



TOHOKU
UNIVERSITY

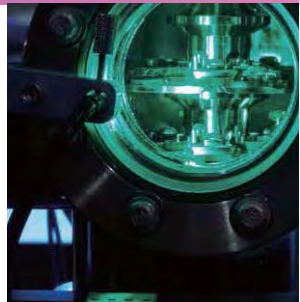
International Symposium



The 6th Symposium
for the Core Research Clusters
for Materials Science and Spintronics,
and the 5th Symposium
on International Joint Graduate Program
in Materials Science

Hybrid

Online and Science Campus Hall (Aobayama East Campus 05, Tohoku University)



Program

10.24
Mon

▶ 10.27

Thu, 2022


Contact

Symposium secretariat, Tohoku University 2-1-1 Katahira, Aoba-ku, Sendai 980-8577, JAPAN

 crcms-sp-gpms2022@grp.tohoku.ac.jp

Information

<https://confit.atlas.jp/guide/event/crcgpms2022/top>

CRC-MS, TOHOKU 

CSIS, TOHOKU 

GP-MS, TOHOKU 



Co-host

Global Institute for Materials Research Tohoku, Institute for Materials Research, Tohoku University





The 6th Symposium for the Core Research Clusters for Materials Science and Spintronics, and The 5th Symposium on International Joint Graduated Program in Materials Science

October 24 (Mon) – 27 (Thu), 2022, Online (CRCs) and Hybrid (GP-MS)



Time table (JST)

| October 24 (Monday) | | | October 25 (Tuesday) | | | October 26 (Wednesday) | | | October 27 (Thursday) | | | | | |
|---|-------------|-------|---|--|---|--|-------------|-------|---|-------------|-------|--|--|--|
| Materials Science | Spintronics | GP-MS | Materials Science | Spintronics | GP-MS | Materials Science | Spintronics | GP-MS | Materials Science | Spintronics | GP-MS | | | |
| | | | 9:00-10:30 M1 Catalytic and battery materials for carbon neutrality M1-1 Sayaka Uchida M1-2 Wei Lv M1-3 Mizuki Tada Chairs: Hiroto Nishihara, Keiichi Tomishige | | | 9:00-11:00 G1 Student Session 1 G1-1 Andrew A. Gewirth G1-2 Jian-Feng Li G1-3 Koki Kannari Chair: Koki Kannari | | | 9:00-10:30 M3 Exotic superconductivity M3-1 Teruo Ono M3-2 Tadashi Machida M3-3 Hong Ding Chairs: Shigemi Mizukami, Takafumi Sato | | | | | |
| | | | 10:30-11:00 Break | | | | | | | | | | | |
| | | | 11:00-12:30 M2 Cutting-edge measurements of biomaterials and soft matter M2-1 Tomohiro Nishizawa M2-2 Florence Tama M2-3 Masateru Taniguchi Chairs: Eriko Nango, Kazuo Takimiya | | | | | | | | | | | |
| | | | 12:30-13:30 Lunch | | | | | | | | | | | |
| 13:50-14:00 Opening address Hideo Ohno | | | 13:30-14:45 Poster Session 2 | | | 13:30-14:30 CRC-MS award Ceremony and Presentation | | | 13:30-14:30 CRC-MS award Ceremony and Presentation | | | | | |
| 14:00-14:45 Plenary 1 PL1 Jien-Wei Yeh Chair: Shin-ichi Orimo | | | | | | 14:30-15:30 Poster award ceremony | | | 13:30-15:30 G4 Student Session 4 G4-1 W. Russ Algar G4-2 Eylon Yavin G4-3 Akunna Frances Ujuagu G4-4 Marc Vendrell Chair: Akunna Frances Ujuagu | | | | | |
| 14:50-15:35 Plenary 2 PL2 Roser Valenti Chair: Shin-ichi Orimo | | | 14:45-14:55 Break | 14:55-17:00 S1 Recent progress of magnetic tunnel junction and its applications S1-1 Hiroaki Sukegawa S1-2 Shoma Akamatsu S1-3 Joseph S. Friedman S1-4 Weisheng Zhao S1-5 Sebastien Couet Chair: Mikihiko Oogane | 14:45-15:00 Break | | | | 15:30-16:00 Break | | | | | |
| 15:40-16:25 Plenary 3 PL3 Manfred Fiebig Chair: Shin-ichi Orimo | | | | | 15:00-17:00 G2 Student Session 2 G2-1 Suvankar Chakraverty G2-2 Thorsten Schneider G2-3 Lambert Alif G2-4 Yuki Yamamoto Chair: Yuki Yamamoto | | | | 15:30-16:00 Break | | | | | |
| 16:30-17:45 Poster Session 1 | | | 17:00-17:15 Break | | | 16:00-17:30 M4 Novel high entropy alloys M4-1 An-Chou Yeh M4-2 Akira Takeuchi M4-3 Ke Chen Chairs: Yutaka S. Sato, Hidemi Kato | | | 16:00-18:00 G3 Student Session 3 G3-1 Yingying Peng G3-2 Johan Chang G3-3 Ruihua He G3-4 Tong Wang Chair: Tong Wang | | | | | |
| | | | 17:15-18:00 Plenary 4 PL4 Thomas Schäpers Chair: Makoto Kohda | | | | | | 16:00-18:00 G5 Student Session 5 G5-1 Ramin Golestanian G5-2 Andreas Menzel G5-3 Amin Doostmohammadi G5-4 Yuki Koyano G5-5 Yutaka Kinoshita Chair: Yutaka Kinoshita | | | | | |
| | | | 18:00-18:15 Break | | | | | | 18:00-18:10 Closing Remarks Katsunari Oikawa | | | | | |
| | | | 18:15-19:45 S2 GP-Spin S2-1 Hideaki Sakai S2-2 Hyunsoo Yang S2-3 Hiroki Arisawa S2-4 Akihiro Ozawa Chair: Chengrong Xie | | | | | | | | | | | |

