

J-Physics 2018: International Workshop on New Materials and Crystal Growth

June 28 – 30, 2018

Awaji Yumebutai International Conference Center

1 Yumebutai, Awaji, Hyogo 656-2306, Japan

June 28 (Thu)

Opening

9:00 – 9:10	Hisatomo Harima	Opning remarks
	Kobe, Japan	

Exotic Superconductors 1

9:10 – 9:40	Paul Canfield	Discovery of spin-vortex-crystal magnetic order in Ni- and Co- doped CaKFe ₄ As ₄
	Ames, USA	
9:40 – 10:10	Yoshikazu Mizuguchi	New Strategies for designing bismuth chalcogenide layered superconductors
	TMU, Japan	
10:10 – 10:40	Coffee Break	

Exotic Superconductors 2

10:40 – 11:10	Yasuyuki Nakajima	Tunable superconductivity and magnetism in topological semimetal candidate <i>R</i> PdBi
	Central Florida, USA	
11:10 – 11:30	Kazutaka Kudo	Superconductivity and polymorphism in hexagonal BaPtAs with an ordered honeycomb network
	Okayama, Japan	
11:30 – 11:50	Nicholas P. Butch	The relationship between structure and superconductivity in Weyl candidate MoTe ₂
	NIST, USA	
11:50 – 13:30	Lunch	

Exotic Materials 1

13:30 – 14:00	Eric D. Bauer	Novel topological phases in strongly correlated <i>d</i> - and <i>f</i> -electron materials
	LANL, USA	
14:00 – 14:30	Swee Kuan Goh	Quasilinear quantum magnetoresistance in pressure-induced nonsymmorphic superconductor chromium arsenide
	Hong Kong, China	
14:30 – 15:00	Moise Tchoula Tchokonte	Magnetocaloric effect and its implementation in critical behavior study of the ferromagnet Nd ₂ Pt ₂ In
	Western Cape, South Africa	
15:00 – 15:20	Hisashi Kotegawa	Quantum criticality of antiferromagnet Mn ₃ P under pressure
	Kobe, Japan	
15:20 – 15:50	Coffee Break	

Kondo Materials

15:50 – 16:20	Christoph Geibel	New puzzling results on the valence, the magnetism, and the superconductivity in Kondo lattice systems
	MPI Dresden, Germany	
16:20 – 16:50	Dariusz Kaczorowski	Coexistence of superconductivity and antiferromagnetism in heavy-fermion systems with multiple Kondo sites
	Wroclaw, Poland	
16:50 – 17:20	Tatsuma D. Matsuda	Unusual heavy electron state in Sm- and Yb-based Compounds
	TMU, Japan	
17:20 – 17:40	Yu Yamane	Single-site non-Fermi liquid behaviors in a diluted Pr system Y _{1-x} Pr _x Ir ₂ Zn ₂₀
	Hiroshima, Japan	
17:40 – 18:00	Hiraku Saito	Current-induced magnetization on Ce-based antiferromagnetic metals
	KEK, Japan	
18:00 – 18:20	Chihiro Tabata	X-ray Crystal Analysis of Toroidally Ordered System UNi ₄ B
	KEK, Japan	

June 29 (Fri)

Exotic Materials 2

9:00 – 9:30	Kosmas Prassides Tohoku, Japan	Carbon-based molecular materials as new electronic materials platforms
9:30 – 10:00	Yoshihiko Okamoto Nagoya, Japan	Crystal growth of 5d transition metal compounds: β -pyrochlore oxide CsW_2O_6 and one-dimensional telluride Ta_4SiTe_4
10:00 – 10:30	Hiroyuki Yoshida Hokkaido, Japan	Material development towards the perfect frustration on Kagome antiferromagnet
10:30 – 11:00	Coffee Break	

Actinoid Materials 1

11:00 – 11:30	M. Brian Maple UC San Diego, USA	Novel Electronic Phases and Competing Interactions in the Correlated f-Electron Compound URu_2Si_2
11:30 – 11:50	Taisuke Hattori JAEA, Japan	Strong Ising anisotropy of URu_2Si_2 probed by ^{29}Si NMR on the superconducting state
11:50 – 12:10	Shin-ichi Fujimori JAEA, Japan	Electronic structures of strongly correlated uranium compounds studied by three-dimensional ARPES
12:10 – 14:00	Group Photo and Lunch	

14:00 – 16:00 **Poster Session****Actinoid Materials 2**

16:00 – 16:30	Jiří Pospíšil Charles Univ., Czech Republic	Magnetism throughout the UCoGe-URhGe-UIrGe system studied on alloy single crystals
16:30 – 16:50	Ai Nakamura JAEA, Japan	Single crystal growth and fermi surface properties in thorium compounds
18:00 – 20:00	Banquet	

June 30 (Sat)

Crystal Growth

9:00 – 9:30	Arumugam Thamizhavel Tata Institute, India	Crystal growth of compounds that contain high vapor pressure element as one of the constituents
9:30 – 10:00	Jiaqiang Yan Oak Ridge, USA	Flux growth in a horizontal configuration: an analog to vapor transport growth
10:00 – 10:30	Yoshichika Ōnuki Ryukyus, Japan	High-quality single crystal growth in heavy fermion compounds
10:30 – 10:50	Toshiro Takabatake Hiroshima, Japan	Crystal growth and physical properties of Kondo semiconductors
10:50 – 11:20	Break	

