

Symposia - E03
Magnetic Materials

October 15 (Sunday), 2023

Conference Room: 5701, 7# floor

8:30-10:20 Session I
Chair: Shouguo Wang

8:30-8:40 Opening speech
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8:40-9:00 (E03-01)
Picosecond spin current generation from antiferromagnetic insulators (Invited)
Di Wu, Nanjing University

9:00-9:20 (E03-02)
Giant Three-dimensional polarized spin current produced by Strictly Antiferromagnetic Spin Hall effect (Invited)
Long You, Huazhong University of Science and Technology

9:20-9:40 (E03-03)
Caloric effects in some antiferromagnetic materials (Invited)
Peng Tong, Hefei Institutes of Physical Science, Chinese Academy of Science

9:40-10:00 (E03-04)
Field-free magnetization switching via out-of-plane spin-polarization induced by an antiferromagnetic insulator/heavy metal interface (Invited)
Xiaoguang Xu, University of Science and Technology Beijing

10:00-10:20 (E03-05)
Néel spin currents for sublattice-resolved antiferromagnetic spintronics (Invited)
Ding-Fu Shao, Hefei Institutes of Physical Science, Chinese Academy of Science

10:20-10:50 Coffee Break

10:50-12:10 Session II
Chair: Haifeng Du

10:50-11:10 (E03-06)
Topological magnetic memory materials (Invited)
Zhipeng Hou, South China Normal University

11:10-11:30 (E03-07)
Experimental observation of one-dimensional motion of skyrmion in chiral magnet (Invited)
Dongsheng Song, Anhui University

11:30-11:50 (E03-08)

Magnonic crystals based on skyrmions (Invited)
Fusheng Ma, Nanjing Normal University

11:50-12:10 (E03-09)
Real-space control of magnetic skyrmions and antiskyrmions (Invited)
Licong Peng, Peking University

12:10-13:30 Lunch

13:30-15:10 Session III
Chair: Lihui Bai

13:30-13:50 (E03-10)
Unconventional Magnetoelectric Quantum Functional Materials and Physics (Invited)
Youwen Long, Institute of Physics in Chinese Academy of Sciences

13:50-14:10 (E03-11)
Magnetoelectric coupling effect based on spin-polarized capacitance (Invited)
Qiang Li, Qingdao University

14:10-14:30 (E03-12)
Electrically programmable magnetic coupling in an Ising network exploiting solid-state ionic gating (Invited)
Zhaochu Luo, Peking University

14:30-14:50 (E03-13)
Influence of Topology on the Phase Transition of a Ferromagnetic metal (Invited)
Yangkun He, Beihang University

14:50-15:10 (E03-14)
High Pressure Control of Magnetic Anisotropy and Curie Temperature in a van der Waals Ferromagnet (Invited)
Kun Zhai, Yanshan University

15:10-15:40 Coffee Break

15:40-17:20 Session IV
Chair: Youwen Long

15:40-16:00 (E03-15)
Magnons in layered antiferromagnetic CrCl₃ in a microwave cavity and the pumped spin current (Invited)
Lihui Bai, Shandong University

16:00-16:20 (E03-16)
Interfacial engineering the ferromagnetism in

2D vdW Fe_xGeTe₂ and its SOT magnetic switching (Invited)

Tianxiao Nie, Beihang University

16:20-16:40 (E03-17)

Probing Spin Dynamics in van der Waals Magnets (Invited)

Peng Li, University of Science and Technology of China

16:40-17:00 (E03-18)

Synthesis and self-assembly of two-dimensional magnetic metal chalcogenide materials (Invited)

Yang Liu, Fudan University

17:00-17:20 (E03-19)

Spin-orbitronics based on a vdW antiferromagnetic semiconductor (Invited)

Rui Wu, South China University of Technology

17:20 Dinner

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October 16 (Monday), 2023

8:30-10:00 Session V

Chair: Xuepeng Qiu

8:30-8:50 (E03-20)

