

Tokyo Institute of Technology - RWTH Aachen University Joint Workshop

Interfaces of Biological and Bio-inspired Materials for Future BioDevices

Date and Time: Thursday, February 9, 2023, 9:20 a.m.

Venue: Ookayama Lecture Theater (W531)

** Online participation is available. The zoom link will be sent later.*

In order to make the "Doctoral Students Exchange Program Between RWTH and Tokyo Tech" widely known to everyone in the university, we will hold a workshop inviting several professors from the RWTH Aachen University

The theme is the latest research on materials and devices that are very important for the post-COVID world and are closely related to our healthcare. We are also pleased to have a professor from Tokyo Medical and Dental University for an invited talk on this topic, in addition to researchers from Tokyo Tech.

Schedule

- 9:20- Lectures by researchers from Aachen Univ. and Tokyo Tech.
- 16:10- Explanation of the
" Doctoral Students Exchange Program Between RWTH and Tokyo Tech"
- 17:00- Poster presentations by students

We are now accepting students for poster presentations. We look forward to your participation.

Registration is here.  

<https://forms.gle/hqDAb64feM6uxL4H7>



【Organizer】 School of Materials and Chemical Technology, Tokyo Institute of Technology and
RWTH Aachen University

【Contact】 mct.intl.adm@jim.titech.ac.jp (Administrative Affairs Group, School of Materials Science and Engineering, Tokyo Tech)

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Tokyo Institute of Technology - RWTH Aachen University: Joint Workshop on "Interfaces of Biological and Bioinspired Materials for Future BioDevices"

Time		Name	Affiliation	Title
Japan	Germany			
9:20	1:20	Prof. Hidetoshi Sekiguchi	School of Materials and Chemical Technology, Tokyo Institute of Technology	Opening Remark
9:30	1:30	Prof. Sven Ingebrandt	Electrical Engineering and Information Technology, RWTH Aachen University	Biosensor concepts based on silicon field-effect transistor devices
9:55	1:55	Assoc. Prof. Masayoshi Tanaka	School of Materials and Chemical Technology, Tokyo Institute of Technology	Technique Development for Proteomic Exploration of Membrane Curvature Sensors using Spherical Supported Lipid Bilayers
10:20	2:20	Dr. Akram Idrissi	ITA Group International Centre for Sustainable Textiles, RWTH Aachen University	Medical Smart Textiles: Material and Technology Innovations for Wearable Healthcare
10:45	2:45	Break		
11:00	3:00	Assoc. Prof. Toshiaki Sawada	School of Materials and Chemical Technology, Tokyo Institute of Technology	Surface engineering of biopolymers toward functional soft materials
11:25	3:25	Dr. Sikandar Hayat	Institute of Experimental Medicine and Systems Biology, Uniklinik RWTH Aachen	Using novel single-cell multi-omics approaches to find biomarkers for patient stratification
11:50	3:50	Prof. Junko Morikawa	School of Materials and Chemical Technology, Tokyo Institute of Technology	Measurement methods of nano/micro-thermal interface and prospects for biosensing applications
12:15	4:15	Lunch time		
13:30	5:30	Dr. Vivek Pachauri	Institute of Materials in Electrical Engineering 1, RWTH Aachen University	Bioinspired system-integration for future computing and biosensor platforms
13:55	5:55	Assoc. Prof. Yuhei Hayamizu	School of Materials and Chemical Technology, Tokyo Institute of Technology	Characterization of Nano-Bio interfaces of 2D materials Toward Novel Biosensing
14:20	6:20	Prof. Dr. Maria Fyta	Mathematics, Computer Science and Natural Sciences RWTH Aachen University	Computational interrogation of the bio/material interface: the case of DNA and gas sensing
14:45	6:45	Prof. Yuji Miyahara	Institute of Biomaterials and Bioengineering, Tokyo Medical & Dental University (TMDU)	Detection of biomolecular recognition and cell function using bio-transistors
15:10	7:10	Break		
15:20	7:20	Prof. Katsunori Tanaka	School of Materials and Chemical Technology, Tokyo Institute of Technology	Therapeutic In Vivo Synthetic Chemistry
15:45	7:45	Prof. Dr. César Rodríguez-Emmenegger	DWI-Leibniz Institute for Interactive Materials, RWTH Aachen University	Using Nature's engineering principles to design biointerfaces and synthetic cells for biomedicine
16:10	8:10	Prof. Ji Shi	School of Materials and Chemical Technology, Tokyo Institute of Technology	Introduction of the "Doctoral Students Exchange Program Between RWTH and Tokyo Tech"
16:20	8:20	Dr. Meguya Ryu	AIST (Former student at Tokyo Institute of Technology)	Experiences of the Exchange program at Aachen
16:30	8:30	Chishu Homma	School of Materials and Chemical Technology, Tokyo Institute of Technology	Experiences of the Exchange program at Aachen
16:35	8:35	Prof. Yoshitaka Kitamoto	School of Materials and Chemical Technology, Tokyo Institute of Technology	Closing Remark
16:40	8:40	Move to the poster session location		
17:00	9:00	Poster session @ Tokyotech Front	<ul style="list-style-type: none"> ◆ A special poster presenter from Tokushima University <u>Prof. Takaaki Yano</u> Plasmonic digital sensors for highly sensitive biomolecular detection ◆ Four student presenters from RWTH Aachen University <u>Dibyendu Khan</u>: Graphene-nanoparticle interface on silicon photodiodes as a hybrid platform for biosensor applications <u>Animesh Pratap Singh</u>: Electrochemical logic gates for encoding biological information for circuit-security applications <u>Aidin Nikookhesal</u>: Realization of graphene-based thin-films for biologization of two-dimensional bionanointerfaces <u>Hesam Amiri</u>: High-accuracy on-chip characterization of thermal annealing and reduction of Graphene oxide films <p>* The student presenters from TokyoTech will be announced later.</p>	