Program (JST)

The 6th International Symposium for The Core Research Clusters for Materials Science and Spintronics, and
The 5th Symposium on International Joint Graduated Program in Materials Science

October 24 (Monday) – 27 (Thursday), 2022
Online (CRCs) and Hybrid (GP-MS)

Plenary sessions

October 24 (Monday)

| | | |
|------------------|---|------------------------|
| Plenary 1 | | Chair: Shin-ichi Orimo |
| 14:00-14:45 | Jien-Wei Yeh (National Tsing Hua University) | 1 |
| PL1 | High-entropy materials technology | |

| | | |
|------------------|--|------------------------|
| Plenary 2 | | Chair: Shin-ichi Orimo |
| 14:50-15:35 | Roser Valenti (Goethe University Frankfurt) | 2 |
| PL2 | Strategies to design quantum materials with exotic properties | |

| | | |
|------------------|---|------------------------|
| Plenary 3 | | Chair: Shin-ichi Orimo |
| 15:40-16:25 | Manfred Fiebig (ETH Zürich) | 3 |
| PL3 | Seeing is believing: Nonlinear optics on ferroic materials | |

October 25 (Tuesday)

| | | |
|------------------|--|---------------------|
| Plenary 4 | | Chair: Makoto Kohda |
| 17:15-18:00 | Thomas Schäpers (Forschungszentrum Jülich) | 4 |
| PL4 | Topological-insulator-superconductor networks | |

The Core Research Cluster for Materials Science

October 25 (Tuesday)

M1: Catalytic and battery materials for carbon neutrality Chairs: Hirotomoto Nishihara
Keiichi Tomishige

- | | | |
|-------------|---|---|
| 9:00-9:30 | Sayaka Uchida (University of Tokyo) | 5 |
| M1-1 | Porous ionic crystals based on polyoxometalates as a tunable platform for functional materials | |
| 9:30-10:00 | Wei Lv (Tsinghua University) | 6 |
| M1-2 | Catalysis and catalyst design for lithium-sulfur batteries | |
| 10:00-10:30 | Mizuki Tada (Nagoya University) | 7 |
| M1-3 | Operando 3D visualization of practical polymer electrolyte fuel cell | |

