

# Experimental and Characterization Studies on Micro Direct Methanol Fuel Cell

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A micro DMFC of 1cm<sup>2</sup> active area with selective sensor materials to sense methanol for redox, has been developed. Among different Pt alloys, Pt-Sn/C was able to produce high current density and repeatability. MEA of anode catalyst Pt-Sn/C was prepared with nafion as active membrane and Pt black as cathode catalyst. The sensor's maximum ability to detect the trace levels of methanol in ppm has been analyzed. A compact sensor set up has also been made and the characterization studies were carried out. The acceptable value of current density was derived by the cell and the results are able to fulfill the needs of DMFC technology for the practical applications.

**Biography**  
Prof.Muthuraja obtained his Masters degree in Technology (Sensor systems) from VIT in 2005 and Masters degree in Physics from Madurai Kamaraj University in 2001. He has successfully submitted his PhD dissertation on micro fuelcell development and serving for VIT since 2008. His major area of interest including Nanomaterials and nanosensors, gas sensors and fuelcells.

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Masters degree in Physics from Madurai Kamaraj University in 2001

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