

Poster Sessions

***Iron-based superconductors 2***

Chairperson: Takao Sasagawa (Tokyo Institute of Technology)

**PCP1-1** 16:00–18:00

**Synthesis and Superconductivity of New FeSe-Based Intercalation Compounds  $A_x(\text{C}_8\text{H}_{11}\text{N})_y\text{Fe}_{1-z}\text{Se}$  ( $A = \text{Li}, \text{Na}$ ) with the Largest Interlayer Spacings**

\*Takehiro Hatakeda, Takashi Noji, Kazuki Sato, Takayuki Kawamata, Masatsune Kato, Yoji Koike

Department of Applied Physics, Graduate School of Engineering, Tohoku University

**PCP1-2** 16:00–18:00

**Dome-Shaped Magnetic Order in High-Pressure Phase Diagram of FeSe Superconductor**

\*Kohei Matsuura<sup>1</sup>, Jianping Sun<sup>2</sup>, Guangzhou Ye<sup>2,3</sup>, Yuta Mizukami<sup>1</sup>, Masaaki Shimozawa<sup>4</sup>, Kazuyuki Matsubayashi<sup>5</sup>, Minoru Yamashita<sup>4</sup>, Tatsuya Watashige<sup>6</sup>, Shigeru Kasahara<sup>6</sup>, Yuji Matsuda<sup>6</sup>, Jiaqiang Yan<sup>7,8</sup>, Brian C Sales<sup>7</sup>, Yoshiya Uwatoko<sup>4</sup>, Jinguang Cheng<sup>2</sup>, Takasada Shibauchi<sup>1</sup>

1. Department of Advanced Materials Science, University of Tokyo; 2. Beijing National Laboratory for Condensed Matter Physics and Institute of Physics, Chinese Academy of Sciences; 3. School of Physical Science and Technology, Yunnan University; 4. The Institute for Solid State Physics, The University of Tokyo; 5. Department of Engineering Science, The University of Electro-Communications; 6. Department of Physics, Kyoto University; 7. Materials Science and Technology Division, Oak Ridge National Laboratory; 8. Department of Materials Science and Engineering, University of Tennessee

**PCP1-3** 16:00–18:00

**Synthesis of Te substituted Iron Chalcogenide Thick Films by Electrochemical Method**

\*Nobuaki Watanabe<sup>1</sup>, Takahiko Masui<sup>2</sup>, Takahiro Osafune<sup>1</sup>, Yuusuke Kasai<sup>1</sup>, Kouhei Kiuchi<sup>1</sup>, Shoma Koike<sup>1</sup>

1. Kanto Gakuin Univ.; 2. Kinki Univ.

**PCP1-4** 16:00–18:00

**Synthesis of Electrodeposited  $\text{FeSe}_{1-x}\text{Te}_x$  ( $0 \leq x \leq 0.5$ ) Superconductors**

\*Takahiro Osafune<sup>1</sup>, Nobuaki Watanabe<sup>1</sup>, Takahiko Masui<sup>2</sup>, Yuusuke Kasai<sup>1</sup>, Kouhei Kiuchi<sup>1</sup>, Shoma Koike<sup>1</sup>

1. Kanto Gakuin Univ.; 2. Kinki Univ.

**PCP1-5** 16:00–18:00

**Synthesis of Electrodeposited  $\text{FeSe}_{1-x}\text{Te}_x$  ( $0.5 \leq x \leq 1$ ) Superconductors**

\*Yuusuke Kasai<sup>1</sup>, Nobuaki Watanabe<sup>1</sup>, Takahiko Masui<sup>2</sup>, Takahiro Osafune<sup>1</sup>, Kouhei

Kiuchi<sup>1</sup>, Shoma Koike<sup>1</sup>

1. Kanto Gakuin Univ.; 2. Kinki Univ.

**PCP1-6** 16:00–18:00

**Gap features of Fe(Se,Te) found by tunneling spectroscopy below and above the superconducting transition**

\*Toshikazu EKINO<sup>1</sup>, Akira Sugimoto<sup>1</sup>, Alexander M. Gabovich<sup>2</sup>