M2: Cutting-edge measurements of biomaterials and soft matter Chairs: Eriko Nango
Kazuo Takimiya

- | | | |
|-------------|---|----|
| 11:00-11:30 | Tomohiro Nishizawa (Yokohama City University) | 8 |
| M2-1 | Recent advances in cryo-EM: from molecules to cells | |
| 11:30-12:00 | Florence Tama (RIKEN & Nagoya University) | 9 |
| M2-2 | Integrative modeling to characterize structure and dynamics of (bio)molecules from single-molecule experiments | |
| 12:00-12:30 | Masateru Taniguchi (Osaka University) | 10 |
| M2-3 | Digital platform for developing rapid infectious disease testing methods | |

October 26 (Wednesday)

M3: Exotic superconductivity Chairs: Shigemi Mizukami
Takafumi Sato

- | | | |
|-------------|--|----|
| 9:00-9:30 | Teruo Ono (Kyoto University) | 11 |
| M3-1 | Superconducting diode effect in Rashba superlattice | |
| 9:30-10:00 | Tadashi Machida (RIKEN & JST) | 12 |
| M3-2 | Detecting the signature of Majorana quasiparticles at vortex core of topological superconductor Fe(Se,Te) | |
| 10:00-10:30 | Hong Ding (Shanghai Jiao Tong University) | 13 |
| M3-3 | Iron-based superconductors as a new Majorana playground | |

M4: Novel high entropy alloys Chairs: Yutaka S. Sato
Hidemi Kato

- | | | |
|-------------|--|----|
| 16:00-16:30 | An-Chou Yeh (National Tsing Hua University) | 14 |
| M4-1 | High temperature tensile creep deformation of high entropy alloys | |
| 16:30-17:00 | Akira Takeuchi (University of Hyogo) | 15 |
| M4-2 | Thermodynamics stability of solid solutions in high-entropy alloys | |
| 17:00-17:30 | Ke Chen (Shanghai Jiao Tong University) | 16 |
| M4-3 | Superb metallurgical bonding formed in friction stir lap welding of FeCoCrNiMn high entropy alloys to 6061 Al alloy | |

The Core Research Cluster for Spintronics

October 25 (Tuesday)

S1: Recent progress of magnetic tunnel junction and its application Chair: Mikihiko Oogane

| | | |
|-------------|--|----|
| 14:55-15:20 | Hiroaki Sukegawa (National Institute for Materials Science) | 17 |
| S1-1 | Giant tunnel magnetoresistance at room temperature: Recent progress and prospect | |
| 15:20-15:45 | Shoma Akamatsu (Tohoku University) | 18 |
| S1-2 | FeAlSi alloy films with ultra-soft magnetic properties for highly sensitive TMR sensors | |
| 15:45-16:10 | Joseph S. Friedman (University of Texas at Dallas) | 19 |
| S1-3 | Unsupervised learning and recognition with single-domain and domain-wall MTJs | |
| 16:10-16:35 | Weisheng Zhao (Beihang University) | 20 |
| S1-4 | Current-driven exchange bias switching and its application in MRAM | |
| 16:35-17:00 | Sebastien Couet (Imec) | 21 |
| S1-5 | Voltage-gated SOT-MRAM for low power, high speed and dense cache memory applications | |

S2: GP-Spin Chair: Chengrong Xie

| | | |
|-------------|---|----|
| 18:15-18:45 | Hideaki Sakai (Osaka University) | 22 |
| S2-1 | Block-layer design of magnetic and polar Dirac/Weyl semimetals | |
| 18:45-19:15 | Hyunsoo Yang (National University of Singapore) | 23 |
| S2-2 | Magnon torques and its connection with THz spintronics | |
| 19:15-19:30 | Hiroki Arisawa (Tohoku University) | 24 |
| S2-3 | Spin-current striction in a ferromagnet $Tb_{0.3}Dy_{0.7}Fe_2$ | |
| 19:30-19:45 | Akihiro Ozawa (Tohoku University) | 25 |
| S2-4 | Theory of Weyl/Dirac semimetal phase and magnetic orderings in kagome-lattice shandite | |

International Joint Graduate Program in Materials Science

October 25 (Tuesday)

