International Symposium on Physics and Chemistry of Novel Superconductors and Related Materials

time	Octber 1 Monday	Octber 2 Tuesday	Octber 3 Wednesday	time
9:00	Registration	(Chair : M. Ichioka) Y. Iwasa	(Chair : Y. Kubozono) K. Prassides	9:00
9:30	Opening	T. Bollinger	X. H. Chen	9:30
10:00	(Chair : G.-q. Zheng) F. Steglich	S. Kawasaki	T. Kambe	10:00
10:30	T. Takabatake	Coffee Break	Coffee Break	10:30
11:00	Coffee Break	(Chair : R. Kondo) N. Hussey	(Chair : M. Nohara) T. Yokoya	11:00
11:30	(Chair : T. Yokoya) Z. Hiroi	S. Yamanaka	R. Kondo	11:30
12:00	Y. Haga	M. Nohara	N. Dragoe	12:00
12:30	S. Araki	Photo	Closing	12:30
13:00	12:45～14:00 Lunch and Meeting	12:40～14:00 Lunch and Meeting	12:40～ Lunch and Excursion	13:00
13:30				13:30
14:00	(Chair : T. C. Kobayashi) H. Takagi	(Chair : K. Kudo) N.L. Wang		14:00
14:30	L.L. Sun	A. Kaminski		14:30
15:00	R. Eguchi	H. Kotegawa		15:00
15:30	Coffee Break	move		15:30
16:00	(Chair : K. Machida) Y.K. Bang	Poster session (Coffee)		16:00
16:30	K. Miyake			16:30
17:00	M. Ichioka			17:00
17:30				17:30
18:00				18:00
18:30		Banquet		18:30
19:00				19:00
19:30				19:30
20:00				20:00

Program

Monday 1 October

9:00-9:30 **Registration**

9:30-9:45 **Opening**

(Chair: G.-q. Zheng)

9:45-10:25 **Prof. Frank Steglich (MPI for Chemical Physics of Solids)**
Interplay of superconductivity, quantum criticality and f-electron localization in heavy fermions

10:25-10:55 **Toshiro Takabatake (Hiroshima University)**
Unusual magnetic order in highly coordinated Ce and Eu compounds

10:55-11:15 **Coffee Break**

(Chair: T. Yokoya)

11:15-11:45 **Zenji Hiroi (The University of Tokyo)**
Rattling and superconductivity in cage compounds

11:45-12:15 **Yoshinori Haga (Japan Atomic Energy Agency)**
Heavy Fermion superconductivity in uranium and transuranium compounds

12:15-12:45 **Shingo Araki (Okayama University)**
Hall effect in $CeCu_2Si_2$ under high pressure

12:45-14:10 **Lunch and Meeting**

(Chair: T. C. Kobayashi)

14:10-14:50 **Hidenori Takagi (The University of Tokyo)**
Discovery of Superconductivity in 4d and 5d transition metal compounds

14:50-15:20 **Liling Sun (Chinese Academy of Sciences)**
Reemergence of superconductivity and pressure driven quantum criticality in iron selenide superconductors

15:20-15:50 **Ritsuko Eguchi (Okayama University)**
Superconductivity induced by mechanical cleavage of $FeSe_{1-x}Te_x$, and the first observation of field-induced electrical transport

15:50-16:10 **Coffee Break**

(Chair: K. Machida)

16:10-16:40 **Yunkyu Bang (Chonnam National University)**
Impurity scattering effects on the ±S-wave state for the Iron-Based Superconductors

16:40-17:10 **Kazumasa Miyake (Osaka University)**
Superconductivity due to valence or charge-transfer fluctuations

17:10-17:40 **Masanori Ichioka (Okayama University)**
Local electronic states in electric-field-induced surface superconductivity

Tuesday 2 October

(Chair: M. Ichioka)

9:00-9:40 **Yoshihiro Iwasa (The University of Tokyo)**
Field effect phase control

9:40-10:10 **Anthony T. Bollinger (Brookhaven National Laboratory)**
Interface Superconductivity and the Electric Field Effect in $La_{2-x}Sr_xCuO_4$

10:10-10:40 **Shinji Kawasaki (Okayama University)**
NMR/NQR study of high-T_c cuprate and iron pnictide

