

Plenary Lecture

(International Conference Hall)

09:05-09:45

Chair: Prof. Masumi Yamada (Chiba University)

PL01. Photo-responsive cell anchoring surfaces for expansion of
biological data

Prof. Satoshi Yamaguchi

The University of Osaka

Keynote Lecture

(International Conference Hall)

09:45-10:10

Chair: Prof. Jingwen ZHOU (Jiangnan University)

KL01. Microbial Cell Factories Manufacture Plant Natural Products

Prof. Chun Li

Tsinghua University

10:10-10:35

Chair: Prof. Tae-Joon Jeon (Inha University)

KL02. Peptide binder-driven electrochemical biosensor for highly sensitive
detection of biomarkers

Prof. JongPil Park

Chung-Ang University

10:35-11:00

Chair: Prof. Si-Yu Li (National Chung Hsing University)

KL03. Insect Biorefinery as a Platform for Sustainable Bioprocessing and
Net-Zero Applications

Prof. Yu-Shen Cheng

National Yunlin Univ. of Science and Technology

Oral Session

Session A: Medical Biotechnology and Biochip/Biosensor

(International Conference Hall) 14:00-16:00

Chair: TBA

14:00-14:15

OA01. Mechanism analysis and application expansion of sonodynamic therapy

Prof. Huiyu Liu

Beijing University of Chemical Technology

14:15-14:30

OA02. Stabilizing Electrochemical Interfaces with Ionic Liquids for Selective Biomarker Detection

Prof. Hsiang-Yu Wang

National Tsing Hua University

14:30-14:45

OA03. Unlocking Antibody Dynamics and Interactions by a Multidisciplinary Approach

Prof. Saeko Yanaka

Institute of Science Tokyo

14:45-15:00

OA04. Therapeutic Modulation of Cytokine Storms in Infectious Diseases via Cleavage-Activated Biofactory T Cells

Prof. Boram Son

Kookmin University

Chair: Prof. Songping ZHANG (Institute of Process Engineering, Chinese Academy of Sciences)

15:00-15:15

OA05. Glycan recognizable nanoparticle for photodynamic cancer immunotherapy of melanoma

Dr(Ph.D). Yonghyun Choi

Chung-Ang University/Institute of Science Tokyo

15:15-15:30

OA06. Biosensor-coupled in vivo evolution to improve malonyl-Coenzyme A flux in *Saccharomyces cerevisiae*

Prof. Jin Hou

Shandong University

15:30-15:45

OA07. Targeting Dendritic Cell with Novel Peptide Binders for Antigen Delivery

Prof. Yoshirou Kawaguchi

Kyushu University

15:45-16:00

OA08. A Microphysiological Tumor-on-Chip Platform for Assessing Microenvironment-Dependent Drug Sensitivity

Prof. Jen-Huang Huang

National Tsing Hua University

Session B: Bioenergy, Biorefinery, and Environmental Biotechnology

(Room401) 14:00-16:00

Chair: TBA

14:00-14:15

OB01. Modeling and Demonstration of Gas-Phase Bioreactors for Greenhouse-Gas Conversion

Prof. Yan-Yu Chen

National Chung Hsing University

14:15-14:30

OB02. Conversion of C2 carbon sources to C2+ biochemicals by microbial cell factories

Prof. Hui Wu

Dalian University of Technology

14:30-14:45

OB03. Engineering of *Corynebacterium glutamicum* for para-coumaric acid biosynthesis from lignocellulosic biomass

Dr(Ph.D). Jung Ho Ahn

Korea Institute of Science and Technology

14:45-15:00

OB04. The scale-up cultivation of the psychrophilic bacterium *Shewanella livingstonensis* and evaluation of its potential for industrial application

Dr(Ph.D). Taku Matsumoto

Hiroshima University

Chair: Prof. Zihé LIU (Beijing University of Chemical Technology)

15:00-15:15

OB05. Strategies for stable and feasible outdoor microalgal cultivation

Prof. Won-Kun Park

Konkuk University

15:15-15:30

OB06. Enhancement of multiple stress resistance in *Escherichia coli* by bacterial small heat shock proteins

