section. The output correction section includes an available output computing unit for computing the maximum available output power value of the fuel cell on the basis of the detected flow rate of fuel gas flowing into the fuel cell or fuel exhaust gas flowing out of the fuel cell; a low level selector for selecting either the computed maximum available output power value or the output power set value, whichever is the lower; and an output correction regulator for supplying the output control regulator with a signal for correcting the output power set value so as to control the detected output current from the fuel cell as close to the current value corresponding to the output current value of the low level selector as possible.

5639572

INTERCONNECTOR MATERIAL FOR ELECTROCHEMICAL CELLS

Mori Kazutak; Miyamoto Hitoshi; Matsudaira Tsuneak Takasago, JAPAN assigned to Mitsubishi Jukogyo Kabushiki Kaisha

An interconnector material for use in electrochemical cells having Y2O3-stabilized ZrO2 as a solid electrolyte, said interconnector material comprising a lanthanum chromite material of the following general formula: (*See Patent for Tabular Presentation*) PS where M is Zr or Ti, x is in the range of 0.1 to 0.2, and y is in the range of 0.05 to 0.2.

5641328

FUEL CELL CATHODES

Ong Estela T; Donado Rafael A Chicago, IL, UNITED STATES assigned to Electric Power Research Institute

Methods of making fuel cell electrodes in which the pores of an electrically conductive metal substrate are filled with a slurry containing particles of the same or a different electrically conductive metal. The liquid phase of the slurry is removed, leaving the particles of conductive material in the pores of the substrate; and the conductive metal(s) making up the substrate and the metal particles supplied from the slurry are converted to oxide.

5641585

MINIATURE CERAMIC FUEL CELL

Lessing Paul A; Zuppero Anthony C Idaho Falls, ID, UNITED STATES assigned to Lockheed Idaho Technologies Company

A miniature power source assembly capable of providing portable electricity is provided. A preferred embodiment of the power source assembly employing a fuel tank, fuel pump and control, air pump, heat management system, power chamber, power conditioning and power storage. The power chamber utilizes a ceramic fuel cell to produce the electricity. Incoming hydro carbon fuel is automatically reformed within the power chamber. Electrochemical combustion of hydrogen then produces electricity.

5641586

FUEL CELL WITH INTERDIGITATED POROUS FLOW-FIELD

Wilson Mahlon Los Alamos, NM, UNITED STATES assigned to The Regents of the University of California Office of Technology Transfer

A polymer electrolyte membrane (PEM) fuel cell is formed with an improved system for distributing gaseous reactants to the membrane surface. A PEM fuel cell has an ionic transport membrane with opposed catalytic surfaces formed thereon and separates gaseous reactants that undergo reactions at the catalytic surfaces of the membrane. The fuel cell may also include a thin gas diffusion layer having first and second sides with a first side contacting at least one of the catalytic surfaces. A macroporous flow-field with interdigitated inlet and outlet reactant channels contacts the second side of the thin gas diffusion layer for distributing one of the gaseous reactants over the thin gas diffusion layer for transport to an adjacent one of the catalytic surfaces of the membrane. The porous flow field may be formed from a hydrophilic material and provides uniform support across the backside of the electrode assembly to facilitate the use of thin backing layers.