G1: Student Session 1

Chair: Koki Kannari

- | | | |
|-------------|---|----|
| 9:00-9:45 | Andrew A. Gewirth (University of Illinois) | 27 |
| G1-1 | Electrodeposited metal and alloy catalysts for electrocatalysis | |
| 9:45-10:30 | Jian-Feng Li (Xiamen University) | 28 |
| G1-2 | <i>In-situ</i> Raman monitoring of electrochemical reaction processes | |
| 10:30-11:00 | Koki Kannari (Tohoku University) | 29 |
| G1-3 | Revealing solvation structure of cathode surface in highly concentrated electrolyte in Li-O₂ batteries by surface-enhanced Raman spectroscopy | |

G2: Student Session 2

Chair: Yuki Yamamoto

- | | | |
|-------------|---|----|
| 15:00-15:30 | Suvankar Chakraverty (Institute of Nano Science and Technology) | 30 |
| G2-1 | KTaO₃ – The new kid on the spintronics block | |
| 15:30-16:00 | Thorsten Schneider (Technische Universität Darmstadt) | 31 |
| G2-2 | Strain engineering of antiferroelectricity in NaNbO₃ thin films | |
| 16:00-16:30 | Lambert Alff (Technische Universität Darmstadt) | 32 |
| G2-3 | Extended defects, substoichiometric phases and defect interactions in oxide based memristive devices | |
| 16:30-17:00 | Yuki Yamamoto (Tohoku University) | 33 |
| G2-4 | Improved electrical conduction in La₂O₂Pn (Pn = Sb, Bi) epitaxial thin films grown by multilayer solid phase epitaxy | |

October 26 (Wednesday)

G3: Student Session 3

Chair: Tong Wang

- | | | |
|-------------|---|----|
| 16:00-16:30 | Yingying Peng (Peking University) | 34 |
| G3-1 | Magnetic excitations and charge order in high-T_c superconductors | |
| 16:30-17:00 | Johan Chang (Universität Zürich) | 35 |
| G3-2 | Nature and symmetry charge order in cuprate superconductors | |
| 17:00-17:30 | Rui-Hua He (Westlake University) | 36 |
| G3-3 | Anomalous intense coherent secondary photoemission from an oxide semiconductor | |
| 17:30-18:00 | Tong Wang (Tohoku University) | 37 |
| G3-4 | Annealing effect of T*-type cuprates Pr_{1.6}Sr_{0.4}CuO₄ | |

October 27 (Thursday)

G4: Student Session 4

Chair: Akunna Francess Ujuagu

| | | |
|-------------|--|----|
| 13:30-14:00 | W. Russ Algar (University of British Columbia) | 38 |
| G4-1 | Advancing materials to simplify bioanalysis and imaging | |
| 14:00-14:30 | Eylon Yavin (Hebrew University of Jerusalem) | 39 |
| G4-2 | Developing bright FIT-PNA RNA sensors | |
| 14:30-15:00 | Akunna Francess Ujuagu (Tohoku University) | 40 |
| G4-3 | Designing a light up peptide probe as an FID assay indicator for RNPs | |
| 15:00-15:30 | Marc Vendrell (University of Edinburgh) | 41 |
| G4-4 | Fluorescent peptides for live cell imaging and translational studies | |

October 27 (Thursday)

G5: Student Session 5

Chair: Yutaka Kinoshita

| | | |
|-------------|---|----|
| 16:00-16:30 | Ramin Golestanian (Max Planck Institute for Dynamics and Self-Organization) | 42 |
| G5-1 | Non-reciprocal active matter | |
| 16:30-17:00 | Andreas Menzel (Otto von Guericke University Magdeburg) | 43 |
| G5-2 | Magnetic gels and elastomers — externally tunable soft elastic composite materials | |
| 17:00-17:30 | Amin Doostmohammadi (University of Copenhagen) | 44 |
| G5-3 | Active matter: Flow, topology, and control | |
| 17:30-17:45 | Yuki Koyano (Kobe University) | 45 |
| G5-4 | Imperfect bifurcation in the rotation of a propeller-shaped camphor rotor | |
| 17:45-18:00 | Yutaka Kinoshita (Tohoku University) | 46 |
| G5-5 | Effect of an electric field on the dynamical steady states of active nematics | |