Developing the role of YIG-based layer in the multilayered Spintronic and Dielectric systems (Invited)

Caiyin You, Xi'an University of Technology

8:50-9:10 (E03-21)

Dzyaloshinskii-Moriya interaction in ferrimagnetic Rare Earth-Transition Metal alloy and multilayers (Invited)

Dahai Wei, Institute of Semiconductors, Chinese Academy of Sciences

9:10-9:30 (E03-22)

Cryogenic in-memory computing using magnetic topological insulators (Invited)

Qiming Shao, The Hong Kong University of Science and Technology

9:30-9:50 (E03-23)

Magnetic antiskyrmions in tetragonal Heusler materials with D_{2d} structure (Invited)

Tianping Ma, Anhui University

9:50-10:00 (E03-24)

Epitaxial growth of unconventional antiferromagnetic-FeMn on insulating substrate (Invited)

Cunxu Gao, Lanzhou University

10:00-10:30 Coffee Break

10:50-12:10 Session VI

Chair: Caiyin You

10:30-10:50 (E03-25)

Manipulating Spin Polarization for Spin Orbit Torque (Invited)

Xuepeng Qiu, Tongji University

10:50-11:10 (E03-26)

Multiferroic Magnon Spin-Torque Based Reconfigurable Logic-In-Memory (Invited)

Tianxiang Nan, Tsinghua University

11:10-11:30 (E03-27)

Anomalous Hall enhancement and field-free spin-orbit torque switching in synthetic antiferromagnets (Invited)

Yufeng Tian, Shandong University

11:30-11:50 (E03-28)

Flexible magnetic thin films and devices (Invited)

Huali Yang, Ningbo Institute of Materials Technology and Engineering, CAS

11:50-12:00 (E03-29)

Field-free spin-orbit torque switching in magnetic single layer (Oral)

Yunchi Zhao, Institute of Physics, CAS

12:00-13:30 Lunch

13:30-15:10 Session VII

Chair: Xuefeng Wang

13:30-13:50 (E03-30)

MOF-derived electromagnetic wave absorbing composites tuned by multi-level structural factors (Invited)

Chen Wu, Zhejiang University

13:50-14:10 (E03-31)

Exploration of rare-earth-free magnetocaloric materials for room temperature magnetic refrigeration (Invited)

Lingwei Li, Hangzhou Dianzi University

14:10-14:30 (E03-32)

Flexible Magnetic Sensor and Its Application in Human Health Monitoring (Invited)

Yuanzhao Wu, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences

14:30-14:50 (E03-33)

Deterministic perpendicular magnetization switching enabled by noncollinear antiferromagnetic spin source (Invited)

Shiheng Liang, Hubei University

14:50-15:00 (E03-34)

Electron catalysis: from charge to spin (Oral)

Guowei Li, Ningbo Institute of Materials Technology and Engineering, CAS

15:00-15:30 Coffee Break

15:30-17:10 Session VIII

Chair: Chen Wu

15:30-15:50 (E03-35)

Exotic magnetotransport behaviors in noncoplanar ferromagnet Cr₅Te₆ thin films and heterostructures (Invited)

Xuefeng Wang, Nanjing University

15:50-16:10 (E03-36)

Optimization of spin current polarization in magnetic devices (Invited)

Yumeng Yang, ShanghaiTech University

16:10-16:30 (E03-37)

Controllable canted magnetism in perpendicular Hall balance (Invited)

Jingyan Zhang, University of Science and Technology Beijing

16:30-16:50 (E03-38)

Co alloying related magnetic properties, microstructure and martensitic transformation behavior of NiCuCoMnGa alloys (Invited)

Jingmin Wang, Beihang University

16:50-17:00 (E03-39)

Application of magnetic substances in magnetic programming of soft robots (Oral)

Longfu Li, Institute of Solid State Physics, CAS

17:00-17:10 (E03-40)

Field-free spin-orbit torque switching of perpendicular magnetization and corelative memory devices (Oral)

Baoshan Cui, Lanzhou University

17:10 Dinner