10:40-11:00 **Coffee Break**

(Chair: R. Kondo)

11:00-11:30 **Nigel E. Hussey (University of Bristol)**
Violations of laws, limits and symmetries in one-dimensional $Li_{0.9}Mo_6O_{17}$

11:30-12:00 **Shoji Yamanaka (Hiroshima University)**
Superconductivity of the layer structured nitride TiNCl electron-doped by intercalation

12:00-12:30 **Minoru Nohara (Okayama University)**
Development of Novel Superconductors using the Chemistry of Arsenic

12:30-12:40 **Conference Photo**

12:40-14:00 **Lunch and Meeting**

(Chair: K. Kudo)

14:00-14:30 **Nanlin Wang (Chinese Academy of Sciences)**
Structural instability and superconductivity in (Ir,Pt)Te_2: an optical spectroscopic study

14:30-15:00 **Adam Kaminsky (Iowa State University)**
Competition between ordered states and unconventional superconductivity

15:00-15:30 **Hisashi Kotegawa (Kobe University)**
NMR Study of Layered Nitride Superconductor Li_xZrNCl

16:00-18:00 **Poster session** (coffee)
at Recent Culture Hotel

18:00-20:00 **Banquet**
at Recent Culture Hotel

Wednesday 3 October

(Chair: Y. Kubozono)

9:00-9:40 **Kosmas Prassides (Durham University)**
Fullerene Superconductivity 20 Years on - alive and kicking

9:40-10:10 **Xianhui Chen (University of Science and Technology of China)**
Electronic nematicity and pseudogap-like phase diagram in $NaFe_{1-x}Co_xAs$

10:10-10:40 **Takashi Kambe (Okayama University)**
Physical and Chemical Properties in Metal Intercalated Hydrocarbon Superconductors

10:40-11:00 **Coffee Break**

(Chair: M. Nohara)

11:00-11:30 **Takayoshi Yokoya (Okayama University)**
High-resolution photoemission spectroscopy of URu_2Si_2

11:30-12:00 **Ryusuke Kondo (Okayama University)**
Synthesis of the topological superconductor $Cu_xBi_2Se_3$ and attempt to introduce other kinds of atoms to Bi_2Se_3

12:00-12:30 **Nita Dragoe (Universite Paris Sud)**
Endohedral fullerenes and their superconductivity

12:30-12:40 **Closing**

12:40- **Lunch and Excursion**

Posters

1 **Interplay of superconductivity and magnetism in $Ca(Fe_{1-x}Rh_x)_2As_2$ with lattice collapse transition**
Masataka Danura, Kazutaka Kudo, and Minoru Nohara
Department of Physics, Okayama University, Okayama, Japan

2 **Preparation of novel TaO_2 thin films with rutile-type structure**
Yuki Fujimoto, Yuji Muraoka, Takanori Wakita and Takayoshi Yokoya
Graduate School of Nature Science and Technology, Okayama University, Okayama, Japan

3 **NQR study of superconductivity in $CeCu_2Si_2$ under pressure**
Kenji Fujiwara,[1] Masakazu Iwata,[1] Youichi Ikeda[2] and Tatsuo C. Kobayashi[2]
[1]Department of Physics and Materials Science, Shimane University, Matsue, Japan
[2]Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan

4 **Transport properties in graphene edge**
Hidenori Goto,[1,2] Eri Uesugi,[1] Ritsuko Eguchi,[1] and Yoshihiro Kubozono[1,2]
[1]Research Laboratory for Surface Science, Okayama University, Okayama, Japan
[2]Reserach Center of New Functional Materials for Energy Production, Storage and Transport, Okayama University, Okayama, Japan

5 **Metamagnetic transition of itinerant ferromagnet U_3P_4 under high pressure**
Minami Hayashida,[1] Naoto Nishiumi,[1] Hiro Manabe,[1] Shingo Araki,[1] Yoichi Ikeda,[1] Tatsuo C. Kobayashi,[1] Piotr Wiśniewski,[2] Dai Aoki,[2] Yoshichika Ōnuki,[2,3] Etsuji Yamamoto,[3] and Yoshinori Haga[3]
[1]Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan
[2]Graduate School of Science, Osaka University, Toyonaka, Osaka, Japan
[3]Advanced Science Research Center, Japan Atomic Energy Agency, Tokai, Ibaraki, Japan

