Lu (Nanjing Univ. of Sci. & Technol.)		
15:30-15:55	Changgan Zeng (Univ. of Sci. and Technol. of China)	Antiferromagnetic Dirac semimetal & Weyl semiconductor
15:55-16:20	Xiaofei Liu (Nanjing Univ. of Aeronautics and Astronautics)	Van der Waals interaction in two-dimensional materials
16:20-16:45	Xue Jiang (Dalian Univ. of Technology)	High throughput ab inito screening for magnetic two dimensional materials
16:45-17:00	Zhi Li (Nanjing Univ. of Sci. & Technol.)	Nonlinear optical Hall effect in topological semimetal

VIII. Poster

No.	Name	Title
S1-1	Shunjiao Li	(π,π) spin fluctuation and pseudogap behavior in $(CTA)_{0.3}FeSe$ superconductor
S1-2	Xin Shang	Andreev spectroscopy of the triplet superconductivity state in Bi/Ni bilayer system
S1-3	Xiao Ren	C4-Symmetry Breaking in Tetragonal Fe and Ti Pnictides revealed by Raman Scattering
S1-4	Lei Qiao	Coexistence of superconductivity and antiferromagntism in Er_2O_2Bi compound with anti-$ThCr_2Si_2$ type structure
S1-5	Siyuan Wan	Directly visualizing the sign change of d-wave superconducting Gap in $Bi_2Sr_2CaCu_2O_8$+δ by phase-referenced quasiparticle interference
S1-6	Wenxin Ding	Dynamical *t*/*U* expansion of the doped Hubbard model
S1-7	Yifei Fang	Electronic structure in the antiferromagnetic state of possible topological Ni-doped $TlCo_2Se_2$
S1-8	Baolei Kang	Enhanced Cooper pairing in layered FeSe superconductor
S1-9	Xingyu Jiang	Flat electron band dominated superconductivity of FeSe
S1-10	Fei Jiao	Investigate the Nb doping position and its relationship with bulk topological superconductivity in $Nb_xBi_2Se_3$ by X-ray photoelectron spectra
S1-11	Yi Cui	Ionic-liquid-gating induced protonation and superconductivity in FeSe, ZrNCl, 1T -TaS_2 and Bi_2Se_3
S1-12	Xiaohong Pan	Lattice symmetry assisted second order topological superconductors and Majorana patterns

S1-13	Xinzhi Liu	Microscopic evidence of a quantum magnetization process in S = 1/2 triangular lattice Heisenberg-like antiferromagnet $Ba_3CoSb_2O_9$
S1-14	Chen Chen	Observation of clean conventional Caroli-de Gennes-Matricon states in the vortex core of single-layer $FeSe/SrTiO_3$
S1-15	Wenxing Nie	Orbital angular momentum of chiral superfluids revisited
S1-16	Jin Si	Pressure effect of the new compound ScZrCo and $Sc_{0.5}Zr_{0.5}Co$
S1-17	Yupeng Li	Quantum transport in a compensated semimetal W_2As_3 with nontrivial Z_2 indices
S1-18	Dianwu Song	Revealing the hidden order in $BaTi_2As_2O$ via nuclear magnetic resonance
S1-19	Pengchao Lu	Robust double Weyl semimetal phase in a nonmagnetic hexagonal lattice system
S1-20	Xiyu Zhu	Structures, and Physical Properties of $CsV_2Se_{2-x}O$ and V_2Se_2O
S1-21	Zhenhua Chi	Superconductivity in pristine $2H_a$-MoS_2 at ultrahigh pressure
S1-22	Wen Duan	Superconductivity with two fold symmetry in $Bi_2Te_3/FeTe_{0.5}5Se_{0.45}$ heterostructures
S1-23	Qing Li	Synthesis, structure, and physical properties of bilayer molybdate $Sr_3Mo_2O_7$-d with flat-band
S1-24	Huazhou Li	Twofold superconductivity observed on $Bi_2Te_3/Bi_2Sr_2CaCu_2O_8$+δ heterostructures resolved by quasiparticle interference
S1-25	Haichao Xu	Unveiling the superconducting mechanism of $Ba_{0.51}K_{0.49}BiO_3$
S1-26	Wenchao Jiang	Von hove singularity arising from Mexican-hat-shaped inverted bands in the topological insulator Sn-$Bi_{1.1}Se_{0.9}Te_2S$

