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강연제목: Nanomaterials manipulation and nanostructure design strategies in bioelectronics : Applications from disease diagnosis to therapy

Abstract

Bioelectronics facilitates the continuous and precise sensing of biological signals, enabling effective body monitoring, early disease diagnosis, and personalized treatment. These advancements are critical for enhancing preventive healthcare, interventional therapies, and rehabilitation processes.

To achieve these applications, it is essential to develop soft bioelectronic devices with biocompatibility for seamless integration with human tissues. A key component in this domain is the stretchable conductor, which must exhibit high conductivity to ensure effective signal transmission while maintaining mechanical flexibility. Furthermore, the integration of diverse functional materials is crucial for accurately detecting a wide array of physical activities. Despite these requirements, achieving an optimal balance between stretchability, high conductivity, and multifunctionality presents significant challenges.

This presentation will introduce innovative nanomaterials manipulation and nanostructure design strategies for stretchable conductors that fulfill these demands and outline strategies for the development of high-performance soft bioelectronics for medical applications.

Brief Biosketch

고려대학교 전기전자공학과 박사 (2018) / Korea University, Electrical and Electronic Engineering, Ph.D.
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