6 **Fabrication of high-performance single crystal field-effect transistors with phenacene-type molecules**
Xuexia He,[1] Ritsuko Eguchi,[1] Hidenori Goto,[1,2] and Yoshihiro Kubozono[1,2]
[1]Research Laboratory for Surface Science, Okayama University, Okayama, Japan
[2]Reserach Center of New Functional Materials for Energy Production, Storage and Transport, Okayama University, Okayama, Japan

7 **Preparation and physical properties of heavily boron-doped superconducting diamond films by a hot-filament CVD method**

Chiaki Hiramatsu,[1] Yuji Muraoka,[1,2] Takayoshi Yokoya[1,2]
[1]Graduate School of Nature Science and Technology, Okayama University, Okayama, Japan
[2]Reserach Laboratory for Surface Science, Okayama University, Okayama, Japan

8 **Ni Substitution Effects on Heavy Fermion Superconductor $CeCu_2Si_2$**

Yoichi Ikeda, Yuzo Ito, Shingo Araki, and Tatsuo C. Kobayashi
Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan

9 **High-resolution photoemission spectroscopy of CeT_2Al_{10} (T = Fe, Ru, Os)**

Toshihiko Ishiga,[1] Koji Tsubota,[1] Masanori Sunagawa,[1] Kanta Uenaka,[1] Keisuke Yutani,[2] Yuji Muro,[3] Toshiro Takabatake,[2,4] Hiroshi Kumigashira,[5] Masaharu Oshima,[6] Kozo Okada,[1] Takanori Wakita,[1,7] Yuji Muraoka,[1,7] and Takayoshi Yokoya[1,7]
[1]The Graduate School of Nature Science and Technology, Okayama University, Okayama, Japan
[2]Department of Quantum Matter, AdSM, Hiroshima University, Higashi-Hiroshima, Japan
[3]Department of Liberal arts and Sciences, Toyama Prefectural University, Izumi, Toyama, Japan
[4]Institute for Advanced Materials Research, Hiroshima University, Higashi-Hiroshima, Japan
[5]Institute of Materials Structure Science (IMSS), Tsukuba, Ibaraki, Japan
[6]Department of Applied Chemistry, The University of Tokyo, Bunkyo, Tokyo, Japan
[7]Research Laboratory for Surface Science, Okayama University, Okayama, Japan

10 **Electrical Resistivity of Heavy Fermion Superconductor $Ce(Cu_{1-x}Ni_x)_2Si_2$ under High Pressure**

Yuzo Ito, Yoichi Ikeda, Shingo Araki, and Tatsuo C. Kobayashi
Department of Physics, Okayama University, Okayama, Japan

11 **NMR studies on possible topological superconductors $Cu_xBi_2Se_3$**

F. Iwase,[1] G.-q. Zheng,[1] Y. S. Hor,[2] M. Kriener,[3] K. Segawa,[3] Z. Ren,[3] Y. Ando,[3]
[1]Department of Physics, Okayama University,
[2]Department of Physics, Missouri University of Science and Technology,
[3]The Institute of Scientific and Industrial Research, Osaka University

12 **K doping dependent electronic structure of picene films studied by high-resolution photoemission spectroscopy**

Taihei Jabuchi,[1] Hiroyuki Okazaki,[2] Takanori Wakita,[1,3] Takashi Kato,[4] Yoshihiro Kubozono,[1,3] Takashi Kambe,[1] Yuji Muraoka,[1,3] and Takayoshi Yokoya[1,3]

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[2]National Institute for Materials(NIMS), Tukuba, Japan

[3]Research Laboratory for Surface Science, Okayama University, Okayama, Japan

[4]Nagasaki Institute of Applied Science(NiAS), Nagasaki, Japan

13 **The Mott state and superconductivity in face-centred cubic structured Cs_3C_{60}: A ^{133}Cs-nuclear magnetic resonance study under pressure**

