The All-RIKEN Workshop 2019

令和元年度 理研大交流会

The 20th Interdisciplinary Exchange Evening

Discovery Evening

Chief Scientist Assembly Research Workshop

FY 2017 Research Reporting Session for Incentive Research Grants

13:00 – 19:30 December 5th, 2019

10:00 – 17:30 December 6th, 2019

Suzuki Umetaro Hall & Main Cafeteria,

Wako Branch, RIKEN

RIKEN Scientists' Assembly Steering Committee (SASC)

Contact: "**researcher-exchange@ml.riken.jp**"

Supported by

President, Executive Directors, Auditors,

CPR, RNC, RAP, CEMS

and RIKEN Mutual Benefit Society

Program

Day 1st, December 5th, 2019

<Suzuki Umetaro Hall>

13:00 --- Opening Remarks

by Dr. Yasumasa Takenaka (Chair of SASC, CSRS)

13:10 --- About "The All-RIKEN Workshop 2019" About the Scientists' Assembly Steering Committee (SASC)

by Dr. Yasumasa Takenaka (Chair of SASC, CSRS)

13:20 --- Oral Presentations

~ 12 min Talk, 3 min Question and Discussions ~

(Language: English)

1. 42 mW Light Power and 9.1% EQE from AlGaN-based 304 nm-Band UVB LEDs grown on AlN Template
   Dr. Muhammad Ajmal Khan *Special Postdoctoral Researcher*
   Terahertz Quantum Device Research Team, RAP
2. Large fluctuations and the brain
   Dr. Lukasz Kusmierz *Research Scientist*
   Laboratory for Neural Computation and Adaptation, CBS
3. Hierarchical nanostructures and novel nanomaterials produced by laser ablation in liquids
   Dr. Dongshi Zhang *Postdoctoral Researcher*
   Advanced Laser Processing Research Team, RAP
4. Innovation on Metal-Mediated 11C-Cyanation and Intracyclic 11C-Labeling
   Dr. Zhouen Zhang *Research Scientist*
   Laboratory for Chemical Biology, BDR

--- Group Photo and Break ---

15:00 --- V.S.O.P.s (Very Short Oral Presentations)

(Language: English)

~ 5 min Talk, No Question and Discussions ~

"Discovery Evening"

1. (P1) Development of Cu Spin Correlation in Overdoped La_2-xSrxCuO$_4$ Nanoparticles
   Mr. Suci Winarsih *International Program Associate*
   Meson Science Laboratory, RNC
2. (P29) Tunable superconducting microwave beam splitter and switch on-chip
   Ms. Iuliia Zotova *International Program Associate*
   Superconducting Quantum Simulation Research Team, CEMS
3. (P2) Hacking magnets with big data
   Mrs. Marie-Therese Diana Huebsch *International Program Associate*
   First-Principles Materials Science Research Team, CEMS
4. (P27) Investigating the physiological role of Amyloid Precursor Protein
   Mr. Oliver Robert Wilkes *International Program Associate*
   Laboratory for Neurodiversity, CBS
5. (P28) The bushing of bacterial flagellar motor analyzed by electron cryomicroscopy
   Ms. Tomoko Yamaguchi *Junior Research Associate*
   Laboratory for Supramolecular System Dynamics Research, BDR

"General (Researcher)"

