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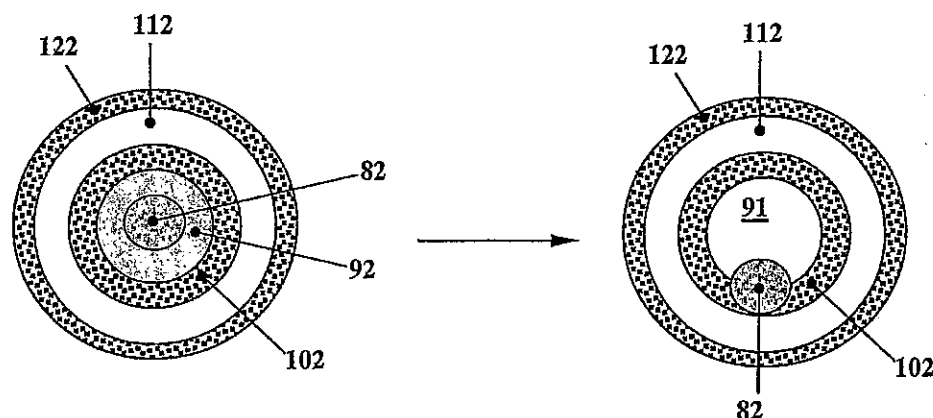
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(54) Title: SUBSTRATE-SUPPORTED PROCESS FOR MANUFACTURING MICROFIBROUS FUEL CELLS



(57) Abstract: The present invention relates to a substrate-supported process for continuous and automated manufacturing of microfibrous fuel cells and other electrochemical devices. Specifically, a removable substrate layer (92) is formed around an inner current collector (82), followed by sequentially coating multiple structure layers, such as the inner catalyst layer (102), the membrane separator (112), and the outer catalyst layer (122), over such removable substrate layer (92), and subsequent removing such removable layer (92), so as to form a lumen (91) around the inner current collector (82), to allow passage of fluid therethrough. The removable substrate layer (92) preferably comprises a water-soluble polymer, such as polyvinyl pyrrolidone (PVP), polyvinyl alcohol (PVA), or polyethylene glycol (PEG).

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