Shinji Kawasaki,[1] J. Fukui,[1] T. Motoyama,[1] Y. Suzuki,[1] S. Shibasaki,[1] Guo-qing Zheng[1,2]

[1]Department of Physics, Okayama University, Okayama, Japan

[2]Institute of Physics and Beijing National Laboratory for Condensed Matter Physics, Chinese Academy of Sciences, Beijing, China

14 **Electronic phase diagram of the iron-based superconductors $Ca_{10}(Pt_nAs_8)(Fe_{2-x}Pt_xAs_2)_5$ (n = 3, 4) with novel platinum-arsenide layers**

Kazutaka Kudo, Satomi Kakiya, and Minoru Nohara

Department of Physics, Okayama University, Okayama, Japan

15 **NMR/NQR studies of non-centrosymmetric superconductor LaPtBi and PdBi**

K. Matano,[1] S. Harada,[1] Y. Inada,[2] Y. Muro,[3] T. Takabatake,[3] B. Joshi,[4] S. Ramakrishnan[4] and G.-q. Zheng[1]

[1]Department of Physics, Okayama University, Okayama, Japan

[2]Faculty of Education Okayama University, Okayama, Japan

[3]Department of Quantum Matter, ADSM, and IAMR, Hiroshima University, Hiroshima, Japan

[4]Tata Institute of Fundamental Research, Mumbai, India

16 **Surface physical property of the CrO_2 thin films**

Y. Muraoka,[1,2] S. Yoshida,[1] T. Wakita,[1] M. Hirai,[1,2] T. Yokoya,[1,2]

[1]Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan

[2]Research Laboratory for Surface Science, Okayama University, Okayama, Japan

17 **Angle-resolved photoemission spectroscopy measurements for metallic VO_2 thin films**

H. Nagao,[A] Y. Muraoka,[A,B] T. Ishiga,[A] K. Tsubota,[A] T. Wakita,[A,B] T. Yokoya,[A,B] K.

Ono,[C] H. Kumigashira[C]
[A]Graduate School of Nature Science and Technology, Okayama University, Okayama, Japan
[B]Research Laboratory for Surface Science, Okayama University, Okayama, Japan
[C]Institute for Materials Structure Science (IMSS), Tsukuba, Ibaraki, Japan

18 **Bond breaking and emergence of superconductivity by platinum doping of $IrTe_2$**

Sunseng Pyon, Kazutaka Kudo, and Minoru Nohara
Department of Physics, Okayama University, Okayama, Japan

19 **Emergence of superconductivity in thin crystals of $FeSe_{1-x}Te_x$ (x = 0.9 and 0.95)**

Megumi Senda,[1] Ritsuko Eguchi,[1] Hidenori Goto,[1,2] Yoshihiro Kubozono[1,2]
[1]Research Laboratory for Surface Science, Okayama University, Okayama, Japan
[2]Research Center of New Functional Materials for Energy Production, Storage and Transport, Okayama University, Okayama, Japan

20 **New synthesis method of $Ba_xFe_2Se_2$ by solution process with monomethylamin**

S. Shibasaki, M, Danura, Y, Nishikubo, K. Kudo, M. Nohara, T. Kambe
Department of Physics, Okayama University, Okayama, Japan

21 **Pressure Effects on Rattling and Superconductivity of Einstein Solids; $A_xV_2Al_{20}$ (A = $Ga_{0.2}$, $Al_{0.3}$ and $Y_{1.0}$)**

Takafumi Shinohara,[1] Yasuhiro Kawasaki,[1] Yoichi Ikeda,[1] Shingo Araki,[1] Tatuo C. Kobayashi,[1] Atushi Onosaka,[2] Yoshihiko Okamoto,[2] Jun-ichi Yamaura,[2] and Zenji Hiroi[2]
[1]Department of Physics, Okayama University, Okayama, Japan
[2]Institute for Solid State Physics, University of Tokyo, Kashiwa, Chiba. Japan

22 **Electronic structure of iron-platinum-arsenide $Ca_{10}(Pt_4As_8)(Fe_{2-x}Pt_xAs_2)_5$ studied by angle-resolved photoemission spectroscopy**