6. (P10) Trials to visualize unidentified metabolic pathways and enzymes
   Dr. Yoko Chiba *Research Scientist*
   Biofunctional Catalyst Research Team, CSRS
7. (P18) Hyperspectral imaging and Terahertz Spectroscopic Imaging Technology as the Novel Techniques for Food
   Dr. Chaohui Feng *Special Postdoctoral Researcher*
   Terahertz Sensing and Imaging Research Team, RAP
8. (P24) Electron Ion Collider
   Dr. Yuji Goto *Senior Research Scientist*
   Radiation Laboratory, RNC
9. (P8) Study of protein stability by integral equation theory of molecular liquids
   Dr. Yutaka Maruyama *Research Scientist*
   Architecture Development Team, R-CCS
10. (P11) In vivo calcium imaging with a single cell resolution using “cosmoscope”, a new wide-field two-photon microscope
    Dr. Keisuke Ota *Research Scientist*
    Laboratory for Haptic Perception and Cognitive Physiology, CBS
11. (P3) Universality of Few Charged Particles
    Dr. Christiane Heike Schmickler *Postdoctoral Researcher*
    Strangeness Nuclear Physics Laboratory, RNC
12. (P14) Memory of my victory and your defeat: Contributions of reward- and memory-related regions to the encoding of winning events in competitions with others
    Dr. Hikaru Sugimoto *Postdoctoral Researcher*
    Cognitive Behavioral Assistive Technology Team, AIP
13. (P16) QM/MM in GENESIS: Anharmonic vibrational calculations of biomolecules
    Dr. Kiyoshi Yagi *Senior Research Scientist*
    Theoretical Molecular Science Laboratory, CPR
14. (P5) EDGE：An Chisel-Based General Purpose Network on Chip Generator
    Dr. Hao Zhang *Research Scientist*
    Laboratory for Computational Molecular Design, BDR

< Main Cafeteria>

16:45 --- Poster Presentation

17:20 --- Free Talk

17:30 --- The 20th Interdisciplinary Exchange Evening
with Free Food and Drinks

19:00 --- Live Performance by CPR Band

19:30 --- Closing

Day 2nd, December 6th, 2019

< Suzuki Umetaro Hall >

10:00 --- Opening Remarks
by Dr. Masafumi Jo (WG1 Leader of SASC, CPR)

10:10 --- About the Collaboration Seed Fund「『連携のタネ』ファンド」
by Dr. Ma Yue (WG4 Leader of SASC, CPR)

--- Group Photo ---

10:45 --- Special Talks *~ 45 min Talk, 15 min Question and Discussions ~*

「研究所計画のプロセスからメンテナンスまで –理想のラボと現実–」
(Language: Japanese)

1. *Mr. Satoshi Tanaka (Corporate Officer, Dalton Corporation)*
2. *Mr. Toshimitsu Masuda (General Manager, Dalton Corporation)*

--- Lunch ---

13:00 --- About the Chief Scientist Assembly (CSA) Research Workshop
by Dr. Tahei Tahara (Chair of CSA, Chief Scientist, CPR)

13:10 --- Short Award Talks *~ 12 min Talk, 3 min Question and Discussions ~*

1. Robust learning against label noise
   "RIKEN BAIHO Awards"
   Dr. Gang Niu *Research Scientist*
   Imperfect Information Learning Team, Generic Technology Research Group, AIP
2. A secreted mobile peptide mediates distant organ communications in drought stress response
   "RIKEN BAIHO Awards"
   Dr. Fuminori Tahahashi *Research Scientist*
   Gene Discovery Research Group, CSRS
3. Optimization algorithm of order/degree problem for network topology in parallel computer system
   "RIKEN BAIHO Awards"
   Dr. Masahiro Nakao *Research Scientist*
   Programming Environment Research Team, R-CCS
4. The right decision is not always right — What I think through the PiP development
   "RIKEN BAIHO Awards"
   Dr. Atsushi Hori *Senior Research Scientist*
   System Software Research Team, R-CCS
5. Establishment of a new fate mapping system and identification of a molecular pathway of multipotent memory CD8+ T cells
   "RIKEN BAIHO Awards"
   Dr. Harumichi Ishigame *Research Scientist*
   Laboratory for Tissue Dynamics, IMS
6. Development of a new genomic technology for DNA replication analysis in single cells
   "RIKEN EIHO Awards"
   Dr. Hisashi Miura *Research Scientist*
   Dr. Saori Takahashi *Special Postdoctoral Researcher*
   Dr. Ichiro Hiratani *Team Leader*
   Laboratory for Developmental Epigenetics, BDR

--- Break ---

15:00 --- Invited Talks *~ 50 min Talk, 10 min Question and Discussions ~*

1. ***Rational Design of Mixed-Anions Semiconductor Photocatalysts toward Solar Hydrogen Production***
   by Prof. Ryu Abe (Kyoto University)
2. ***Catalyst and Process Design for Synthesis/Decomposition of Ammonia as an Energy Carrier***
   by Prof. Katsutoshi Nagaoka (Nagoya University)