Prof. Yu Sato

Yamaguchi University

15:30-15:45

OB07. Production of steroids by synthetic biology

Prof. Jingwen Zhou

Jiangnan University

15:45-16:00

OB08. A Dual-Platform Approach to Waste Valorization: Biohydrogen and Microalgal Lutein from Spent Mushroom Substrate

Prof. Yoong Kit Leong

Tunghai University

Session C: Applied Microbiology, Synthetic Biology and Bioinformatics

(Room501) 14:00-16:00

Chair: TBA

14:00-14:15

OC01. Development of translation-enhancing peptides in *Escherichia coli*

Prof. Teruyo Ojima-Kato

Nagoya University

14:15-14:30

OC02. Innovative microalgal biotechnology for carbon capture utilization and stress resilience

Prof. I-Son Ng

National Cheng Kung University

14:30-14:45

OC03. Reprogramming *Yarrowia lipolytica* for Adipic Acid Production via Plant-derived Acyl-CoA Oxidase Integration

Dr(Ph.D). Seung-Ho Baek

Korea Research Institute of Chemical Technology

14:45-15:00

OC04. Synthetic Membraneless Organelles for Microbial Engineering

Prof. Zhigang Qian

Shanghai Jiao Tong University

Chair: Prof. Shangxian XIE (Huazhong University of Science and Technology)

15:00-15:15

OC05. Synthetic Biology Powers the Discovery and High-Yield Production of Natural Products

Prof. Yunzi Luo

Tianjin University

15:15-15:30

OC06. Development of *Escherichia coli* Nissle 1917 Expression Platforms

Prof. Po-Ting Chen

Southern Taiwan University of Science and Technology

15:30-15:45

OC07. Precise microbiome engineering for functional analysis of gut microbiome

Prof. Kenji Okano

Kansai University

15:45-16:00

OC08. Recording biological surroundings from within

Prof. Sung Sun Yim

Korea Advanced Institute of Science and Technology (KAIST)

Session D: Enzyme, Biotechnology, Bioprocess Engineering, Biophysics & Others

(Room601) 14:00-15:00

Chair: TBA

14:00-14:15

OD01. Biosensor using aggregation of gold nanoparticles

Prof. Tamotsu Zako (Ehime University)

14:15-14:30

OD02. Mass Transfer intensification and Intelligent Regulation in Bioprocesses

Prof. Kequan Chen Nanjing Tech University

14:30-14:45

OD03. A microbial co-culture process for de novo production of benzyl acetate

Prof. Kyeong Rok Choi Korea Advanced Institute of Science and Technology

14:45-15:00

OD04. Secret Weapon of Pineapple Extract: Pineapplin's Anti-Inflammatory Revolution for Sustainable Animal Farming

Dr. I-Ping Lin Chappion Biotechnology Co., Ltd.

Chair: Prof. Wei KANG (Dalian University of Technology)

15:00-15:15

OD05. Development of gastroprotective capsules for acute gastric ulcer prevention using amyloid fibril-polysaccharide interfacial coacervation

Dr. You-Ren Lai National Taiwan University

15:15-15:30

OD06. Synthetic Biology-Guided Metabolic Engineering for Efficient Microbial Production of Diverse Flavonoid Compounds

Prof. HyunGyu Hwang Jeonbuk National University

15:30-15:45

OD07. Development of a novel therapeutical approach using DNA Aptamers

Prof. Natsuko Inagaki The University of Tokyo

15:45-16:00

OD08. Modification of Cel7A from *Trichoderma reesei* aided with computer

Prof. Xu Fang Shandong University

BioFun

(International Conference Hall) 16:15-17:15

Chair: Prof. Kenji Okano (Kansai University)

16:15-16:30

BF01. Show Me the Bio

Prof. Jiyeon Bu

Inha University

16:30-16:45

BF02. Enzyme Revolution: Revitalizing Nature's Catalysts with the Power of AI and Energy

Prof. Yajie Wang

Westlake University

16:45-17:00

BF03. AI-Driven Protein Engineering for a Perfect Morning: What Eggs Me?