S1-27	Haiwen Liu	Large in-plane critical field in two-dimensional Ising superconducting systems
S1-28	Xiaou yu Chen	Discrete energy levels of Caroli-de Gennes-Matricon states and zero energy conductance peaks in the vortex core states of $FeTe_{0.55}Se_{0.45}$
S1-29	Dan Zhao	A universal electronic crossover and predominant ferromagnetic spin fluctuation in YFe_2Ge_2
S2-1	Jian Li	A spin-orbital-intertwined nematic state in FeSe
S2-2	Yuke Li	Anomalous Nernst effect in the magnetic Weyl semimetal
S2-3	Chen Peng	Correlation effects in quadrupole insulators: A quantum Monte Carlo study
S2-4	Qiuyun Chen	Direct observation of the hybridization gap in both the hidden order and antiferromagnetic phases of $URu_{2-x}Fe_xSi_2$ by ARPES and STM
S2-5	Wen Wen	Electrical oscillation and Raman spectroscopy of multi-state charge-density-wave phase transition in 1T-TaS_2
S2-6	Byungmin Sohn	Emergence of robust 2D skyrmions in $SrRuO_3$ ultrathin film
S2-7	Wu Xie	Extremely large magnetoresistance and compensated Fermi surfaces in the antiferromagnetic semimetal YbAs
S2-8	Zhengzhi Sun	Generative tensor network classification model for supervised machine learning
S2-9	Tao Ying	Higgs mode of planar coupled spin ladders and its observation in $C_9H_{18}N_2CuBr_4$

S2-10	Peng Li	Large Fermi surface expansion through anisotropic c-f mixing in semi-metallic Kondo lattice system CeBi
S2-11	Chu Guo	Learning unknown quantum states with variational quantum circuits
S2-12	Jiucai Wang	One proximate Kitaev spin liquid in the *K-J-Y* model on the honeycomb lattice
S2-13	Lixuan Zheng	Pressure-induced topological phase transition and emergent electronic correlation in black phosphorus
S2-14	Shiju Ran	Simulating many-body physics of infinite-size systems by few-body models: Efficient tensor network approach
S2-15	Yajun Yan	Spectroscopic evidence of two-impurity Kondo effect in potassium doped single-layer para-sexiphenyl films
S2-16	Jian Bian	Study of Gd doping prochlore iridate $Bi_{2-x}Gd_xIr_2O_7$ by means of electron paramagnetic resonance
S2-17	Linpeng Nie	The connection between quantum spin liquid and high-T_c superconductor in 1T-TaS_2
S2-18	Xi Chen	Thermodynamics of spin-1/2 Kagomé Heisenberg antiferromagnet: Algebraic paramagnetic liquid and finite-temperature phase diagram
S2-19	Huaiming Guo	Unconventional pairing symmetry of interacting Dirac fermions on a π-flux lattice
S2-20	Yupeng Liu	Unraveling the hybridization dynamics in $CeCoIn_5$ using ultrafast optical spectroscopy
S2-21	Hui Liu	Enhanced ferromagnetism and Mott variable-range hopping behavior in Cu doped pyrochlore iridate $Y_2Ir_2O_7$
S2-22	Yuan Feng	Effects of Dy doping on the electrical transport and magnetic properties of the pyrochlore iridate $Bi_2Ir_2O_7$

S3-1	Heliang Huang	General-purpose quantum circuit simulator with Projected Entangled-Pair States and the quantum supremacy frontier
S3-2	Yanan Lu	Migration of single atom in diamond tracked by a nearby nitrogen-vacancy center
S3-3	Chenxi Zhu	Parametric resonance of a Bose - Einstein condensate in a ring trap with periodically driven interactions
S3-4	Yanxing Shang	Probing pressure-induced magnetic phase transition of NdFeB with diamond NV center
S3-5	Fuxiang Li	Quantum annealing and thermalization: Insights from integrability
S3-6	Shaoming Fei	Quantum correlation, coherence & uncertainty
S3-7	Yuhai Liu	Superconductivity from the condensation of topological defects in a quantum spin-Hall insulator
S3-8	Xuemin Yang	Visualizing topology of real-energy gapless phase arising from exceptional point
S3-9	Peihao Huang	Valley physics and spin manipulation in silicon quantum dots
S5-1	Zhongmei Huang	2D Wigner crystals on silicon surface induced by nanosecond pulsed laser
S5-2	Siyuan Zhu	A high-throughput all-in-1 UHV system at core facility of Westlake University
S5-3	Yuying Yang	Anisotropic magnetoelectric coupling and Cotton−Mouton effects in the organic magnetic charge-transfer complex Pyrene−F4TCNQ
S5-4	Yaomin Dai	Anomalous phonon behavior in the topological insulator Sn-$Bi_{1.1}Sb_{0.9}Te_2S$

