



CSIC lecture

23th September 2016

12:00 pm

Auditorium of CSIC (Spanish National Research Council) C/Serrano 117 Madrid

Prof. Dr. Sang Yup Lee

Systems metabolic engineering of microorganisms for realizing bio-based sustainable chemical industry

"As noted from the results of the COP-21 last year, we are observing a great need for paradigm shift from fossil resource-dependent chemical industry to renewable bio-based chemical industry. Bio-based production of chemicals, fuels and materials will play increasingly important roles in providing the chemicals and materials of everyday use from renewable resources. In this lecture, I will describe our works on developing platform technologies for metabolic engineering at systems-level. This will be accompanied by 10 general steps one should consider when developing industrial microbial strains. Several examples will be showcased for the production of important bulk chemicals, fuels and polymers. Future prospects will be discussed as well."



Dr. Sang Yup Lee is Distinguished Professor at the Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology (KAIST). He is currently the Director of Center for Systems and Synthetic Biotechnology, Director of BioProcess Engineering Research Center, and Director of Bioinformatics Research Center. He has published more than 500 journal papers, 64 books/book chapters, and more than 580 patents. He received numerous awards, including the National Order of Merit, Ho-Am Prize, POSCO TJ Park Prize, Merck Metabolic Engineering Award, Amgen Biochemical Engineering Award, and Elmer Gaden Award. He is currently Fellow of Korean Academy of Science and Technology, National Academy of Engineering Korea, and AAAS, AAM, AIChE, AIMBE, SIMB and TWAS. He is also Foreign Associate of National Academy of Engineering USA, and Editor-in-Chief of Biotechnology Journal, and Associate Editor and board member of numerous journals. He has served as the Chairman of the Global Agenda Council on Emerging Technologies and also Biotechnology of the World Economic Forum, and founded the World Council on Industrial Biotechnology. His research interests are metabolic engineering, systems biology and biotechnology, industrial biotechnology, synthetic biology, and nanobiotechnology.



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