

SCIENTIFIC PROGRAM

SESSION LECTURE

No.16

Nanobiotech for Precision Medicine and Healthy Life
Room: Dong Yu Grand Ballroom 4

Co-Chair:
Xing-Jie Liang



Juyoung Yoon



Day 2 October 20th (Sunday) 14:00 – 17:50

Time	Speaker	Title
14:00-14:30	Jianlin Shi Shanghai Institute of Ceramics, CAS, China	Nanocatalytic Medicine for Anti-inflammation
14:30-15:00	Juyoung Yoon Ewha Womans University, Korean	Phototherapy: activatable multimodal theranostics to realize imaging-guided precision therapy for diseases
15:00-15:30	Kenneth Dawson University College Dublin, Ireland	A critical role for glassy states biomolecular condensates in nanoscale regulation of biology
15:30-15:50	Tea Break	
15:50-16:20	Chenzhong Li Chinese University of Hong Kong (Shenzhen), China	Bio-optoelectronics for Energy Medicine
16:20-16:50	Xing-Jie Liang National Center for Nanoscience and Technology, CAS, China	Develop Nanobiomedical Technology to Benefit the Human Health
16:50-17:05	Yuanyu Huang Beijing Institute of Technology, China	Nucleic Acid Delivery and Drug Development
17:05-17:20	Dechao Niu East China University of Science and Technology, China	Micellar-mediated silica-based biomaterials for tumor therapy
17:20-17:35	Dong Wang Hainan University, China	Electron Conductive and Transparent Hydrogels for Brain Neural Signals Recording and Neuromodulation
17:35-17:50	Rui Wang Hainan Medical University, China	Tumor environment responsive nanomaterials for fluorescence image-guided photodynamic immunotherapy



Jianlin Shi

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Academician of Chinese Academy of Sciences and Chinese Academy of Medical Science, and Professor of Shanghai Institute of Ceramics. Recently he proposed the concept of Nanocatalytic Medicine for disease (such as malignant tumor and oxidative stress) therapeutics by using nanocatalyst-initiated chemical reactions without using conventional toxic chemodrugs. In the nanocatalytic therapy for oxidative stress-related diseases, immune regulations have most recently been found to be of great significance in realizing anti-inflammation of elevated and prolonged efficacy.



Kenneth Dawson

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Director of the Centre for BioNano Interactions (CBNI), Chair of Physical Chemistry and Full Professor at UCD School of Chemistry. A leading expert on the principles governing the interactions of nanoscale entities with living organisms and the founder of the modern concept of the 'bimolecular corona' hypothesis responsible for nanoparticle biological identity—that is, how cells and tissues 'perceive' the approaching particle. His team's work at CBNI has been central to understanding the unique processes by which nanostructures are recognized and processed in biology.



Xing-Jie Liang

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Chinese medical/biotechnology and pharmaceutical researcher and Member of Academia Europaea, Fellow of American Institute of Medical and Biological Engineering. He is the Chief Professor at University of Chinese Academy of Sciences, and the principal investigator at CAS Center for Excellence in Nanoscience. His research interests are in elucidating mechanisms to improve drugability and nanomedicinal bioavailability by nanotechnology in vitro and in vivo, and novel strategies to increase therapeutic efficiency on cancers and infective diseases, developed "Injectable Nanomicelle Powder with Irinotecan" approved with CFDA and transferred to pharmaceutical industry for clinical trials.



Dechao Niu

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He is a full professor at East China University of Science and Technology. His research interests focus on the organosilica-based hybrid biomaterials and silica-based porous nanoparticles for biomedical applications. He has authorized 5 patents and published 80 papers in journals including Nat. Commun., Nano Lett., Adv. Funct. Mater., Biomaterials. He was awarded "Young Chang Jiang Scholars", "Shanghai Academic Research Leader", and "Shanghai Rising-starProgram" and so on.



Juyoung Yoon

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Juyoung Yoon is a distinguished professor at the Department of Chemistry and Nanoscience, Ewha Womans University. He received his PhD (1994) from Ohio State University and conducted his postdoctoral work at UCLA and Scripps Research Institute. His research interests include investigations of fluorescent imaging probes, phototherapy, activatable photosensitizers, and organic functional materials. He was listed as a highly cited researcher in chemistry for 2014-2023 with the h-index of 132.



Chenzhong Li

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Dr. Chenzhong Li is the X.Q. Deng Presidential Chair Professor of Biomedical Engineering at the Chinese University of Hong Kong (Shenzhen) and the director of Biooptoelectronics and Biosensors Center. He is the fellow members of Canadian Academy of Engineering (CAE), National Academy of Inventors (NAI), the American Institute for Medical and Biological Engineering (AIMBE). He is the coEditors in Chief of the journal Biosensors and Bioelectronics and the Deputy Editor of journal RESEARCH.



Yuanyu Huang

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His primary research interest focuses on the development of nucleic acid- based therapeutics, including designing and optimizing nucleic acid molecules (siRNA, mRNA, Aptamer, etc.), exploring innovative drug delivery system and their translational medicine applications in the treatment of diverse diseases. He has published over 120 papers in journals such as Nat Rev Bioeng, Sci Adv and Nat Commun, applied for over 40 patents. He led the establishment of a series of siRNA pharmaceutical technology platforms, which have advanced 5 siRNA drugs to clinical Phase I-II trials.



Dong Wang

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Dong Wang is a professor and PI at School of Biomedical Engineering, Hainan University. He received his Ph.D. degree from Xiamen University in 2014. He was a visiting student at Wake Forest University, USA, Research Fellow at National University of Singapore, and visiting scholar at Tsinghua University. His research focuses on biomaterials and tissueinterface, biosensors, flexible electronics for wearable and implantable sensing.



Rui Wang

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Member of Hainan Engineering Research Center of Biomaterials and Medical Devices, member of Hainan Key Laboratory of Trauma and Disaster Rescue Research Aiming at the forefront of the development of precision medicine field, based on the basis of optical probes and nano- biomaterials, integrating fluorescence imaging technology, developing and constructing nano- biomaterials for disease imaging diagnosis and precision treatment.