S5-5	Dingyong Zhong	Atomically thin magnetic metal halides and chalcogenides grown by molecular beam epitaxy
S5-6	Shitan Wang	Breaking down and reconstruction of islands during the film growth of CuPc on HOPG
S5-7	Zhe Chen	Chiral metallic glass nanolattice with combined lower density and improved auxeticity
S5-8	Yu Gao	Coherent terahertz emission with tunable ellipticity and optical chirality from the Weyl semimetal TaAs
S5-9	Shijun Liang	Correlation between carrier pockets and unusual electrical transport in WTe_2
S5-10	Xiaoxia Li	Coverage-dependent carbon phases induced by the precipitation of carbon on Pt(111) at low temperature
S5-11	Lei Xu	Edge-channel transport and spin-polarized interface current in folded graphene ribbon
S5-12	Zihan Guo	Effects of AB-BA domain wall on the structures and electronic properties of twisted trilayer graphene
S5-13	Guowei Liu	Efficiently obtaining single P atoms on Si (111)-7x7 via dissociating P4
S5-14	Wenting Yang	Electronic phase separated modulated large magnetoresistance in manganites-based organic spin valves
S5-15	Kenan Zhang	Electronic structure and band structure modulation of two monochalcogenides-SnSe and CuTe
S5-16	Xinlei Zhao	Electronic structure calculations of new possible high-*T*c superconductors *A*$FeSe_2$ (*A*=K, Rb, Cs, or Tl)
S5-17	Lei Guo	Electronic transport evidence for topological nodal-line

S5-18	Lin Li	Evidence for Weyl fermions in the elemental semiconductor tellurium
S5-19	Wenming Xue	First principles study of semihydrogenated graphene and topological insulator heterojunction
S5-20	Xuanyi Li	First-principles simulation on multilayer MoS_2 bubbles cooperate with photoluminescence observation
S5-21	Li Dong	Formation of two-dimensional AgTe monolayer atomic crystal on Ag(111) substrate
S5-22	Donglin Lu	Free-barrier transport of charge carriers in in-plane 1T′-2H $MoTe_2$ homojunctions with Ohmic contact
S5-23	Dianxiang Ji	Freestanding crystalline oxide perovskites down to the monolayer limit
S5-24	Jinyu Zou	High order topological insulators in crisscross antiferromagnetic model
S5-25	Donghui Xu	Higher-order topological insulators in quasicrystals
S5-26	Lijun Lang	Interplay of non-Hermitian skin effects and Anderson localization in non-reciprocal quasiperiodic lattices
S5-27	Siwei Luo	Investigation of growth-induced strain in monolayer MoS_2 grown by chemical vapor deposition
S5-28	Boxiang Wang	Light transmission in two-dimensional dense cold atomic media with short-range positional correlations
S5-29	Hang Xie	Magnetic and topological phases of interacting electrons in graphene and silicone nanoribbons
S5-30	Xiaohui Song	Metal−organic frameworks as platforms for the incorporation of single-molecule magnets Mn3

S5-31	Xiaodong Fan	Moiré engineering of electronic phenomena in correlated oxides
S5-32	Kai Zhang	Multi Brillouin zone and redefinition of winding number
S5-33	Hai Zhu	Nonlinear optical properties and exciton-polariton in the semiconductor microcavity
S5-34	Jiho Jang	Optical conductivity of black phosphorus with a tunable electronic structure
S5-35	Zhe Li	Point group symmetry breaking topological superconductivity
S5-36	Zhiming Yu	Quadratic & cubic nodal line metal and torus surface states
S5-37	Hui Li	Quantitative analysis of weak antilocalization effect of topological surface states in topological insulator $BiSbTeSe_2$
S5-38	Wenjie Zhang	Quantized plateau in the thermoelectric Hall conductivity of three-dimensional Dirac electrons
S5-39	Xi Luo	Quantum chaos associated with emergent event horizon in transition layer between type-I and type-II Weyl semimetals
S5-40	Can Li	Resolving quinoid structure in poly-para-phenylene
S5-41	Qili Li	Role of the surface state in the Kondo effect of Co single adatoms on Ag(111)
S5-42	Yaning Ren	STM characterizations of a circular graphene resonator realized with p-p junctions
S5-43	Siyu Li	STM study of quantum Hall isospin ferromagnetic states of zero Landau level in graphene monolayer
S5-44	Yi Wu	Strong band kinks in magic-thickness Yb films arising from interfacial electron-phonon coupling

