

OS31: Japan-South Africa Bilateral Workshop

November 11, 2025

EX-4B

- OS31-1
9:00-9:30 **Molecular Dynamics Simulation of Hydroxide Transport and Stability in Polyfluorene-based Anion Exchange Membranes Functionalized with Hexamethylenediamine** (*Invited*)
Thandiwe. R Maumau (University of Johannesburg, South Africa), Thabakgolo T. Letsau (Wits Business School, South Africa), Nobanathi. W Maxakato (University of Johannesburg, South Africa), Takuya Mabuchi (Tohoku University, Japan), Phumlani F. Msomi (University of South Africa, South Africa)
- OS31-2
9:30-9:45 **Evaluation of the Effect of Ultrasound-Induced Bubbles in Biological Tissue for the Purpose of Suppressing Light Scattering**
Tomoki Tani, Atsuki Komiya (Tohoku University, Japan)
- OS31-3
9:45-10:00 **Investigation of the Effect of Ultrasound Combined with PhotoElectroCatalysis on ZnFe₂O₄ Doped with Gold as a Piezo-Photo Anode for the Removal of Ciprofloxacin in Water**
Tsholofelo I. Sebokolodi, Dimpo S. Sipuka, Kehinde D. Jayeola, Omotayo A. Arotiba (University of Johannesburg / Centre for Nanomaterials Science Research, South Africa)
- OS31-4
10:00-10:15 **A Perovskite/Spinel Structured LaFeO₃/Co₃O₄ Heterojunction for Photoelectrocatalytic Applications in Degradation of Tetracycline and Water Splitting**
Gugulethu P. Ndimba, Oluchi V. Nkwachukwu, Omotayo A. Arotiba (University of Johannesburg, South Africa)
- OS31-5
10:15-10:30 **The Timing of Immune Checkpoint Inhibitor Administration via The Lymphatic Drug Delivery System Affceres Inhibition of Metastasis, Particularly when Combined with Docetaxel**
Ariunbuyan Sukhbaatar, Shiro Mori, Tetsuya Kodama (Tohoku University, Japan)
- 10:30-10:45 BREAK
- OS31-6
10:45-11:00 **Smart Multifunctional Nanocarriers for Targeted Antibiotic Delivery: A Triple-Action Approach to Sepsis Management**
Relebohile Mautsoe (University of KwaZulu-Natal, South Africa), Eman A. Ismail (University of KwaZulu-Natal, South Africa / University of Gezira, Sudan), Calvin A. Omolo, Ghazi Elamin, Jasoda Govender, Mohammed A. Gafar, Thirumala Govender (University of KwaZulu-Natal, South Africa)
- OS31-7
11:00-11:15 **Comprehensive Analysis of the Impact of Solvent Osmolarity and Viscosity on Lymph Node Pharmacokinetics and the Surrounding Environment in Lymphatic Drug Delivery System**
Taiki Shimano, Ariunbuyan Sukhbaatar, Shiro Mori, Tetsuya Kodama (Tohoku University, Japan)

- OS31-8
11:15-11:30 **Exploring the Antibacterial and Antitumor Activities of Bioactive Constituents Secreted by Bacterial Endophytes Isolated from *Alectra sessiliflora***
Mehabo Penistacia Maela, Mahloro Hope Serepa-Dlamini (University of Johannesburg, South Africa)
- OS31-9
11:30-11:45 **Pharmacokinetic Modeling of a Lymphatic Drug Delivery System Targeting Clinically Occult N0 Lymph Nodes**
Reito Miyazaki, Ariunbuyan Sukhbaatar, Shiro Mori (Tohoku University, Japan), Takahiro Kusaka, Katsunori Katagiri (Iwate Medical University, Japan), Tsuyoshi Sugiura, Tetsuya Kodama (Tohoku University, Japan)
- OS31-10
11:45-12:00 **Electrochemical Detection of Nicotine in Hookah Smoke Using a Graphene-PEDOT: PSS/Nitrogen-Doped Carbon Nanosheet/Screen-Printed Carbon Electrode Sensor**
Sesethu Makaluza, Foluke O. G. Olorundare, Busisiwe N. Zwane, Duduzile Nkosi, Omotayo A. Arotiba (University of Johannesburg, South Africa)
- OS31-11
12:00-12:15 **Targeted Treatment of Metastatic Lymph Nodes via Lymphatic Drug Delivery System of a HDAC/PI3K Dual Inhibitor**
Erika Tada, Ariunbuyan Sukhbaatar, Shiro Mori, Ken Saijo, Chikashi Ishioka, Hisato Kawakami, Tsuyoshi Sugiura, Tetsuya Kodama (Tohoku University, Japan)
- 12:15-13:30 BREAK
- OS31-12
13:30-13:45 **A Label-Free TB Test Using Electrochemiluminescence As The Transducer**
Meleskow Cox (University of the Western Cape, South Africa), Samantha Fiona Douman (University of Cape Town, South Africa), Emmanuel Iheanyichukwu Iwuoha (University of the Western Cape, South Africa)
- OS31-13
13:45-14:00 **Efficacy of Radioimmunotherapy for Metastatic Lymph Nodes without Site-Specific Identification**
Ryuma Suzuki, Wilda Septilah Aulia, Taiki Shimano, Ariunbuyan Sukhbaatar, Shiro Mori, Tetsuya Kodama (Tohoku University, Japan)
- OS31-14
14:00-14:15 **Dendrimer – Gold Nanocomposite-Based Electrochemical Aptasensor for the Detection of Dopamine**
Dimpo S. Sipuka, Foluke O.G.Olorundare, Sesethu Makaluza, Nyasha Midzi, Tsholofelo I. Sebokolodi, Omotayo A. Arotiba, Duduzile Nkosi (University of Johannesburg, South Africa)
- OS31-15
14:15-14:30 **The Evaluation of Histopathology Related to Treatment Efficacy of Docetaxel Treatment by LDDS for Lymph Node Metastasis**
Wilda Septilah Aulia, Kaimori Kanon, Ariunbuyan Sukhbaatar, Mori Shiro, Tsuyoshi Sugiura, Tetsuya Kodama (Tohoku University, Japan)
- OS31-16
14:30-14:45 **Electrochemical Detection of Paracetamol in Wastewater Using an Exfoliated Graphite-CuInSe/ZnS QDs Electrode**
Patience S. Silinda, Tsholofelo I. Sebokolodi, Oluwafemi S. Oluwafemi, Omotayo A. Arotiba (University of Johannesburg, South Africa)