Prof. Tomoyuki Ito

Tohoku University

17:00-17:15

BF04. Rats on the Beat and on Your Heartstrings

Prof. Yuan-Pang Hsieh

National Taiwan University of Science and Technology

Poster Session

(Small Hall) 12:30-13:50 (Odd number: 12:30-13:10, Even number 13:10-13:50)

Session A: Medical Biotechnology and Biochip/Biosensor

- PA01. Tumor-Targeting Cu²⁺/IR820-Rich Nanozymes to Exert Photothermal-Reinforced Reactive Oxygen Species Production and Dual Glutathione Scavenging for Synergistic Cancer Therapy
Wen-Hsuan Chiang National Chung Hsing University
- PA02. Catechol-Functionalized Multifunctional Hydrogel for Minimally Invasive and Long-Term Treatments with Neuroprotective and Regenerative Potential
Kai-Hsiang Chang National Taiwan University
- PA03. Investigation of CO₂ Sorption/Desorption Characteristics and Foaming Mechanisms in Biodegradable PCL/PEG Blends
Jung-Chin Tsai Ming Chi University of Technology
- PA04. Engineered Cell-Derived Nanovesicles with Chimeric Antigen Receptor and Hyaluronidase for Enhanced PDT and TME Modulation
Hee Ho Park Korea University
- PA05. AAV Capsid Engineering for Targeted Gene Therapy
Kye Il Joo Ewha Womans University
- PA06. Development of a femtosensitive electrochemical aptasensor for tuberculosis Ag85B detection
Shraddha Chauhan Pohang University of Science and Technology
- PA07. An Alkaline Phosphatase for Targeted Recognition and Cleavage of Macromolecular Substrates
Yu Xie Beijing University of Chemical Technology
- PA08. RPA-PfAgo detection platform for one-tube rapid typing diagnosis of EGFR mutations
Jinyu Fu Beijing University of Chemical Technology
- PA09. Zwitterionic-hydrogel-based sensing system enables real-time ROS monitoring for ultra-long hypothermic cell preservation
Yunqing Tian Tianjin University
- PA10. HBc VLPs: an ideal platform for drug delivery and vaccine construction via a thermal-trigger packing strategy
Songping Zhang Institute of Process Engineering, Chinese Academy of Sciences
- PA11. Bivalent foot-and-mouth disease virus mRNA vaccine induces well-balanced humoral and cellular immune response
Zhengjun Li Institute of Process Engineering, Chinese Academy of Sciences
- PA12. Choline-Retinoic acid ionic liquid [Cho][Ra] as potential adjuvant to enhance humoral, cellular and mucosal immune responses of SARS-CoV-2 RBD antigen
Jingyang Zhao Institute of Process Engineering, Chinese Academy of Sciences
- PA13. Targeting multiple genetic defects of mitochondrial diseases with a single bacterial lipoate protein ligase
Zhijuan Hu Westlake University

- PA14. Development of porous polydimethylsiloxane thermoplastic elastomer membranes for medical applications
Soma Tanaka The University of Tokyo
- PA15. Detection of CpG methylation level using fluorescent modified methylated probe DNA with methyl-CpG binding domain fused luciferase
Wataru Yoshida Tokyo University of Technology
- PA16. Development of Thermosensitive Liposomes Encapsulating Anticancer Drugs for the Treatment of Bile Duct Cancer
Motoki Shimizu The University of Tokyo
- PA17. Epitope-directed antibody screening through mammalian cell display
Ning Lin Institute of Science Tokyo
- PA18. A Cell Sorting System with Lattice-patterned Microchannels Inducing Deformability-based Differential Flow Behaviors
Hiroto Ito Chiba University
- PA19. Engineering Microparticle-connected Hydrogel Sponges Using a Density-tuned Aqueous Two-phase Dispersion for High-density 3D Liver Cell Cultivation
Shin Ozawa Chiba University
- PA20. Microfluidic Rare Cell Capture Devices Incorporating Bilaterally Perforated Honeycomb Films
Masumi Yamada Chiba University
- PA21. Improving the Cytotoxicity of T-cell Engaging Antibodies against Cancer Cells using Machine Learning
Tomoyuki Ito Tohoku University
- PA22. Short peptide-coated surfaces for the regulation of myofibroblast differentiation
Takumi Taga Nagoya University
- PA23. Non-destructive quality control of cell spheroids by multispectral near-infrared imaging
Ren Sakai Nagoya University
- PA24. pH-Responsive and Shear-Thinning Polyampholyte Hydrogel of Dimethylaminopropylamine-Modified Hyaluronan for the Prevention of Severe Peritoneal Adhesions Following Hepatectomy
Yizhou Dai The University of Tokyo
- PA25. Label-Free Early Evaluation of Cryoprotective Agents by Morphometric Profiling
Koki Kobayashi Nagoya University
- PA26. Development of an Ionic Liquid Microemulsion System for Effective Transdermal Delivery of GLP-1 RA in Diabetes Management
Yamin Li Kyushu University
- PA27. Controllable Antibody Modification via Fusion Enzyme Technology
Riko Nishioka Kyushu University
- PA28. Langerhans cell targeting peptide selected from ribosome display for Transdermal Allergy Vaccine
Mina Yokoyama Kyushu University
- PA29. Enhancement of Transdermal Delivery and Vaccine Effect via CPE-Integrated Solid-in-Oil Dispersions
Keisuke Tanaka Kyushu University
- PA30. Enhanced 3D Tumor Spheroid Penetration via Supramolecular Peptide Amphiphile Nanofibers
Ingram Tan Kyushu University