Masanori Sunagawa,[1*] Rikiya Yoshida,[1,2,3] Koji Tsubota,[1] Toshihiko Ishiga,[1] Taihei Jabuchi,[1] Junki Sonoyama,[1] Satomi Kakiya,[1,2] Daisuke Mitsuoka,[1] Kazutaka Kudo,[1,2] Minoru Nohara,[1,2] Jian Jiang,[4] Hideaki. Iwasawa,[4] Kenya Shimada,[4] Hirofumi Namatame,[4] Masaki Taniguchi,[4] Kanta Ono,[5] Hiroshi Kumigashira,[5] Takanori. Wakita,[1,2,6] Yuji. Muraoka,[1,2,6] and Takayoshi Yokoya[1,2,6]
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[5]Institute for Material Structure Science, High Energy Accelerator Research Organization, Tsukuba, Ibaraki, Japan
[6]Research Laboratory for Surface Science, Okayama University, Okayama, Japan

23 **Chemical tuning of soft-phonons and enhancement of superconductivity by phosphorus doping of $BaNi_2As_2$**

Masaya Takasuga,[1] Kazutaka Kudo,[1] Yoshihiko Okamoto,[2] Zenji Hiroi,[2] and Minoru Nohara[1]
[1]Department of Physics, Okayama University, Okayama, Japan
[2]Institute for Solid State Physics, The University of Tokyo, Kashiwa, Japan

24 **Resistivity of aromatic hydrocarbon superconductors**

Kazuya Teranishi,[1] Xuexia He,[1] Masanari Izumi,[1] Yusuke Sakai,[1] Megumi Senda,[1] Ritsuko Eguchi,[1] Hidenori Goto,[1,2] Yasuhiro Takabayashi,[1] Takashi Kambe[3] and Yoshihiro Kubozono[1,2]
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[2]Research Center of New Functional Materials for Energy Production, Storage and Transport, Okayama University, Okayama, Japan
[3]Department of Physics, Okayama University, Okayama, Japan

25 **Single Crystal Growth and Electrical Resistivity Measurements of $CeNiGe_3$ under High Pressure**

Takeshi Tomijima, Yoichi Ikeda, Shingo Araki, Tatsuo C. Kobayashi
Department of Physics, Okayama University, Okayama, Japan

26 **Physical Properties in alkali and alkali earth metal doped triphenylene**

Keitarou Tomita,[1] Seiji Shibasaki,[1] Yuuki Takahei,[1] Keishi Ashida,[1] Yoshihiro Kubozono,[2] Takashi Kambe[1]
[1]Department of Physics ,Faculty of Science, Okayama University, Okayama, Japan
[2]Research Laboratory for Surface Science, Okayama University, Okayama, Japan

27 **Change in Fermi surface topology of $Ca(Fe_{1-x}Rh_x)_2As_2$ across the collapsed tetragonal phase transition revealed by angle-resolved photoemission spectroscopy**

Koji Tsubota,[1] Takanori Wakita,[1,2] Hiroki Nagao,[1] Chiaki Hiramatsu,[1] Toshihiko

Ishiga,[1] Kanta Ono,[3] Masataka Danura,[1,4] Kazutaka Kudo,[1,4] Minoru Nohara,[1,4] Yuji Muraoka[1,4] and Takayoshi Yokoya[1,4]
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[3]KEK Photon Factory, Tsukuba, Ibaraki, Japan
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28 **As-NMR/NQR study of iron-pnictide superconductor $Sr_2VFeAsO_3$**

K. Ueshima,[1] T. Oka,[1] F. Han,[2] H. -H. Wen,[2] Z. Li,[3] G. F. Chen,[3] N. L. Wang,[3] S. Kawasaki,[1] G. -q. Zheng[1,3]
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[2]Department of Physics, Nanjing University, Nanjing, China
[3]Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Science, Beijing, China

29 **Investigation on capacitance between ionic liquid and few-layer graphene**

Eri Uesugi,[1*] Hidenori Goto,[1,2] Ritsuko Eguchi[1] and Yoshihiro Kubozono[1,2]
[1]Research Laboratory for Surface Science, Okayama University, Okayama, Japan
[2]Research Center of New Functional Materials for Energy Production, Storage and Transport, Okayama University, Okayama, Japan