Poster session
16:30-17:45 JST, October 24 (Monday)
13:30-14:45 JST, October 25 (Tuesday)

| | | |
|-----------|---|----|
| Poster 1 | Kenta Ito (Tohoku University) Modulation of the anomalous Nernst effect in nitride films on SrTiO₃ | 47 |
| Poster 2 | Riku Tataka (Tohoku University) Formation of quantum dots in MoS₂ utilizing intrinsic Schottky barriers | 48 |
| Poster 3 | Yuxin Song (Tohoku University) A lightweight Ti-Al-Cr shape memory alloy showing large superelastic strain | 49 |
| Poster 4 | Kritin pirabul (Tohoku University) Conformal graphene coating onto TMS-grafted nanoporous SiO₂ | 50 |
| Poster 5 | Kenshin Yoshikawa (Tohoku University) Extremely large magnetoresistance material LaBi thin films grown by using multi-layer precursor | 51 |
| Poster 6 | Hongyu Liu (Tohoku University) Electrically conductive membrane with ordered nanochannels: A universal platform material for probing electrochemical systems | 52 |
| Poster 7 | Sukma Suci Friandani (Tohoku University) Microstructures of carbon-added Co-Cr-W-Ni alloys for stent application | 53 |
| Poster 8 | Diancheng Geng (Tohoku University) Evaluation of irradiation hardening in ion-irradiated RAFM steel F82H using ultra-small testing technologies (USTTs) | 54 |
| Poster 9 | Mizuho Yabushita (Tohoku University) Transcription-induced formation of paired heteroatom sites in zeolite framework and their performance for divalent cation exchange | 55 |
| Poster 10 | Dmytro Demirskyi (Tohoku University) Deformation peculiarities of boron and boron carbide at elevated temperatures | 56 |
| Poster 11 | Eriko Shinkawa (Tohoku University) Towards a mathematical understanding of kneading | 57 |
| Poster 12 | Asuka Homma (Tohoku University) Domain-dependent Dirac-cone surface states in antiferromagnetic topological insulator NdBi studied by micro-focused ARPES | 58 |
| Poster 13 | Suxia Guo (Tohoku University) An approach of improving slurry dispersibility by nanobubbles water during powder fabrication for additive manufacturing | 59 |
| Poster 14 | Xiangyu Wu (Tohoku University) Fracture behavior of tungsten coating and bonding interface of dissimilar joints of tungsten to ferritic steel | 60 |
| Poster 15 | Zhenxing Zhou (Tohoku University) Fabrication of a MoSiBTiC alloy by freeze-dry pulsated orifice ejection method and laser powder bed fusion | 61 |
| Poster 16 | Chenguang Li (Tohoku University) Study on powder fabrication and additive manufacturing of MoSiBTiC alloy by high-energy ball milling and plasma spheroidization | 62 |