S5-45	Yangyang Lv	The physical mechanism of extremely large magnetoresistance in nonmagnetic single crystals
S5-46	Yunyouyou Xia	Topological Dirac fermions emerged in a non-centrosymmetric system
S5-47	Kunliang Zhang	Topological phase transition independent of system non-Hermiticity
S5-48	Qiang Jing	Topological phase transition of $Bi_{2-x}In_xTe_3$
S5-49	Yijun Yu	Tunable high-temperature superconductivity in monolayer $Bi_2Sr_2CaCu_2O_{8+\delta}$
S5-50	Hongmei Liu	Tuning topological states in a two dimensional Ni-hexaiminobenzene framework by gas adsorption
S5-51	Shuai Yang	Unconventional temperature dependence of anomalous Hall effect in $HgCr_2Se_4$
S5-52	Jingyue Wang	Vanishing quantum oscillations in Dirac semimetal $ZrTe_5$
S5-53	Yi Pan	WSe_2 homojunctions and quantum dots created by patterned hydrogenation of epitaxial graphene substrates
S5-54	Peng Li	Spin reorientation transition and strain induced enhancement of perpendicular magnetic anisotropy in the nickel-graphene heterostructure
S5-55	Jian Tang	Thermal stability study of MoS_2 and ultrashort channel MoS_2 Transistors with graphene contact
S5-56	Yuan Zhao	Investigation on interfacial electronic stuctures of C8-BTBT/ perovskite-based and MoOx/mixed perovskites-based photodetectors
S5-57	Ran Tao	STM study of SnTe(001) thin films with in-situ gating

S5-58	Shanshan Wang	Monolayer Mg2C : Negative Poisson's ratio and unconventional two-dimensional emergent fermions
S7-1	Gongzheng Chen	Dynamics of ferroelectric domain wall
S7-2	Huanhuan Yang	Atomic antiferromagnetic domain wall propagation beyond the relativistic limit
S7-3	Zhenwei Zhou	Strong spin wave pulses induced by spin-transfer torque
S7-4	Taekoo Oh	Magnetic field induced topological semimetals near the quantum critical point of pyrochlore iridates
S7-5	Tongli Wei	One dimensional Cherenkov processes in ferromagnetic insulator
S7-6	Ning An	Fabrication and spin transport of non-collinear antiferromagnetic Mn_3Pt films
S7-7	Kisoo Park	Magneto-elastic excitations in multiferroic hexagonal $YMnO_3$ using inelastic X-ray scattering
S7-8	Ashwini Kumar	Structural and magnetodielectric effect in Pb and Ti modified $BiFeO_3$
S7-9	Poorva Sharma	Observation of magnetic response at spin-reorientation transition: $TmFeO_3$
S7-10	Mengmeng Wei	Optically controlled magnetization and magnetoelectric effect in organic multiferroic heterojunction
S7-11	Jun Chen	Magnetic properties of multiferroic perovskite $BiCoO_3$
S7-12	Hong Chang	Impact of Ir^{4+} with single-ion anisotropy on magnetic properties of $Mn_{1-x}Ir_xCo_2O_4$

S7-13	Sheng Yu	Adjustable current-induced magnetization switching utilizing interlayer exchange coupling
S7-14	Zhongzhi Luan	Enhanced spin accumulation in metallic bilayers with opposite spin Hall angles
S7-15	Yi Cao	Tuning a binary ferromagnet into a multi-state synapse with spin-orbit torque induced plasticity
S7-16	Lifan Zhou	Anisotropic magnetoresistance modulated by interface decoration
S7-17	Fanlong Zeng	Giant current-orientation effect of the anisotropic magnetoresistance in Co_xFe_{1-x} single crystal films
S7-18	Huimin Zhang	Possible emergence of a skyrmion phase in ferroelectric $GaMo_4S_8$
S7-19	Tao Lin	Realization of ferro- and ferri-magnetic skyrmions in Pt/Co/*X* based systems
S7-20	Ping Huang	In situ electric field skyrmion creation in magnetoelectric Cu_2OSeO_3
S7-21	Xuejuan Liu	The dynamics of antiskyrmion states in magnetic nanodots
S7-22	Leina Jiang	First-principles prediction of switchable metallic ferroelectricity in multiferroic tunnel
S7-23	Weizhao Chen	Influence of HfO_2 interlayers on magnetocrystalline anisotropy in Fe|MgO|Fe magnetic tunnel junction: First-principles investigation
S7-24	Haijuan Zhang	Room Temperature Hidden State in a Manganite Observed by Femtosecond Ultrafast Techniques
S7-25	Liangfeng Liu	Pressure-induced c/a ratio enhancement and the indication of enhancement in Néel transition temperature and electric polarization among hexagonal multiferroic $Lu_{0.5}Sc_{0.5}FeO_3$

