화학과 특별세미나

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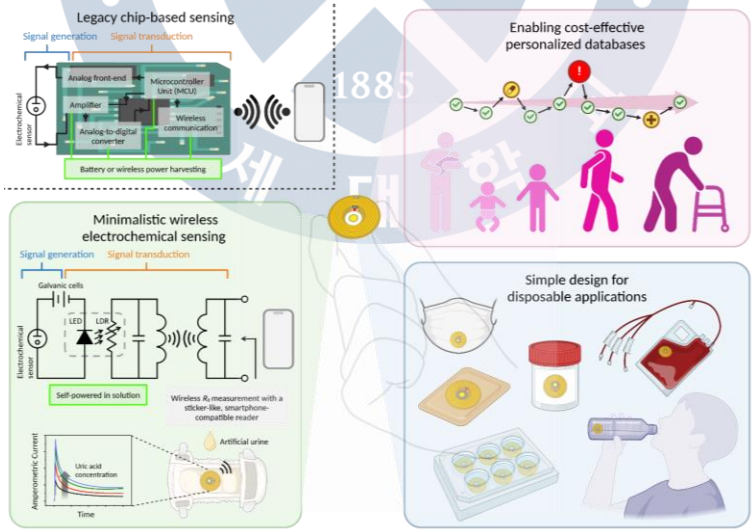
How Can We Best Collect Human-Oriented Molecular Biological Data?

The advent of AI and machine learning has unveiled a new dimension of personal healthcare information, enabling predictive and preventive approaches that are reshaping the future of healthcare. To harness these advancements and translate findings into practical applications, a convenient, economical, and effective means of extracting molecular biological data from human states is imperative.

This talk will review past, present, and emerging strategies for collecting molecular-level healthcare data, emphasizing the need for minimalistic, batteryless electrochemical sensors. Electrochemical sensors have established themselves as one of the most reliable methodologies for miniaturized biomedical devices, with their utility proven through the widespread adoption of continuous glucose monitors. However, traditional sensors rely on complex, expensive, and power-intensive peripheral readout circuits to maintain the controlled environments necessary for accurate electrochemical measurements.



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