| | | |
|-----------|--|----|
| Poster 17 | Shuntaro Ida (Tohoku University) Physical property and microstructure of off-stoichiometric B1-type (Ti,Mo)C in equilibrium with the metal phase | 63 |
| Poster 18 | Xi Nan (Tohoku University) MoSiBTiC alloys for ultrahigh-temperature applications –Enhanced oxidation resistance by silicide coating– | 64 |
| Poster 19 | Rintaro Kimura (Tohoku University) Superconductivity of rock-salt structure NbO epitaxial thin films | 65 |
| Poster 20 | Mingqi Dong (Tohoku University) Fabrication of high-concentration nanoceramic-decorated metal powders using nanobubble water for additive manufacturing | 66 |
| Poster 21 | Buket Akkus (Tohoku University) Synthesis of mono-functional cyclosiloxanes for crosslinkable polysiloxane copolymers | 67 |
| Poster 22 | Weiwei Zhou (Tohoku University) Laser powder bed fusion of nanocarbon-decorated titanium alloy powders | 68 |
| Poster 23 | Hiroyuki Kai (Tokyo University of Science) Formation of hydrogels by droplet reactions on the massively branching open microfluidic channels | 69 |
| Poster 24 | Satoshi Sasaki (Tohoku University) Heavy rare-earth monoxides DyO and ErO thin films as ferromagnetic semiconductors | 70 |
| Poster 25 | Yui Muto (Tohoku University) Charge state recognition in double quantum dot devices by machine learning | 71 |
| Poster 26 | Yuma Sato (Tohoku University) Size dependence of thermal stability factor in non-collinear antiferromagnetic Mn₃Sn nanodot | 72 |
| Poster 27 | Kenya Suzuki (Tohoku University) Magnetic tunnel junctions with Fe₂CoAl Heusler electrodes | 73 |
| Poster 28 | Hiroshi Naganuma (Tohoku University) Interpretation of directionality XAS and XMCD signals of wavy graphene on L1₀-FePd by first-principles calculation | 74 |
| Poster 29 | Kosuke Noro (Tohoku University) Kondo effects in ZnO quantum dots | 75 |
| Poster 30 | Zaizhou Jin (Tohoku University) Low magnetic Gilbert damping in epitaxial films of Fe_xCo_{1-x} alloys | 76 |
| Poster 31 | Takeshi Seki (Tohoku University) Enhancement of spin-charge conversion efficiency for Co₃Sn₂S₂ across transition from paramagnetic to ferromagnetic phase | 77 |
| Poster 32 | Weixiang Li (Beihang University) Field-free switching of perpendicular magnetization through voltage-gated spin-orbit torque | 78 |
| Poster 33 | Haruki Kimura (Tohoku University) Effective model of orthorhombic CuMnAs | 79 |

| | | |
|-----------|--|----|
| Poster 34 | Takemi Kato (Tohoku University) Surface-termination-dependent electronic states in a kagome superconductor CsV₃Sb₅ studied by micro-ARPES | 80 |
| Poster 35 | Tomohiro Uchimura (Tohoku University) Domain imaging of an antiferromagnetic Weyl semimetal Mn₃Sn thin films by magneto-optical Kerr effect | 81 |
| Poster 36 | Yuichiro Abe (Tohoku University) Annealing temperature dependence of optical properties of Ce doped SiO₂ | 82 |
| Poster 37 | Thi Van Anh Nguyen (Tohoku University) Preparation of RuO₂ for spin-orbit torque measurement of RuO₂/Co-Fe-B bilayer | 83 |
| Poster 38 | Kazuki Koyama (Tohoku University) The synthesis of thin SnS by two-step growth and etching methods | 84 |
| Poster 39 | Kazuaki Ishibashi (Tohoku University) Laser-induced Terahertz Emission from Bi/Co bilayer | 85 |
| Poster 40 | Jana Lustikova (Tohoku University) Spin pumping into a <i>d</i>-wave superconductor | 86 |
| Poster 41 | Shun Wakabayashi (Tohoku University) Thickness dependence of anomalous Hall effect in non-collinear antiferromagnetic D0₁₉-Mn₃Sn epitaxial thin films | 87 |
| Poster 42 | Kenta Sudo (Tohoku University) High-magnetic-field investigation of electronic state across the metamagnetic transition in the spin-triplet superconductor UTe₂ | 88 |
| Poster 43 | Juncheng Wang (Tohoku University) Characteristic investigation of spin gapless semiconductor CoFeMnSi thin films | 89 |
| Poster 44 | Shun Noguchi (Tohoku University) Characterization of anomalous Nernst effect in ferromagnetic Co₃Sn₂S₂ thin films | 90 |
| Poster 45 | Tomoya Johmen (Tohoku University) High-frequency measurement in bilayer graphene nanodevices | 91 |
| Poster 46 | Naoki Kamata (Tohoku University) Perpendicular magnetized tetragonal Mn-based ultrathin films grown on highly mismatched sapphire substrate | 92 |
| Poster 47 | Rikuto Ota (Tohoku University) Insensitivity to the bias voltage in double-free-layer stochastic magnetic tunnel junction | 93 |
| Poster 48 | Toshiyuki Kodama (Tohoku University) Permeability control using spin-Hall effects for time-varying metamaterials | 94 |
| Poster 49 | Ruma Mandal (Tohoku University) Topologically influenced spintronic terahertz emission in Weyl semimetal | 95 |
| Poster 50 | Osamu Kanehira (Tohoku University) Anomalous Josephson effects between the Kitaev ladder junction systems | 96 |
| Poster 51 | Zhipeng Wang (Tohoku University) Scanning tunneling microscopy study of Yu-Shiba-Rusinov state originated from magnetic moment in curved monolayer island of 1T-phase NbSe₂ | 97 |

