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강연 제목: 전기 역학 힘을 활용한 바이오 센서 및 미세유체 칩

(Electrokinetic force assisted sensors and microfluidics)

Abstract:

To improve sensitivity of sensor, various research has been conducted by reducing sensor's size or utilizing nanomaterials. Unlike such a trend, technology for sensor sensitivity improvement by applying electrokinetic force such as dielectrophoretic force or electrophoretic force that can be used to move and capture cells, exosomes, and nanoparticles will be introduced. The electrokinetic forces can accomplish the functions such as concentration, separation, and activation of a receptor. And the functions are novel and new candidate to improve the sensitivity of sensor without size-reducing or nanomaterials.

Brief Biosketch

Dr. Jinsik Kim received his bachelor's degree and doctor's degree from electrical engineering, Korea university in 2007 and 2014, respectively. After PhD degree, he joined the center for Bio Mirco system, Korea Institute of Science and Technology as Post-doctor who supported by National research council of science and technology. From 2016, he joined the Korea institute of Industrial Technology as a senior research scientist to develop practical biosensors with its high-yield fabricating methods. Finally, he joined at Department of Biomedical engineering, Dongguk University from 2017. His research interests cover the areas of nano-materials, electrochemical, stretchable, microfluidics sensor and bio-electronics.