- PA31. Engineering Targeted Liposomal Drugs through Protein Lipidation and Spontaneous Covalent Bond Formation Systems
Kazuki Uchida Kyushu University
- PA32. A VHH scaffold adaptable for short CDR3 and target-specific antibody generation
Yuto Watanabe Tohoku University

Session B: Bioenergy, Biorefinery, and Environmental Biotechnology

- PB01. Marine Biorefinery Processes for Production of High-Value Biochemicals
Hah Young Yoo Sangmyung University
- PB02. Engineering of *Sulfolobus acidocaldarius* for Lignocellulosic Biomass Utilization
Areum Lee Chonnam National University
- PB03. Mechanism of the full, complete and simultaneous utilization of all lignocellulose-derived sugars in engineered *Pediococcus acidilactici*
Jiao Liu East China University of Science and Technology
- PB04. High optical purity cellulosic L-lactic acid production using mannose from dry dilute acid pretreated softwood hydrolysate
Yi Zhang East China University of Science and Technology
- PB05. Enhancing xylose utilization in *Corynebacterium glutamicum* through optimized xylose transporters
Zhuolin Song East China University of Science and Technology
- PB06. Closed-Loop Recycling of Polyamides through Chemical and Enzymatic Hydrolysis
Ruan Yongqiang Nanjing Tech University
- PB07. Lignin valorization to bioplastics by engineered *Ralstonia eutropha* H16 with a core-intermediates based gene autoregulation system
Shangxian Xie Huazhong University of Science and Technology
- PB08. Mechanisms of hydrogen-producing community reconstruction under organic loading control: the synergistic effects of initial organic loading rate and hydraulic retention time
DengYang Wang Beijing University of Chemical Technology
- PB09. Coupling of Reverse β -Oxidation and NOG Pathways Mediates Efficient Hexanoic Acid Production in *Escherichia coli*
Junyi Zhu Beijing University of Chemical Technology
- PB10. Selection and Characterization of Symbiotic Bacterial Mutants for Elucidating the Mechanism of Cyanobacterial Growth Promotion
Pei-Yu Tan Kitami Institute of Technology
- PB11. Chemical defined medium designed using targeting profiling of natural medium
Yuwa Inaba Kitami Institute of Technology
- PB12. Cell surface engineering of *Escherichia coli* for enhanced PET degradation
Haruki Todo Osaka Metropolitan University