1. Hiroshima University; 2. National Academy of Sciences of Ukraine

**PCP1-7** 16:00–18:00

**Two-gap features revealed by specific heat measurements in FeSe**

\*Jing Ting Chen, Yue Sun, Tatsuhiko Yamada, Sunseng Pyon, Tsuyoshi Tamegai

The University of Tokyo

**PCP1-8** 16:00–18:00

**High-Resolution ARPES Study of FeSe Thin Films**

\*Giao Ngoc Phan<sup>1</sup>, Kosuke Nakayama<sup>1</sup>, Shota Kanayama<sup>1</sup>, Masato Kuno<sup>1</sup>, Katsuaki Sugawara<sup>2</sup>, Takafumi Sato<sup>1</sup>, Takahiro Urata<sup>1</sup>, Yoichi Tanabe<sup>1</sup>, Katsumi Tanigaki<sup>1,2</sup>, Fuyuki Nabeshima<sup>3</sup>, Yoshinori Imai<sup>3</sup>, Atsutaka Maeda<sup>3</sup>, Takashi Takahashi<sup>1,2</sup>

1. Department of Physics, Tohoku University; 2. WPI Research Center, Advanced Institute for Materials Research, Tohoku University; 3. Department of Basic Science, the University of Tokyo

**PCP1-9** 16:00–18:00

**Chemical-substitution effect on c-axis transport properties of BaFe<sub>2</sub>As<sub>2</sub>**

\*Masahiko Nagafuchi, Masamichi Nakajima, Shigeki Miyasaka, Setsuko Tajima

Osaka-university

**PCP1-10** 16:00–18:00

**Angle-Resolved Photoemission Spectroscopy Study of Fermi Surface and Superconducting Gap in NdFeAs(O,F)**

\*Zi How Tin<sup>1</sup>, Toru Adachi<sup>1</sup>, Akira Takemori<sup>1</sup>, Shigeki Miyasaka<sup>1</sup>, Setsuko Tajima<sup>1</sup>, Shin-ichiro Ideta<sup>2,3</sup>, Kiyohisa Tanaka<sup>2,3</sup>

1. Department of Physics, Osaka University; 2. UVSOR, Institute for Molecular Science; 3. The Graduate University for Advanced Studies

**PCP1-11** 16:00–18:00

**Field-driven Transition Revealed by Vortex Dynamics in Ba<sub>1-x</sub>K<sub>x</sub>Fe<sub>2</sub>As<sub>2</sub> with Splayed Columnar Defects**

\*Nozomu Ito<sup>1</sup>, Akiyoshi Park<sup>1</sup>, Sunseng Pyon<sup>1</sup>, Tadashi Kambara<sup>2</sup>, Tsuyoshi Tamegai<sup>1</sup>

1. Department of Applied Physics, The University of Tokyo; 2. Nishina Center, RIKEN

**PCP1-12** 16:00–18:00

**EFFECT OF OXYGEN VACANCIES ON ELECTRONIC STATE IN  $\text{Sr}_4\text{V}_2\text{O}_6\text{Fe}_2\text{As}_2$**

\*Hiroaki Yokota, Masamichi Nakajima, Shigeki Miyasaka, Setsuko Tajima

Osaka University

***New superconductors***

Chairperson: Kazunori Ueno (The University of Tokyo)

**PCP2-1** 16:00–18:00

**Search for superconductiveity in chromium thin films**

Masahiro Miyagawa<sup>1</sup>, \*Masashi Ohashi<sup>1</sup>, Masaki Sawabu<sup>1</sup>, Kohei Ohashi<sup>1</sup>, Takahide Kubota<sup>2</sup>, Koki Takanashi<sup>2</sup>