17:00 --- Poster Award

17:25 --- Closing

Poster Presenters (*Blue bold numbers are Very Sort Oral Presenters*)

P1. Development of Cu Spin Correlation in Overdoped La_2-xSrxCuO_4 Nanoparticles
Suci Winarsih *International Program Associate*
Meson Science Laboratory, RNC

P2. Hacking magnets with big data
Marie-Therese Diana Huebsch *International Program Associate*
First-Principles Materials Science Research Team, CEMS

P3. Universality of Few Charged Particles
Christiane Heike Schmickler *Postdoctoral Researcher*
Strangeness Nuclear Physics Laboratory, RNC

P4. Epi-transcriptomic mechanisms in epigenetic regulation of temporal patterning in neural stem cells
Quan Wu *Special Postdoctoral Researcher*
Laboratory for Cell Asymmetry, BDR

P5. EDGE：An Chisel-Based General Purpose Network on Chip Generator
Hao Zhang *Research Scientist*
Laboratory for Computational Molecular Design, BDR

P6. The Quest for Neural Mechanism of Hallucinations
Yasuhiro Oisi *Special Postdoctoral Researcher*
Laboratory for Haptic Perception and Cognitive Physiology, CBS

P7. Detection of Emergent Electromagnetic Induction
Hiroshi Oike *Visiting Scientist*
Dynamic Emergent Phenomena Research Unit, CEMS

P8. Study of protein stability by integral equation theory of molecular liquids
Yutaka Maruyama *Research Scientist*
Architecture Development Team, R-CCS

P9. Butadiene biosynthesis in Escherichia Coli via the rationally-designed enzyme variants
Yutaro Mori *Postdoctoral Researcher*
Cell Factory Research Team, CSRS

P10. Trials to visualize unidentified metabolic pathways and enzymes
Yoko Chiba *Research Scientist*
Biofunctional Catalyst Research Team, CSRS

P11. In vivo calcium imaging with a single cell resolution using “cosmoscope”, a new wide-field two-photon microscope
Keisuke Ota *Research Scientist*
Laboratory for Haptic Perception and Cognitive Physiology, CBS

P12. Photodetachment of negative ion beams for the ion-neutral merged-beam experiments at RICE
Masatomi Iizawa *Junior Research Associate*
Atomic, Molecular & Optical Physics Laboratory, CPR

P13. Improvement of estimation of surface flux in atmospheric simulation
Seiya Nishizawa *Research Scientist*
Computational Climate Science Research Team, RCCS

P14. Memory of my victory and your defeat: Contributions of reward- and memory-related regions to the encoding of winning events in competitions with others
Hikaru Sugimoto *Postdoctoral Researcher*
Cognitive Behavioral Assistive Technology Team, AIP

P15. Two-Dimensional Microchip Electrophoresis
Hirohito Sasaki *Visiting Technician*
Ultrahigh Precision Optics Technology Team, RAP

P16. QM/MM in GENESIS: Anharmonic vibrational calculations of biomolecules
Kiyoshi Yagi *Senior Research Scientist*
Theoretical Molecular Science Laboratory, CPR

P17. Development of a novel systematic method for an inhibitor-sensitive mutant
Yuichi Shichino *Visiting Researcher (JSPS Research Fellow)*
RNA Systems Biochemistry Laboratory, CPR

P18. Hyperspectral imaging and Terahertz Spectroscopic Imaging Technology as the Novel Techniques for Food
Chaohui Feng *Special Postdoctoral Researcher*
Terahertz Sensing and Imaging Research Team, RAP

P19. Multiple-isotope positron emission tomography and its applications

Tomonori Fukuchi *Research Scientist*
Laboratory for Pathophysiological and Health Science, BDR

P20. Lipid-cholesterol-protein interaction in the dimerization of juxtamembrane domains of epidermal growth factor receptor
Ryo Maeda *Contact Researcher*
Sako Cellular Informatics, CPR

P21. Biological application of ion microbeam irradiation: measurement of beam profiles
Yuka Hikima *Student Trainee*
Detector Team, RNC

P22. The effect of lipid composition on the dimer conformation of EGFR TM-JM region investigated with MD simulations.
Daisuke Matsuoka *Postdoctoral Researcher*
Theoreotical Molecular Science Laboratory, CPR