- PB13. Sortase A-mediated ligation facilitates metabolic channeling in microorganisms
Takuya Matsumoto Osaka Metropolitan University
- PB14. Compartmental optimization for economically-feasible fermentation of *Perilla frutescens* (L.) Britt.
Bor-Yann Chen National I-Lan University
- PB15. Bioremediation of Marine Oil Spills Using Indigenous Bacteria and Hydrophobic Calcite Nanoparticles
Pin-Yun Lin National Chung Cheng University
- PB16. Integration of Biosurfactant Production, Structural Characterization, and Biogenic Hydroxyapatite Fabrication for Bone Regeneration
Chien-Yen Chen National Chung Cheng University
- PB17. Bioengineered Phage Display and Cellulose Immobilization for Selective Rare Earth Element Recycling
Shen-Long Tsai National Taiwan University of Science and Technology
- PB18. Eggshell-Based Antibacterial Composites Using Immobilized PHMB and Reactive Dye
Shun-Chi Chen Ming Chi University of Technology
- PB19. Cradle-to-gate carbon footprint of industrial-scale fermentative production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) (PHBH)
Si-Yu Li National Chung Hsing University

Session C: Applied Microbiology, Synthetic Biology and Bioinformatics

- PC01. Discover the Maze-like Network for Glabridin Biosynthesis
Zhen Zhang Tsinghua University
- PC02. Utilizing photosensitive materials/proteins for reshaping the metabolism and boosting the yield of natural products in cell factories
Wei Liu Tsinghua University
- PC03. Study and application of global protein phosphorylation regulation mechanism in *Saccharomyces cerevisiae* in response to high temperature
Cui Li Tsinghua University
- PC04. Licorice flavone synthase II catalyzes liquiritigenin to specifically synthesize 7,4'-dihydroxyflavone
Jiachen Sun Tianjin University
- PC05. Strategies to improve the yield of yeast
Zihe Liu Beijing University of Chemical Technology
- PC06. Metabolic engineering of *Pichia pastoris* to co-utilize methanol and CO₂ for malic acid synthesis
Yuanke Guo Nanjing Tech University
- PC07. Developing a RecT-assisted endogenous CRISPR/SzCas9 system for precise genome editing in *Streptococcus zooepidemicus*
Mengmeng Liu Shandong University
- PC08. Metabolic Engineering of *Yarrowia lipolytica* for Production of Shikimate Pathway-Derived Natural Products
Yanzhe Shang Dalian university of technology
- PC09. Development of Organogels for Live *Yarrowia lipolytica* Encapsulation
Haoyu Yang Tianjin University

- PC10. Precise *de novo* Design Principle of Antifreeze Peptides
Xiangyu Zhang Tianjin University
- PC11. Dynamic regulation and enhancement of synthetic network for efficient biosynthesis of monoterpene α -pinene in yeast cell factory
Wenqiang Li Tsinghua University
- PC12. Single-cell protein production from corn straw by *Kluyveromyces marxianus* evolved through integrated adaptive evolution and physical mutagenesis
Guangqing Du Tianjin Institute of Industrial Biotechnology, Chinese academy of sciences
- PC13. Protein Expression: From Component Library to Multidimensional Autonomous and Controllable Industrialization Platform
Gang Fu Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences
- PC14. *In vivo* continuous evolution via phenotypic sorting to alleviate metabolic bottlenecks in β -alanine production
Weizhu Zeng Jiangnan University
- PC15. Programmable PopZ-Based Compartments for Spatiotemporal Control of Toxic Proteins in *Escherichia coli*
Hetong Pan Shanghai Jiao Tong University
- PC16. Synergistic Enhancement of Enzymatic Reactions by Coenzyme Cycling and Microenvironment within Membraneless Organelles
Zhen Fang Shanghai Jiao Tong University
- PC17. Boosting Extracellular PETase Production in *E. coli*
Jie Zhou Nanjing Tech University
- PC18. AI-Driven Enzyme Mining and Construction of Chemo-Enzymatic Synergistic Catalytic Systems
Binbin Chen WestLake University
- PC19. Engineering a Non-native Methylophilic Utilizing the Ribulose Monophosphate Pathway
Ruishuang Sun Beijing University of Chemical Technology
- PC20. Engineering synthetic organelles for enhanced biocatalysis
Wei Kang Dalian University of Technology
- PC21. Advancing Protein Engineering Through AcroAIX™: AI-Driven Strategies for Enhanced Structure and Function Optimization
Fan Yun ACROBiosystems
- PC22. Development of *in situ* genome engineering technology using bacteriophages
Claudia Rima Morimoto Kansai University
- PC23. Alteration of host-specificity of bacteriophage by tail fiber swapping
Miku Kato Kansai University
- PC24. Species-specific microbiome engineering using bacteriophages to control the function of microbiomes
Tomoki Tanaka Kansai University
- PC25. Strategies for the rapid growth of target bacteria~Focusing on the number of ribosomal RNA operon copies~
Yuna Sato Yamaguchi University
- PC26. Multi-gene integration into the rDNA locus of *Komagataella phaffii* for enhanced β -carotene production from methanol
Yoshifumi Inoue Osaka Metropolitan University

