

The bipolar plates may have flat surfaces without grooves and are preferably manufactured with aluminum, titanium or alloys thereof, through cheap mass productions techniques; the bipolar plates are used together with collectors provided with deformability, residual resiliency and high porosity. Said collectors advantageously act also as distributors of the gaseous reactants and of the products.

BATTERY MATERIALS

5475082

USE OF POLY(ALKYLPYRIDINE-2,5-DIYL)

Yamamoto Takakazu; Maruyama Tsukasa Yokohama, JAPAN assigned to Tokyo Institute of Technology

A process of producing a device which is one of a battery, an electrochromic device, an electronic device, an n-type conductor, or an electroluminescent device includes fabricating at least one constituent of the device from a polymer comprised of poly(alkylpyridine-2,5-diyl) having a chemical formula: (*See Patent for Chemical Structure*) wherein R is an alkyl group having not less than 3 carbon atoms, and n is a degree of polymerization and is not less than 30. Preferably R is an alkyl group having 4 to 20 carbon atoms and n is a degree of polymerization and is not less than 30. Most preferably R is an alkyl group selected from the group consisting of a hexyl group, a pentyl group, an octyl group, a decyl group, and a dodecyl group.

5476679

METHOD FOR MAKING A GRAPHITE COMPONENT COVERED WITH A LAYER OF GLASSY CARBON

Lewis Irwin C; Pirro Terrence; Miller Douglas Strongsville, OH, UNITED STATES assigned to UCAR Carbon Technology Corporation

Method for making a component, graphite component, such as a graphite crucible, for use in the production of

silicon crystal growth from molten silicon wherein the graphite component has an outer coated layer of glassy carbon formed from a thermoset organic resin that prevents contamination of the molten silicon by carbon from the graphite component.

5476684

HIGH TEMPERATURE CERAMIC COMPOSITE

Smith Robert St Paul, MN, UNITED STATES assigned to Minnesota Mining and Manufacturing Company

This invention provides a shaped ceramic composite article comprising ceramic oxide fiber(s), a first coating comprising a carbonaceous matrix which includes boron nitride particles in contact therewith, and a second coating comprising silicon carbide. The inventive composite article is useful in applications requiring good heat resistance and mechanical properties, such as gas fired radiant burner tubes, gas burner nozzle liners, heat exchangers, thermowells, core busters or flame dispersers, and other gas fired furnace components.

5476826

PROCESS FOR PRODUCING CARBON BLACK HAVING AFFIXED NITROGEN

Greenwald Anton C; Jalan Vinod North Andover, MA, UNITED STATES assigned to Gas Research Institute

A catalyst material of carbon black powder having nitrogen affixed to its surface and process for its production by contacting carbon black powder particles with a plasma or low energy beam of nitrogen containing ions affixing the nitrogen ions to the surface of the particles in a concentration of about 0.1 to about 10 percent, based upon the total number of surface atoms. The catalysts are particularly suited for use in phosphoric acid fuel cells.