

Carbon Nanotubes Synthesized Using Sugar Cane as a Precursor

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Abstract : This article deals with the carbon nanotubes (CNT) synthesized from a novel precursor, sugar cane and Anodic Aluminum Oxide (AAO). The objective was to produce CNTs to be used as catalyst supports for Proton Exchange Membranes. The influence of temperature, inert gas flow rate and concentration of the precursor is presented. The CNTs prepared were characterized using TEM, XRD, Raman Spectroscopy, and the surface area determined by BET. The results show that it is possible to form CNT from sugar cane by pyrolysis and the CNTs are the type multi-walled carbon nanotubes. The MWCNTs are short and closed at the two ends with very small surface area of SBET = 3.691m²/g.

Keywords : carbon nanotubes, sugar cane, fuel cell, catalyst support

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