- PC27. Engineering *E. coli* chassis cells for flux-balanced precision fermentation
Koko Nakata Tokyo Denki University
- PC28. Design of multiple logic gate genetic circuits with serine recombinases
Toshiki Saito Tokyo Denki University
- PC29. Psychrophile-based simple biocatalysts for sustainable conversions
Takahisa Tajima Hiroshima University
- PC30. Screening of translation-enhancing peptides (TEPs) in a mammalian expression system
Yuma Nishikawa Nagoya University
- PC31. Kinetic analysis of translation enhancement by the SKIK tag and its application
Akimichi Yoshino Nagoya University
- PC32. Microplastics and Plastic-Degrading Microbes in Xinfeng Mangrove Rhizospheres
Chin-Wen Wang National Chung Cheng University
- PC33. Reprogramming TCA cycle to enhance 5-aminolevulinic acid biosynthesis in engineered *Escherichia coli*
Yu-Chieh Lin National Cheng Kung University
- PC34. Production of the PHA copolymer P(HB-co-HHx) using *Ralstonia eutropha* Re2058/pCB113 with camelina oil and fructose
Jun-You You National Chung Hsing University
- PC35. OmicsWeaver: Development of a Machine Learning Multi-Omics Platform using TMS-NGS Data for Novel Natural Product Discovery
Changmin Sung Korea Institute of Science and Technology
- PC36. Engineering a T4SS-Based Toxin Delivery Platform for Growth Control of Pathogenic Bacteria
Juhyun Kim Kyungpook National University
- PC37. Metabolic engineering of acetogenic bacteria using CO gas-sensing transcriptional ON/OFF modules
Sangrak Jin Yeungnam University
- PC38. Advanced Genome Editing and Multi-Cassette Integration Systems in *Pichia pastoris* for C1 Chemical Conversion
Nam Kyu Kang Kyung Hee University
- PC39. Modeling seasonal variation of indoor microbiome in elementary schools of the Northeastern United States
Minsik Kim Inha University
- PC40. Programmable Biosynthesis of Tailored Metalloporphyrins Using Engineered Cellular Factories
Sung Ok Han Korea University
- PC41. Reconstituted Cell-Free Systems for Biofoundry Applications
Joongoo Lee Pohang University of Science and Technology
- PC42. Biological upcycling of aromatic resources value-added chemicals
Jeong Chan Joo and Byoung Wook Jeon Kyung Hee University

