

5639573

POLYMER GEL ELECTROLYTE

Oliver Manuel; Gies Paul J; Pandalwar Shekhar L; Coalson Christen E; Eschbach Florence O Norcross, GA, UNITED STATES assigned to Motorola Inc

An electrolyte system for use in connection with an electrochemical cell. The cell includes a positive electrode and a negative electrode with the electrolyte system disposed therebetween. The electrolyte system is a polymer gel electrolyte system including an electrolyte active species which may be either aqueous or non-aqueous and a polymer gel electrolyte support structure. The blended polymer gel electrolyte support structure includes at least a first phase adapted to absorb or otherwise engage the electrolyte active species disposed on and through the pores of a second phase which is substantially inert and does not absorb the electrolyte active species.

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HETEROATOM INCORPORATED COKE FOR ELECTROCHEMICAL CELL ELECTRODE

Lewis Irwin Charles; Greinke Ronald Alfre Strongsville, OH, UNITED STATES assigned to UCAR Carbon Technology Corporation

This invention relates to an electrode for a coke/alkali metal electrochemical cell comprising: (a) calcined coke particles: (i) that contain at least 0.5 weight percent of nitrogen heteroatoms and at least 1.0 weight percent sulfur heteroatoms, and (ii) that have an average particle size from 2 microns to 40 microns with essentially no particles being greater than 50 microns. (b) a binder, this invention also relates to a coke/alkali metal electrochemical cell comprising: (a) an electrode as described above, (b) a non-aqueous electrolytic solution comprising an organic aprotic solvent and an electrically conductive salt, and (c) a counterelectrode.

5641367

PROCESS FOR ULTRASONIC SEALING AN ANODE CUP INTO A GASKET FOR ELECTROCHEMICAL CELLS

Tatsumi James George North Ridgeville, OH, UNITED STATES assigned to Eveready Battery Company

A gasket-cover assembly for use as a closure for an electrochemical cell which is produced by a process in which an extended wall of the cover is ultrasonically forced into a flange of a gasket such that the flange of the gasket makes a U shaped enclosure about the bottom wall of the cover.

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IONICALLY CONDUCTIVE POLYMER GELS

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A bulk ionically conductive polymer gel is prepared by dissolving a salt such as lithium trifluoromethanesulphonate (which would provide lithium ion conductors) in an organic compound such as N-formylpiperidine. The organic compound dissolves the salt at 20°C but is not a solvent at 20°C (though it is at 215°C) for polyethylene terephthalate. The last-named is a crystallizable polymer which is added in a minor amount at a high temperature to the other components and provides the required mechanical rigidity for the product at lower temperatures.

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SEPARATOR FOR A BATTERY USING AN ORGANIC ELECTROLYTIC SOLUTION AND METHOD FOR PREPARING THE SAME

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