S8-1	Ziming Zhu	Composite Dirac semimetal
S8-2	Dexi Shao	Composite topological nodal lines penetrating the Brillouin zone in orthorhombic AgF_2
S8-3	Jing Fan	Controllable dissociation of H_2O on CeO_2 (111) surface
S8-4	Huisheng Zhang	Converting a 2D ferromagnetic insulator into quantum anomalous Hall system by proper surface modification
S8-5	Xianbiao Shi	Dirac fermions in superconductor $BaTi_2Bi_2O$
S8-6	Xiaojie Tang	Effect of the different width on the negative differential resistance of oligophenyl-eneethynylene molecular devices sandwiched between *C2N-h2D* electrodes
S8-7	Haiyuan Zou	Exactly solvable points and symmetry-protected topological phases of quantum spins on a Zig-Zag lattice
S8-8	Xiang-Bo Xiao	Field driven phase transition from semiconductor to half-metallic ferrimagnet of TcO_2 unit-cell layer on rutile TiO_2(001) surface
S8-9	Zhenqing Li	Ge_3P_2: New viable two-dimensional semiconductors with ultrahigh carrier mobility
S8-10	ZizhenZhou	High thermoelectric performance in the hexagonal bilayer structure consisting of light boron and phosphorus elements
S8-11	Sujun Yun	Investigation of Nagaoka ferromagnetism in the Hubbard model using full configuration interaction quantum Monte Carlo
S8-12	Yuhao Gu	Ni-based transition-metal trichalcogenide monolayer: A strongly correlated quadruple-layer graphene
S8-13	Xiancong Lu	Parity-mixing superconducting phase in the Rashba-Hubbard model and its topological properties from dynamical mean-field theory

S8-14	Sifan Zhang	Strain effects on magnetic states of monolayer MoS_2 doped with group IIIA to VA atoms
S8-15	Huating Liu	Strain engineering the structures and electronic properties of Janus monolayer transition-metal dichalcogenides
S8-16	Hongyan Lv	Strain-tunable magnetic properties of new two-dimensional materials
S8-17	Hongxia Zhong	Tunable magnetical properties of single-layer tin diselenide: From GW approximation to large-scale tight-binding simulations
S8-18	Weikang Wu	Hourglass Weyl loops in two dimensions: Theory and material realization in monolayer GaTeI family
S8-19	Guojun Zhu	Role of Off-stoichiometric Composition at the Grain Boundaries in CuInSe2: A First-principles Study

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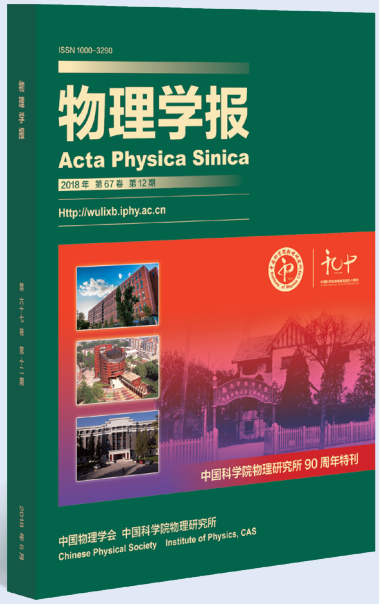

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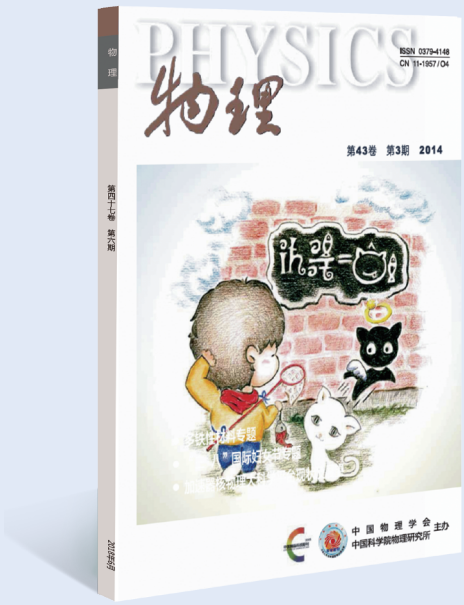

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