1. Kanazawa University; 2. IMR, Tohoku University

**PCP2-2** 16:00–18:00

**Electrical resistivity of Chromium thin film**

\*Masaki Sawabu<sup>1</sup>, Kohei Ohashi<sup>1</sup>, Masahiro Miyagawa<sup>1</sup>, Masashi Ohashi<sup>1</sup>, Takahide Kubota<sup>2</sup>, Koki Takanashi<sup>2</sup>

1. Kanazawa University; 2. Tohoku University

**PCP2-3** 16:00–18:00

**Thin Film Synthesis of Palladates with the  $\text{Nd}_2\text{CuO}_4$  Structure**

\*Yoshiko Nanao, Riku Ito, Hayato Inaba, Michio Naito

Tokyo Univ. of Agri. and Tech.

**PCP2-4** 16:00–18:00

**Impurity effects on critical temperatures of nano-structured superconductors: Size and shape dependence.**

\*Masaki Umeda<sup>1</sup>, Masaru Kato<sup>1</sup>, Osamu Sato<sup>2</sup>

1. Osaka Prefecture University; 2. Osaka Prefecture University Colledge of Technology

**PCP2-5** 16:00–18:00

**Anisotropic Superconducting Properties in Single Crystals of  $\text{ZrTe}_3$**

\*Masaki Onishi, Kenjiro Okawa, Kazumune Tachibana, Takao Sasagawa

Laboratory for Materials and Structures, Tokyo Institute of Technology

**PCP2-6** 16:00–18:00

**Scanning Tunneling Microscopy Measurements in  $\text{ZrTe}_{3-x}\text{Se}_x$**

\*Ryota Ishio, Satoshi Demura, Yuita Fujisawa, Naoki Ishida, Hideaki Sakata

Department of physics, Tokyo University of Science

**PCP2-7** 16:00–18:00

**Enhancement of superconductivity induced by Se doping in  $2H-TaS_2$**

\*Takahiro Iwasaki, Yuita Fujisawa, Takahiro Fujita, Jun Iwashita, Kouki Kishimoto, Mitsuhiko Nakada, Satoshi Demura, Hideaki Sakata

Department of Physics, Tokyo University of Science, Tokyo, Japan

**PCP2-8** 16:00–18:00

**Effect of Fe-doping on the CDW state in  $1T-TaS_2$  investigated by STM/STS**

\*Yuita Fujisawa, Tatsunari Shimabukuro, Hiroyuki Kojima, Kai Kobayashi, Satoshi Demura, Hideaki Sakata

Department of Physics, Tokyo University of Science

**PCP2-9** 16:00–18:00

**A Study on the Vibrational and Superconducting Properties in Granular Boron Doped Diamond Film**

\*Dinesh Kumar, M.S. Ramachandra Rao

Department of physics, IIT Madras, Chennai, India

**PCP2-10** 16:00–18:00

**Exploration of Topological Superconductors in Au-Pb-Bi Compounds**

\*Kazumune Tachibana, Kenjiro Okawa, Hiromasa Namiki, Takao Sasagawa

MSL, Tokyo Institute of Technology

**PCP2-11** 16:00–18:00

**Superconductivity of the Sr-intercalated  $Bi_2Se_3$**

\*Kakeru Nagai<sup>1</sup>, Haruka Mastuzaki<sup>2</sup>, Naoki Kase<sup>2</sup>, Tomohito Nakano<sup>2</sup>, Naoya Takeda<sup>1</sup>

1. Department of Materials Science and Technology, Niigata University; 2. Graduate School of Science and Technology, Niigata University

**PCP2-12** 16:00–18:00

**Superconducting gap symmetry of the single crystal of  $\beta-PdBi_2$**

\*Haruka Matsuzaki<sup>1</sup>, Kakeru Nagai<sup>2</sup>, Naoki Kase<sup>1</sup>, Tomohito Nakano<sup>1</sup>, Naoya Takeda<sup>2</sup>

1. Graduate School of Science and Technology, Niigata University; 2. Department of Materials Science and Technology, Niigata University