| | | |
|-----------|---|-----|
| Poster 52 | Satoshi Iihama (Tohoku University) Ultrafast photon-helicity driven spin-torques in ferromagnet/heavy metal heterostructures | 98 |
| Poster 53 | Muftah Al-Mahdawi (Tohoku University) Developing tunneling magnetoresistance sensors for extreme temperatures, controllable sensitivity, and wide frequency bandwidth | 99 |
| Poster 54 | Yuan Tian (Tohoku University) Detection of chirality dependent second harmonic generation signal in enantiomer enriched chiral carbon nanotubes | 100 |
| Poster 55 | Tappei Kawakami (Tohoku University) Charge-density wave of monolayer VS₂ thin film studied by μ-ARPES | 101 |
| Poster 56 | Yukiya Ide (Tohoku University) Stability of entanglement dynamics in a spin-boson model | 102 |
| Poster 57 | Ken Yaegashi (Tohoku University) High resolution ARPES study of α-Bi and bismuthene on H-SiC | 103 |
| Poster 58 | Chien Wen Chuang (Tohoku University) Electronic and magnetic properties of monolayer Cr₂Se₃ studied by XMCD and ARPES | 104 |
| Poster 59 | Reona Iimura (Tohoku University) Suppressing electrolyte decomposition with Mg-Fe binary oxide-coated cathode for room-temperature magnesium battery operation | 105 |
| Poster 60 | Bowen Tang (Tohoku University) Strengthening of high-entropy alloys via modulation of cryo-pre-straining-induced defects | 106 |
| Poster 61 | Terigele (Tohoku University) Synthesis of Ti-Al intermetallic compound fine powder using shuttle of proportionation and disproportionation reactions in molten salt | 107 |
| Poster 62 | Jiyang Huang (Tohoku University) Magnetic, magnetotransport, and magneto-optical properties of anatase Co-doped TiO₂ thin film on glass substrate | 108 |
| Poster 63 | Xiatong Ye (Tohoku University) Examining electrolyte compatibility on polymorphic MnO₂ cathodes for room-temperature rechargeable magnesium batteries | 109 |
| Poster 64 | Kiyoaki T. Suzuki (Tohoku University) Strength improvement in dissimilar Al/steel weld by simultaneous addition of Si and Ni | 110 |
| Poster 65 | Daisuke Imatomi (Tohoku University) Experimental determination of phase equilibria in Mn-Zn system | 111 |
| Poster 66 | Takaya Matsuo (Tohoku University) Development of novel n-type organic dopants based on pyranilidene structure | 112 |
| Poster 67 | Akunna Frances Ujuagu (Tohoku University) Designing a light-up peptide probe as an FID assay indicator for RNPs | 113 |
| Poster 68 | Shota Namerikawa (Tohoku University) <i>Ab initio</i> calculation of thermoelectric properties of Si and Bi₂Te₃ based on the linear response theory | 114 |

| | | |
|-----------|---|-----|
| Poster 69 | Masato Nakamura (Tohoku University) | 115 |
| | Synthesis of non-fullerene acceptors end-capped with dicyanomethylene-substituted thienothiophenes for organic photovoltaics application | |
| Poster 70 | Akihiro Ishii (Tohoku University) | 116 |
| | Protonic ceramic dense bodies prepared by simmering in fatty acids | |
| Poster 71 | Yo Hishinuma (Tohoku University) | 117 |
| | Synthesis of naphthodithiophenediimide-based semiconducting polymers and studies on the effects of side chain on thermoelectric properties | |