TMU Materials Science 2023

Scientific program

Date June 20th, 2023

Session 1: **Online session** (Chair: Y. Mizuguchi, TMU)

10:20 ~ 10:30 Opning T. Hotta (Vice president, TMU)

10:30 ~ 12:00 Session 1: Online session

1 J. Kono, Rice University, “Quantum Vacuum Dressed Materials in Terahertz Cavities” (invited)

2 Y. Qi, ShanghaiTech University, “Pressure-induced Superconductivity at 32 K in MoB_2” (invited)

3 S. Saha, University of Maryland, “Spin-triplet superconductivity in UTe_2” (invited)

※Please join from your office or at large meeting room（8 号館大会議室）：学内の方はできる限り自室から参加

※If you have not received ZOOM information, please ask organizers (mizugu@tmu.ac.jp; h-arima@tmu.ac.jp)

Session 2 & 3: **In-person session** (@ **large meeting room**,（8 号館大会議室） 2nd floor of building 8, Minami-osawa campus, TMU)

(Chair: H. Arima, TMU)

13:30~14:45 Session 2

4 F. Ando, NIMS, “Observation of Superconducting Diode Effect” (invited)

5 R. Ishikawa, TMU, “Molecular dynamics simulation of diffusion behavior of high-entropy-alloy-type metal tellurides $AgInSnPbBiTe_5$”

6 M. Yoshida, TMU, “Magneto-thermal-switching properties of superconducting Nb”

7 Y. Watanabe, TMU, “Sign change in c-axis thermal expansion constant and lattice collapse by Ni substitution in transition-metal zirconide superconductor $Co_{1-x}Ni_xZr_2$”

14:45~15:15 Break

15:15~16:35 Session 3

8 M. R. Kasem, TMU, “Superconductivity in high-entropy-alloy-type metal telluride compounds”

9 N. Ahmad, TMU, “Transport properties of topological electronic state in β-$IrSn_4$”

10 Md. A. Rahman, TMU, “Synthesis and optical properties of tungsten disulfide nanotubes with relatively small diameters”

11 F. I. Abbas, TMU, “Estimation of anharmonicity of lattice vibration using Grüneisen parameter in $RE(O,F)BiS_2$ (RE=La, Ce, Pr, Nd) Superconductor”

12 M. A. Afzal, TMU, “Superconductivity in chiral structure $Y_3Rh_4Ge_{13}$”

Poster session (Chair: A. Yamashita, TMU)　17:30-19:30　8 号館アトリウム Building 8 Atrium (1st floor)

P-1 T. Sawahara, TMU, “Superconductivity in In doped $AgPbBiTe_3$”

P-2 K. Sakurai, Yokohama National University, “High-entropy effect of the cuprate-oxide superconductors on irradiation resistance”

P-3 N. Tanaka TMU, “Topological Hall effect in the Skyrmion phase of Gd_2PdSi_3”

P-4 P. Rani, TMU, “Synthesis of high-entropy-type $CoSb_3$ based skutterudite thermoelectric materials”

P-5 K. Yamane, Univ. Tsukuba/ NIMS, “Discovery of In-S superconductor by high pressure synthesis and in situ”

P-6 R. Ishi, H. Masuda, TMU, “Improvement of critical current density and macros copic pinning force in magnetic field of RE123 superconducting thin film fabricated by FF-MOD method”

P-7 S. Kuwahara, Nihon University “Substitution effect in misfit compound $\{(SnSe)_{1.16}\}_2(NbSe)_2$”

P-8 R. Kitagawa, TMU, “Single-crystal neutron diffraction study of unusual ordered phase coexisting with heavy electronic states in $SmAu_3Al_7$”

P-9 H. Arima, TMU, “Anisotropic thermal expansion in transition-metal zirconide superconductors”

P-10 A. Seshita, TMU, “Thermoelectric properties of high-entropy type $AgBi(S,Se,Te)_2$”

P-11 R. Shimada, TMU, “The Emergence of bulk superconductivity by Ni substitution in $Fe_{1-x}Ni_xZr_2$”

P-12 M. Miyake, TMU, “Discovery of Anomalous Non-magnetic Transition in Cu_3P with the Noncentrosymmetric Crystal Structure”

P-13 R. Nakachi, TMU, “Single crystal growth of $EuRu_2Ge_2$ and electronic states under pressure”

↓ Poster laboratory tour

P-14 Superconducting Materials Laboratory poster, TMU

P-15 Electronic Properties Laboratory poster, TMU

P-16 Surface and Interface Physics Laboratory poster, TMU

↓ Oral-talk slides will be just displayed.

P-17 M. R. Kasem, TMU, Superconductivity in high-entropy-alloy-type metal telluride compounds” (oral slides)

P-18 Md. A. Rahman, TMU, “TBA” (oral slides)

P-19 F. I. Abbas, TUM, “Estimation of anharmonicity of lattice vibration using Grüneisen parameter in $RE(O,F)BiS_2$ (RE=La, Ce, Pr, Nd) Superconductor”　(oral slides)

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