**PCP2-13** 16:00–18:00

**Large Upper-Critical Field of the Se-doped  $BiS_2$ -based Superconductor**

\*Yusuke Terui<sup>1</sup>, Naoki Kase<sup>1</sup>, Tomohito Nakano<sup>1</sup>, Naoya Takeda<sup>2</sup>

1. Graduate School of Science and Technology, Niigata University; 2. Department of Materials Science and Technology, Niigata University

**PCP2-14** 16:00–18:00

**Growth and characteristics of BiS<sub>2</sub>-based superconducting single crystals**

\*Masanori Nagao<sup>1</sup>, Satoshi Watauchi<sup>1</sup>, Yoshihiko Takano<sup>2</sup>, Isao Tanaka<sup>1</sup>

1. University of Yamanashi; 2. MANA National Institute for Materials Science

**PCP2-15** 16:00–18:00

**Effect of Lead and Antimony Substitution on LaO<sub>0.5</sub>F<sub>0.5</sub>BiS<sub>2</sub>**

\*Satoshi Otsuki, Yuto Sakai, Satoshi Demura, Yuita Fujisawa, Hideaki Sakata

Tokyo University of Science

**PCP2-16** 16:00–18:00

**Evaluation of Bi Defects in BiS<sub>2</sub>-based superconductors by Scanning Tunneling Microscopy and Spectroscopy**

\*Satoshi Demura, Naoki Ishida, Yuita Fujisawa, Hideaki Sakata

Tokyo University of Science

**PCP2-17** 16:00–18:00

**Anomalous Temperature Dependence of Resistivity in LaO<sub>1-x</sub>F<sub>x</sub>BiSe<sub>2</sub> Single Crystals**

\*Naoki Ishida, Satoshi Demura, Yuita Fujisawa, Hideaki Sakata

Tokyo University of Science

**PCP2-18** 16:00–18:00

**Evolution of superconductivity and metallic conductivity by chemical pressure effect in REO<sub>0.5</sub>F<sub>0.5</sub>BiCh<sub>2</sub> superconductors**

\*Kohei Nagasaka, Osuke Miura, Yoshikazu Mizuguchi

Tokyo Metropolitan University

***Theory, new method***

Chairperson: Takashi Yanagisawa (AIST)

**PCP3-1** 16:00–18:00

**Novel Diamond Anvil Cell with B-doped Diamond Electrodes**

\*Ryo Matsumoto<sup>1,2</sup>, Yosuke Sasama<sup>1,2</sup>, Masashi Tanaka<sup>1</sup>, Hiroyuki Takeya<sup>1</sup>, Yoshihiko Takano<sup>1,2</sup>

1. MANA,NIMS; 2. Univ. of Tsukuba

**PCP3-2** 16:00–18:00

**Examination of the Position Estimation Method for The Magnetic Metal Contaminant Detection**

\*Yutaro Tsuzuki, Ken Sakuta

University of Shiga Prefecture Japan

**PCP3-3** 16:00–18:00

**Evolution of the CDW gap in Valence Skipper  $\text{RbTlX}_3$  ( $X=\text{F,Cl,Br}$ ): A First-principle study**

\*Izumi Hase<sup>1</sup>, Takashi Yanagisawa<sup>1</sup>, Kenji Kawashima<sup>2</sup>

1. AIST; 2. IMRA Material R&D Co.Ltd.

**PCP3-4** 16:00–18:00

**Partial-Initiated Surface Flashover Characteristics of Ribbed Surface Insulator in Cryogenic Environment**

\*Jae-Hong Koo, Dong Hun Oh, Jin Yong Na, Bang Wook Lee

Hanyang University

**PCP3-5** 16:00–18:00

**Interplay between staggered flux and  $d$ -wave superconducting states in Hubbard model**

\*Kenji Kobayashi<sup>1</sup>, Hisatoshi Yokoyama<sup>2</sup>

1. Chiba Institute of Technology; 2. Tohoku University

**PCP3-6** 16:00–18:00

**Effects of Impurity Potential on Antiferromagnetic and  $d$ -wave Superconducting States in Hubbard Model**

\*Hisatoshi Yokoyama<sup>1</sup>, Ryo Sato<sup>1</sup>, Kenji Kobayashi<sup>2</sup>, Masao Ogata<sup>3</sup>