Chiral Materials

11:20 – 11:50	Yusuke Kousaka Okayama, Japan	Homo-chiral crystallization and helimagnetic chirality in inorganic chiral magnetic compounds
11:50 – 12:20	Shigeo Ohara Nagoya Inst. Tech., Japan	Flux growth and characterization of new ytterbium intermetallic compounds: chiral magnetism and Kondo-lattice properties

Poster Award and Closing

12:20 – 12:40	Presentation of poster award and closing remarks	
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Poster Session (June 29, 14:00 – 16:00)

- P01 Hu Yajian
Hong Kong, China
Extremely large magnetoresistance and the complete determination of the Fermi surface topology in the semimetal ScSb
- P02 Nonoka Higa
JAEA, Japan
NMR studies of the incommensurate helical antiferromagnet EuCo_2X_2 ($\text{X} = \text{As}, \text{P}$)
- P03 Rajib Mondal
Tata Institute, India
Structural, magnetic and electrical transport properties of single crystalline CeTAs_2 ($T = \text{Cu}, \text{Ag}$)
- P04 Alexander Breindel
UC San Diego, USA
Quantum oscillations in $\text{PrT}_2\text{Cd}_{20}$ ($T = \text{Ni}, \text{Pd}$) Compounds
- P05 Maria Szlawska
Wroclaw, Poland
Magnetic ordering in single-crystalline CeAgAs_2
- P06 Yoshiki Sato
Tohoku, Japan
Superconducting properties and anisotropic superconducting gap of CeIr_3 single crystal
- P07 Arvind Maurya
Tohoku, Japan
Single crystal growth and Fermi surface properties of non-centrosymmetric $\text{U}_3\text{Ni}_3\text{Sn}_4$
- P08 Yuma Umimoto
Tokyo, Japan
A new way to control magnetism in Y-type hexaferrite
- P09 Hideki Tou
Kobe, Japan
NMR evidence for anomalous magnetic ground state in field-insensitive Heavy Fermion System $\text{SmTa}_2\text{Al}_{20}$
- P10 Minoru Nohara
Okayama, Japan
Giant phonon softening and enhancement of superconductivity induced by copper/phosphorus doping of BaNi_2As_2
- P11 Qun Niu
Hong Kong, China
Nonsaturating large magnetoresistance in high carrier density nonsymmorphic metal CrP
- P12 Hiroyuki Hidaka
Hokkaido, Japan
Low-energy phonon and f electronic state in the cage-structured compound MBe_{13}
- P13 Yoshiki Kuwata
Kobe, Japan
The ground states of the materials with similar zigzag structure to RuAs
- P14 Tsuyoshi Omi
Tokyo, Japan
Strong magnetoelastic coupling in multiferroic $\text{CaBaCo}_4\text{O}_7$
- P15 Shingo Araki
Okayama, Japan
Antiferromagnetic quantum criticality and anomalous transversal resistivity in CeRh_2Si_2
- P16 Rikako Yamamoto
Hiroshima, Japan
Crystalline electric field ground state and antiferromagnetic order of $\text{NdT}_2\text{Zn}_{20}$ ($T = \text{Co}, \text{Rh}$)
- P17 Yuichiro Noma
Kobe, Japan
 ^{73}Ge -NQR studies under pressure on magnetic fluctuations of ferromagnetic superconductor UGe_2
- P18 Yuri Fujima
Tokyo, Japan
Effects of uniaxial stress on skyrmion-lattice host GaV_4Se_8
- P19 Ryuto Nakanishi
Hyogo, Japan
Microscopic evidence for the dual Kondo temperatures in YbXCu_4 ($\text{X} = \text{Cu}, \text{Ag}$)
- P20 Takashi Matsui
Kobe, Japan
NMR study on rattling properties of tetrahedrite $\text{Cu}_{12}\text{Sb}_4\text{S}_{13}$
- P21 Yuka Kusanose
Hiroshima, Japan
Non-magnetic ground state doublet in a cubic Pr-based compound PrMgNi_4
- P22 Dai Aoki
Tohoku, Japan
Single crystal growth of uranium based heavy fermion compounds
- P23 Kaya Kobayashi
Okayama, Japan
Superconductivity in trilayer $(\text{PbSe})_n(\text{TiSe}_2)_m$ misfit compound
- P24 Tetsuya Takeuchi
Osaka, Japan
Spin-glass behavior in the flux-grown single crystal EuCu_2Si_2

- P25 Katsuhiko Suzuki Superconducting gap anisotropy in BiS₂ layered superconductors
Ritsumeikan University, Japan
- P26 Tetsuro Kubo NMR studies on magnetic fluctuations at low temperatures in PrT₂Al₂₀ (T = Nb, Ta)
Okayama Univ. of Science, Japan
- P27 Tatsuki Sato Magnetoelectric effect in a newly synthesized helical magnet Ni₂In_{1-x}A_xSbO₆ (A_x = Cr_{0.1}, Fe_{0.05})
Tokyo, Japan
- P28 Tatsuya Yanagisawa Anisotropic elastic response in the hidden order phase of URu₂Si₂ under high magnetic fields
Hokkaido, Japan
- P29 Akinari Kohriki Magnetization measurement of Ce(Ru_{1-x}Rh_x)₂Al₁₀ (x = 0, 0.05) under electric current
Hokkaido, Japan
- P30 Raquel A Ribeiro Superconductivity and structural phase transition in BaBi₃ under pressure
UFABC, Brazil / Iowa, USA