

「 Nanobiohybrid Material-Driven Biosensors for Biomedical and Environmental Applications 」

24 Feb, 14:00-

108 room Adv Res bldg. B

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In this talk, I will present our latest advancements in developing biosensing methodologies that utilize nanobio hybrid materials for biomedical and environmental applications. Our approach integrates organic-inorganic hybrid nanoparticles decorated with bio-receptor molecules specific to a target, along with a selective sandwich assay that employs paired bio-receptors and surface enzyme reactions. For example, I will demonstrate voltammetric and colorimetric analyses of disease-related biomolecules and environmentally toxic agents using a surface sandwich assay platform with surface-tethered bioreceptors, antibody conjugated nanomaterials, and nanozyme amplification. Lastly, I will discuss potential future directions for our nanobiosensing methodologies.

ナノバイオハイブリッド材料を基盤とした医療・環境応用向けバイオセンシング技術の最新成果を紹介していただきます。有機-無機ハイブリッドナノ粒子に標的特異的バイオレセプターを修飾し、ペア化したレセプターと表面酵素反応を組み合わせた選択的サンドイッチアッセイなど、疾患関連分子や環境毒性物質の電気化学・比色検出、ならびにナノザイム増幅を用いた高感度化についてもお話しいたします。

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