Session D: Enzyme, Biotechnology, Bioprocess Engineering, Biophysics & Others

- PD01. Artificial Compartment-Based Selection for Activity-Enhancing Mutations in a Cross-Linking Enzyme
Taisei Koga Kyushu University
- PD02. Adaptive Mechanisms of a Novel Thermophilic Bacterium *Thermus* sp. FJN-A to High-Temperature and Alkaline Environments
Natsumi Yonemaru Yamaguchi University
- PD03. Exploration of Membrane Curvature Sensing Proteins from the Endoplasmic Reticulum Using Spherical Supported Lipid Bilayer
Rikuto Kawakami Institute of Science Tokyo
- PD04. Controlled Au nanoparticles synthesis within liposomes using biomineralization peptides
Yuya Abe Institute of Science Tokyo
- PD05. Construction of a Three-dimensional Microbial Culture System Using a Liquid Drawing Technology
Hidetaka Taniguchi Institute of Science Tokyo
- PD06. Estimating effects of fermentation medium composition for sophorolipid production by *Starmerella bombicola*
Battsengel Ankhmend Kitami Institute of Technology
- PD07. Enhanced Biomass and Triterpenoid Production of *Tuber borchii* via *Cyclobalanopsis glauca* Somatic Embryo Supplementation in Solid-State Fermentation
Yung-Chuan Liu National Chung Hsing University
- PD08. MineCat: Mining Catalytic Landscapes Using Deep Learning Architecture and Incorporating Multiple Features for k_{cat} Prediction
Ruei-En Hu National Cheng Kung University
- PD09. Ultrasound-assisted phenolic extraction from *Psidium cattleianum* leaves: kinetic and thermodynamic modeling
Chia-Hung Kuo National Kaohsiung University of Science and Technology
- PD10. Temporal Dynamics of DMSP-to-DMS Conversion in *Symbiodiniaceae* under Nitrogen Deficiency and Its Implications for Climate Feedback
Chiang Pei-Lun (Irene) National Formosa University
- PD11. Enhancement of Zein-Based Biodegradable Films by Silver Nanoparticle-Embedded Casein for Food Packaging Applications
Su-Chun How Tatung University
- PD12. Dynamic Adsorption Behavior of Lysozyme in Tris(hydroxymethyl)aminomethane Based Affinity Nanofiber Membranes
Kuei Hsiang Chen Ming Chi University of Technology
- PD13. Enhanced Production of Serrawettin from *Serratia marcescens* BCEL1 by Cell Immobilization Strategies
Yu-Hong Wei Yuan Ze University
- PD14. Pinpoint Tunnel Engineering for Design Air-Tolerant CODH Biocatalysts
Suk Min Kim The Catholic University of Korea
- PD15. A Kinetic Framework for Biological Methane Conversion
Jeong-Geol Na Sogang University
- PD16. Establishment of High-Throughput Screening Protocol Based on Isomerase Using *Geobacillus* sp. L-Rhamnose Isomerase

- Hyun June Park Duksung Women's University
- PD17. Engineering the Catalytic Activity of 3-Hydroxybutyrate Dehydrogenase by Iterative Random Mutagenesis
Young Joo Yeon Gangneung-Wonju National University
- PD18. Marker-Free Genetic Engineering Strategy for Enhanced GMP Production in *Saccharomyces cerevisiae*
Hyun Gi Koh Hongik University
- PD19. Region-based Segmental Swapping of Homologous Enzymes for Higher Cadaverine Production in *Escherichia coli*
Seungjin Kim Inha University
- PD20. Aqueous Core Hydrogel Microcapsules for Highly Efficient Enzymatic Cascade Reactions
Chang-Hyung Choi Yeungnam University
- PD21. Engineering RuBisCO-based Shunt for Improved Cadaverine Production in *Escherichia coli*
Jia Feng Nanjing Tech University
- PD22. Boosting medium-chain carboxylic acids yield with nanobubbles
Yang Liu Nanjing tech university
- PD23. Chemo-Enzymatic Protocol Converts Chitin Resources to Furan-Based Amino Compounds
Chaoqiang Wu Nanjing Tech University
- PD24. Construction and application of yeast cell factory for efficient synthesis of high energy terpene fuels
Yapeng Zhang Beijing Institute of Technology
- PD25. Complete Biotransformation of Cellulose to Starch *in vitro*
Jingting Wang Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences
- PD26. Structural elucidation and mechanisms-guided engineering of a promiscuous esterase for enhanced polyurethane depolymerization
Weiliang Dong Nanjing Tech University
- PD27. Surfactant-mediated enzyme stabilization for constructing self-degrading fibrous scaffolds
Yujia Peng Nanjing Tech University
- PD28. BCL-Enzyme-Loaded PCL Biodegradable Dissolvable Microneedle–TENG Integrated Wound Dressing: Synergistic Self-Powered Electrical Stimulation and Enzymatic Degradation for Chronic Wound Healing
Yulin Dong Nanjing Tech University
- PD29. ϵ -Poly-L-lysine/rhamnolipid bifunctional coating based on green electrostatic assembly technology for fruit packaging and preservation
Quanfei Li Nanjing Tech University
- PD30. Establishment of efficient *Agrobacterium* and PEG-mediated transformation in *Naematelia aurantialba* NX-20 using comprehensive optimization
Yuhang Ma Nanjing Tech University