1. Department of Physics, Tohoku University; 2. Department of Natural Science, Chiba Institute of Technology; 3. Department of Physics, University of Tokyo

**PCP3-7** 16:00–18:00

**Theory of high-temperature superconductivity in strongly correlated fermions system**

\*Kazuhisa Nishi

University of Hyogo

***Cuprate related***

Chairperson: Satoshi Okuma (Tokyo Institute of Technology)

**PCP4-1** 16:00–18:00

**Impurity Effects on  $T_c$  and Electronic Transport Properties in the Undoped Superconductor  $T'$ -La<sub>1.8</sub>Eu<sub>0.2</sub>CuO<sub>4</sub>**

\*Koki Ohashi<sup>1</sup>, Takayuki Kawamata<sup>1</sup>, Tomohisa Takamatsu<sup>1</sup>, Tadashi Adachi<sup>2</sup>, Masatsune Kato<sup>1</sup>, Shuma Naito<sup>1</sup>, Kei Hayashi<sup>1</sup>, Yuzuru Miyazaki<sup>1</sup>, Yoji Koike<sup>1</sup>

1. Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan; 2. Department of Engineering and Applied Sciences, Sophia University, Japan

**PCP4-2** 16:00–18:00

**An effective Hamiltonian and its phase diagram for  $T'$ -structure cuprates**

\*Kunito Yamazaki<sup>1</sup>, Takuya Yoshioka<sup>1</sup>, Hiroki Tsuchiura<sup>1</sup>, Masao Ogata<sup>2</sup>

1. Department of Applied Physics, Tohoku University, Japan; 2. Department of Physics, University of Tokyo, Japan

**PCP4-3** 16:00–18:00

**OPTICAL STUDY OF ELECTRON-DOPED CUPRATE  $\text{Pr}_{1.3-x}\text{La}_{0.7}\text{Ce}_x\text{CuO}_{4+\delta}$  IN UNDER-DOPED REGION**

\*Ryota Ohnishi<sup>1</sup>, Masamichi Nakajima<sup>1</sup>, Sigeki Miyasaka<sup>1</sup>, Setsuko Tajima<sup>1</sup>, Tadashi Adachi<sup>2</sup>, Taro Ohgi<sup>3</sup>, Akira Takahashi<sup>3</sup>, Yoji Koike<sup>3</sup>

1. Osaka University; 2. Sophia University; 3. Tohoku University

**PCP4-4** 16:00–18:00

**Magnetron sputtering growth of strain-controlled infinite-layer  $\text{Sr}_{1-x}\text{La}_x\text{CuO}_2$  thin films with high  $T_c$**

\*Keita Sakuma<sup>1</sup>, Masataka Ito<sup>2</sup>, Tetsuya Hajiri<sup>2</sup>, Kenji Ueda<sup>2</sup>, Masashi Miura<sup>1</sup>, Hidefumi Asano<sup>2</sup>

1. Seikei University; 2. Nagoya University

**PCP4-5** 16:00–18:00

**Theoretical Calculations of Superconductive Transition in Ladder Cuprate  $\text{SrCu}_2\text{O}_3$**

\*Kenji Toyoda<sup>1</sup>, Ryotaro Arita<sup>2</sup>, Kazuhiko Kuroki<sup>3</sup>, Hiroki Takeuchi<sup>1</sup>, Yuji Zenitani<sup>1</sup>

1. Advanced Research Division, Panasonic Corporation; 2. Center for Emergent Matter Science, RIKEN; 3. Department of Physics, Osaka University