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연구실에서 세계로: 인공지능 광학기술을 이용한 혁신 진단과 바이오마커 발굴
From Lab bench to the world: "Smart Photonics" for life saving diagnostics and biomarker discovery

Abstract

: In this plenary session, we will explore the transformative journey of academic research within engineering laboratories as it evolves into commercially viable products that serve medical doctors and life scientists. Our discussion will focus on three pivotal innovations: the diagnosis of sepsis, the synthesis of DNA, and advances in digital molecular pathology. We will delve into the role of AI-enhanced smart optical technologies and their impact on driving forward clinical and life sciences innovations. Additionally, I will highlight the competitive advantages of lab startups that are built on the foundation of robust, internationally competitive academic research.

Brief Biosketch

Dr. Sunghoon Kwon is a full professor of School of Electrical and Computer Engineering at Seoul National University. He is a founder and CEO of Quanta Matrix Inc, a company that productized life-saving microfluidic-based antibiotic test for sepsis. He is a full member of the National Academy of Engineering of Korea. He received many prestigious awards including the KAST Young Scientist Award, the Presidential Young Scientist Award, the IEEK/IEEE IT Young Engineer Award, and the NAEK Young Engineer Award. He has published over 100 papers in international journals holds more than 80 international patents.

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