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강연제목:

인체 건강 모니터링용 웨어러블 헬스케어 센서

Wearable and flexible biomedical devices for human healthcare monitoring

Abstract:

Wearable biosensors have received significant attention and are widely developed for healthcare monitoring with their advantages, such as portability, personalization, and a high level of integration. However, the absence of wearable sensors which are reusable, low-cost, battery-free, and easy to fabricate has hindered the actual application possibility. In this talk, I will present recently advanced wearable and flexible biomedical devices for human healthcare monitoring. Furthermore, for a wirelessly real-time monitoring, sensors successfully obtained the stable and accurate biosignals from the human body and displayed them on the smartphone app via the near-field communication (NFC) readout system. In addition, electronic textiles have been widely advanced and used as biomedical applications for the human healthcare monitoring. Various types of electronic textiles (e-textile) will be shown, including e-textile yarns and sheets for detecting specific gas molecules or human motions. Those trials shed a light to be easily accessible a portable, disposable, non-invasive, continuous, and personalized wearable sensors for monitoring human healthcare.

Brief Biosketch

Sang Won Lee is a research professor at Korea University. He received his Ph.D. (2020) in the Department of Bio-convergence Engineering from Korea University in South Korea. Before being employed, he worked as a research professor in the Department of Biomedical Engineering at Korea University (2022-22). Also, he was a postdoctoral scholar at the University of California, Irvine (UCI, 2022) and Terasaki Institute for Biomedical Innovation (TIBI, 2023-24) in the United States. Currently, his main research focuses on developing flexible and wearable bioelectronic devices for personalized healthcare applications.