

Program

November 8

Opening Session

Chair: Shin Yokoyama, Hiroshima University

- 13:00~13:05 **Opening Remarks:** Mitsuo Ochi, President, Hiroshima University
- 13:05~13:10 **Greeting:** Tomonori Nishii, Director, Scientific Research Institutes Division,
Research Promotion Bureau, MEXT
- 13:10~13:20 Introduction of Research Center for Biomedical Engineering
Yuji Miyahara, Tokyo Medical and Dental University

Session A

Chair: Akira Matsumoto, Tokyo Medical and Dental University

- 13:20~14:00 Doron Shabat, Tel-Aviv University (Invited)
"The Emergence of Aqueous Chemiluminescence: New Promising Class of
Phenoxy 1,2-Dioxetanes"
- 14:00~14:15 Keiji Itaka, Tokyo Medical and Dental University
"mRNA-based Therapy for Intractable Diseases and Regenerative Medicine"
- 14:15~14:30 Tomoya Hirano, Tokyo Medical and Dental University
"Identification and Application of Novel Structural Component for Fluorescent
Sensors from Chemical Compounds Library and Natural Compounds"
- 14:30~14:45 Naohiro Horiuchi, Tokyo Medical and Dental University
"Electric Properties of Hydroxyapatite and Their Applications"

14:45~16:15 Poster Session 1 & Coffee Break

Academic-Industrial Collaboration Session

Chair: Shin-Ichiro Kuroki, Hiroshima University

- 16:25~16:50 Toshifumi Imamura, A-R-Tec Corporation
"CMOS-LSI for Breast Cancer Detection"
- 16:50~17:15 Sadato Hongo, Toshiba Corporation
"A New Approach to Virus Detection Using Nanopore Technologies"
- 17:15~17:40 Tomonori Tsukiya, National Cerebral and Cardiovascular Center
"Clinical Evaluations of an Extracorporeal Ventricular Assist Device in National
Cerebral and Cardiovascular Center (NCVC)"
- 17:40~18:05 Yasushi Nakano, Konica Minolta Inc.
"Quantitative Diagnostic Imaging of Human Tissues using Phosphor Integrated
Dots with Ultra-High Brightness"

Networking

Chair: Anri Nakajima, Hiroshima University

18:30~20:00

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Session B

Chair: Tetsuo Sasaki, Shizuoka University

- 10:00~10:40 Michael J. Schöning, Aachen University of Applied Sciences
"Field-effect Biosensing - Selected Examples"
- 10:40~10:55 Hiroshi Inokawa, Shizuoka University
"Refractive Index Measurement with Surface Plasmon Antenna on Photodiode and its Application to Biosensing"
- 10:55~11:10 Atsushi Ono, Shizuoka University
"Optical Bio-imaging by Surface Enhanced Fluorescence"
- 11:10~11:25 Nozomi Nishizawa, Tokyo Institute of Technology
"Development of a Novel, Non-invasive and Unstaining Diagnosis Technique of Cancerous Tissues Using Circularly Polarized Light"

11:25~13:15 Poster Session 2 & Lunch

Session C

Chair: Tadahiko Shinshi, Tokyo Institute of Technology

- 13:25~14:05 Nora Dempsey, Institut Néel
"Magnetic Micro-structures for Biomedical Engineering and Life Science Applications"
- 14:05~14:20 Akitoshi Okino, Tokyo Institute of Technology
"Development of Atmospheric Multi-Gas Temperature-Controllable Plasma and Application to Medical/Dental/Bio Science Field"
- 14:20~14:35 Tomokazu Numano, Tokyo Metropolitan University
"Quantitative Palpation of Skeletal Muscle Systems with MR Elastography"
- 14:35~14:50 Kenji Suzuki, Tokyo Institute of Technology
"Deep Learning in Medical Image Processing and Computer-Aided Diagnosis"

14:50~15:10 Coffee Break

Session D

Chair: Masakazu Iwasaka, Hiroshima University

- 15:10~15:50 Declan O'Loughlin, National University of Ireland
"Remaining Technical Challenges for Clinical Adoption of Microwave Breast Imaging"
- 15:50~16:05 Takamaro Kikkawa, Hiroshima University
"A Hand-Held Breast Cancer Screening System"
- 16:05~16:20 Yoshiteru Amemiya, Hiroshima University
"Silicon Photonic Devices for Biosensing Applications"
- 16:20~16:35 Toshihiro Kasama, The University of Tokyo
"Intraoperative Ultra-high Speed Genotyping of Brain Tumors by Using Microfluidic Immunoassay Devices"

Closing Session

Chair: Takamaro Kikkawa, Hiroshima University

- 16:35~16:50 **Award Ceremony**
Closing Remarks: Hidenori Mimura, Shizuoka University