

The 25th SANKEN International Symposium

Thursday, January 6, 2022

13:30	13:40	Opening Remark by Prof. Tohru Sekino, Director of SANKEN, Osaka University
Chair: Yasushi Yagi		
13:40	14:10	(IL01) Kikuo Kishimoto (New Energy and Industrial Technology, Japan) Promising innovations in the post-COVID world
14:10	14:40	(IL02) Fujio Toriumi (The University of Tokyo, Japan) All you need is not only the facts- Analysis of the infordemic during the COVID-19 pandemic -
Break		
Chair: Tomonao Hosokai		
15:10	15:40	(IL03) Akinori Kuzuya (Kansai University, Japan) DNA nanodevices for single-molecule optical detection of various biomolecules
15:40	16:10	(IL04) Yuji Sano (Institute for Molecular Science, Japan) Fundamentals of laser peening and its industrialization through quantum beam technology
Break		
Chair: Masayuki Numao		
16:40	17:40	(PL01) Sven Groppe (University of Lübeck, Germany) Leveraging artificial intelligence and machine learning in pandemics using COVID-19 as a case study
Break		
Chair: Kiyohiko Kawai		
17:50	18:50	(PL02) Jens Sobek (University of Zurich, Switzerland) The oxidation of guanine in oligonucleotides monitored at single molecules using a modified DNA sequencer
Break		
Chair: Yuji Sano		
19:00	20:00	(PL03) Domenico Furfari (AIRBUS Operations GmbH, Germany) Towards innovation for in-service technologies and future aircraft programs
Group Photo		

Friday, January 7, 2022		
10:30	12:00	Poster Session (see poster program)
Break		
Creation of new science and technology by integrating information sciences, and development to society		
Discussion Leader: Tomoya Nakamura		
13:00	13:20	(Y1-1) Takafumi Fujita (Osaka University, Japan) Introducing machine learning to semiconductor single-spin quantum computation
13:20	13:40	(Y1-2) Teppei Araki (Osaka University, Japan) Flexible sensor sheet for healthcare monitoring
13:40	14:00	(Y1-3) Takashi Morita (Osaka University, Japan) Toward end-to-end unsupervised classification of animal vocalization
14:00	14:20	(Y1-4) Shuqiong Wu (Osaka University, Japan) Facilitating computed-tomography-based diagnosis using deep learning techniques
Discussion Leader: Zhan Jin		
13:00	13:20	(Y2-1) Taishi Yokoi (Tokyo Medical and Dental University, Japan) Development of octacalcium phosphate-based functional biomaterials
13:20	13:40	(Y2-2) Yasuyuki Kondo (Osaka University, Japan) Charge-discharge reactions of aqueous energy-storage devices
13:40	14:00	(Y2-3) Tomoyo Goto (Osaka University, Japan) Development of seaweed-like sodium titanate as a sorbent material for environmental purification
Discussion Leader: Yasuko Osakada		
13:00	13:20	(Y3-1) Kai Lu (Osaka University, Japan) Going fast and nano: Rediscoveries of the fluorescent protein toolbox for thermometry and nanoscopy in biological cells
13:20	13:40	(Y3-2) Masaharu Somiya (Osaka University, Japan) Analysis of intracellular trafficking of extracellular vesicles for cytoplasmic biomacromolecule delivery
13:40	14:00	(Y3-3) Yasuko Osakada (Osaka University, Japan) Development of photo-functional nanomaterials with new properties and their application to bioscience
Basic researches of nanotechnology		
Discussion Leaders: Seiho Jinnai, Masao Gohdo		
13:00	13:20	(Y4-1) Hao-Bo Li (Osaka University, Japan) Synthesis of highly reduced strongly correlated oxide SrCoO ₂
13:20	13:40	(Y4-2) Hiroyoshi Momida (Osaka University, Japan) Piezoelectricity of wurtzite materials: A first-principles study

13:40	14:00	(Y4-3) Naoto Kamiuchi (Osaka University, Japan) Nanostructure of Rh/SnO ₂ catalyst under CO oxidation reaction
14:00	14:20	(Y4-4) Yuki Komoto (Osaka University, Japan) DNA detection and discrimination using of nanogap single-molecule measurement
Advanced applications based on nanotechnology Discussion Leader: Masaaki Geshi, Yoshikata Nakajima		
13:00	13:20	(Y5-1) Hiroki Yamaguchi (Daikin Industries, Ltd., Japan) Improvement of water repellency of fluoroalkyl (meth) acrylate-based polymer with chemical and physical approaches
13:20	13:40	(Y5-2) Taisuke Matsui (Panasonic Corporation, Japan) Development of perovskite solar cells
13:40	14:00	(Y5-3) Hiroko Miki (Toshiba Corporation, Japan) Wafer-scalable graphene sensors for biological detection in ionic liquids
14:00	14:20	(Y5-4) Yasuaki Okada (Murata Manufacturing Co., Ltd., Japan) Atomic scale simulations for pseudocapacitive MXene electrode
14:20	14:40	(Y5-5) Daichi Suemasa (JSR Corporation, Japan) Laboratory automation for high-level expression of recombinant protein-A in escherichia coli
Break		
Chair: Yoichi Yoshida		
15:00	16:00	(PL04) Jai Pal Mittal (National Academy of Sciences, India) Scientific and technological advances in India during COVID-19
Break		
Chair: Yoichi Yoshida		
16:10	16:40	(IL05) Kiyohiko Kawai (Osaka University, Japan) Single molecule analysis and diagnosis by measuring chemical reaction rates
16:40	17:10	(IL06) Hidekazu Tanaka (Osaka University, Japan) Nanotechnology platform at SANKEN- Current and future beyond COVID-19 -
Closing and Group Photo		