P23. Enhanced degree of molecular orientation by controlling rubbing temperature in thienoquinoid semiconductor thin films
Tetsuya Aoyama *Senior Research Scientist*
Elements Chemistry Laboratory, CPR

P24. Electron Ion Collider
Yuji Goto *Senior Research Scientist*
Radiation Laboratory, RNC

P25. Visualization of Homeostatic Disturbances in Space
Asako Sakaue-Sawano *Research Scientist*
Lab for Cell Function Dynamics, CBS

P26. RIKEN SHARing system for Shared-Use Facilities and Equipment ～SimpRent（理研）～
Kentaro Fuji *Staff*
Pioneering Research Promotion Office, CPR

P27. Investigating the physiological role of Amyloid Precursor Protein
Oliver Robert Wilkes *International Program Associate*
Laboratory for Neurodiversity, CBS

P28. The bushing of bacterial flagellar motor analyzed by electron cryomicroscopy
Tomoko Yamaguchi *Junior Research Associate*
Laboratory for Supramolecular System Dynamics Research, CBS

P29. Tunable superconducting microwave beam splitter and switch on-chip
Iuliia Zotova *International Program Associate*
International Program Associate, CEMS

P30. Long-range substituent effect on selectivity in radical fluoroalkylation via 1,4-aryl migration of N-arylallylamides: Selective synthesis of fluoroalkylated phenethylamines.
Yusuke Mitani *Student Trainee*
Synthetic Organic Chemistry Laboratory, CPR

P31. Prediction of behavioral expression based on brain network dynamics in mice
Nobuhiro Nakai *Research Scientist*
Laboratory for Mental Biology, CBS

P32. Design and analysis of DUV-LEDs and QCLs by utilizing HOKUSAI
Joosun Yun *Special Postdoctoral Researcher*
Quantum Optodevice Laboratory, CPR

P33. Time-Resolved Impulsive Stimulated Raman Spectroscopic studies on Metal-Metal Bond Formation in K[Au(CN)2] large oligomers
Li Liu *Postdoctoral researcher*
Molecular Spectroscopy Laboratory, CPR

P34. Band selective visualization of electron spin relaxation in a semiconductor
Shunji Yamamoto *Special Postdoctoral Researcher*
Surface & Interface Science Laboratory, CPR

P35. Molecular tuning of the optical properties in air-suspended carbon nanotubes
Zhen Li *Postdoctoral Researcher*
Nanoscale Quantum Photonics Laboratory, RAP

P36. Sub-shot-noise absorption spectroscopy based on entangled photon pairs
Korenobu Matsuzaki *Special Postdoctoral Researcher*
Molecular Spectroscopy Laboratory, CPR

P37. Improvement of light-extraction efficency AlGaN UV LEDs by using superlattice hole spreading layer and Al reflector
Noritoshi Maeda *Research Scientist*
Quantum Optodevice Laboratory, CPR

P38. Development of gas cell to stop and collect high energy RI beam, and extract radioactive ions with a high efficiency

Shun Iimura *Junior Research Associate*
Instrumentation Development Group, SLOWRI Team, RNC

P39. Development of an Interferometric 2D Heterodyne-detected Vibrational Sum-frequency Generation Spectrometer for Investigation of Ultrafast Dynamics at Liquid Interfaces
Woongmo Sung *Postdoctoral Researcher*
Molecular Spectroscopy Laboratory, CPR

P40. Efficient siRNA delivery using peptide-lipid hybrid vesicle mediated by fusogenic pathway
Mohammed Abdelhamid ramadan Abosheasha *Student trainee*
Nano Medical Engineering Laboratory, CPR

P41. Fission of Capsule-Shaped Vesicle Prepared from Amphiphilic Polypeptides
Kon Son *Research Part-time Worker II, Student Trainee*
Emergent Bioengineering Materials Research Team, CEMS

P42. Cbfb/Runx regulate ILC2 function and homeostasis
Takashi Ebihara *Visiting Scientist (Professor)*
Laboratory for Transcriptional Regulation, IMS (Akita University)

P43. 【Expired】FY2019 Incentive Research Projects
Kentaro Fuji *Staff*
Pioneering Research Promotion Office, CPR

Poster Arrangement