FUEL CELL R&D PROGRESS
THURSDAY, NOVEMBER 7 - ROOM 101-A, 1:30 PM - 3:30 PM

- **A Novel Bi-layer Electrolyte Solid Oxide Fuel Cell with Substantially Improved Performance at Reduced Temperatures** - *Ying Liu, Phillips 66*

    - The performance of conventional zirconia-based solid oxide fuel cells is limited by the conductivities of electrolytes at low temperatures while the highly conductive ceria-based materials are chemically unstable in a fuel environment.

- **Nanocomposite Nanofiber Fuel Cell Membranes** - *Seda Köksal Yeğin, Farel Plastic Electric and Electronic Company*

    - In this study, nanocomposite nanofiber structured membranes were developed for polymer electrolyte membranes.

- **A Discussion on Mathematical Models of Proton Conducting Solid Oxide Fuel Cells** - *Jakob Kupecki, Warsaw University of Technology*

    - The paper presents a comparison of the models currently used in relation to the available experimental data. The review highlights the main causes of discrepancies between the results of modeling and experimental data.

- **A Novel Automatic Control of Dead-ended Operated Open Cathode Type Fuel Cell for Hydrogen Consumption Reduction** - *Ji-Young Park, KATECH*

    - In this research, a fuel cell stack voltage feedback hydrogen purge control logic was proposed to maintain optimum performance and reduce the hydrogen consumption by adjusting appropriate water contents inside the fuel cell stacks.

- **Performance Analysis of a Multi-Stream Microfluidic Fuel Cell with Bridge-Shaped Microchannel** - *Muhammad Tanveer, Inha University*

    - A parametric study is carried out using the height and width of the channel and the height and width of the bridge for power and current densities.

- **Synthesis and Characterization of Anode Nanocomposites NiLiCu-LDC for Low Temperature (350-600 ˚C) SOFCs Fueling With Biogas** - *Asia Rafique, Higher Education Department, Govt. of Punjab, Lahore, Pakistan*

    - In this paper, stable and active anode catalysts for solid oxide fuel cell NiLiCu-LDC with specific compositions were synthesized and studied.