



DEPARTMENT OF BASIC MEDICAL SCIENCES SEMINAR SERIES

A weekly lecture series covering diverse topics in the biomedical sciences

Seminar Title: Plasmonics-Enhanced Lateral-Flow Immunoassay



Thursday, October 10, 2024

12 p.m. - 1 p.m. via ZOOM

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ZOOM LINK: <https://arizona.zoom.us/j/88026452276>

CME credit provided by the University of Arizona College of Medicine-Tucson

A concise overview of the presentation: The lateral flow immunoassay (LFIA) has become a widely adopted method for point-of-care (POC) diagnostics due to its ease of use, portability, and cost-effectiveness. However, the sensitivity of traditional gold nanoparticle-based LFIAs is often limited by the weak visual signals they generate. This presentation will explore the use of anisotropic plasmonic nanoparticles, such as gold nanostars (GNS) and gold nanocrowns (GNC), to not only enhance colorimetric detection but also improve performance in photothermal and SERS-based LFIAs. We will also discuss how this plasmonically active nanoparticle system enables enhanced sensitivity and provides an excellent platform for uncovering the unique chemistry involved in nanoparticle synthesis.¹⁻⁴

BMS Host:

Frederic Zenhausern, PhD, MBA



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