



University of Hawai'i at Mānoa

Hawai'i Natural Energy Institute

School of Ocean & Earth Science & Technology

Development of Bioanodes for Bio-Fuel Cells

Enzymatic bio-fuel cells are similar to traditional fuel cells except the metallic electrocatalyst is replaced with oxidoreductase enzymes. Enzymatic bioanodes can be developed for a variety of biofuels, including: ethanol, sucrose, glucose, lactate, glycerol, and soybean oil. This presentation will detail the general development of enzymatic bioanodes for high power density and long-term stability. Enzyme immobilization membranes for increasing stability will be discussed, along with mediator systems.

Shelley D. Minteer

Saint Louis University
St. Louis, MO

Tuesday, October 24, 2006

3:15 – 4:15 PM

HIG Auditorium, Room 110

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