is passed through the respective units for purging the residual reformed gas.

BATTERY MATERIALS

5632863

BATTERY PYROLYSIS PROCESS

Meador W R Pecos, TX, UNITED STATES

Used batteries and other material for reclamation and recovery or environmentally safe disposal are transferred from a feed bin by an auger into a crusher and then into a pyrolysis chamber. The feed system excludes air or oxygen from passing through the auger and crusher into the pyrolysis chamber. The material from the crusher is transferred by an auger through the pyrolysis chamber which is heated to a decomposition temperature between 350° and 650° F. and is decomposed. The pyrolysis chamber includes a vapor recovery system for removing the vapors and maintaining a vacuum in the pyrolysis chamber. The vapors are withdrawn through a heat exchanger and into the liquid/gas separator where the condensed liquids are removed and the gas is further processed. The residue from the pyrolysis chamber is discharged into a residue recovery system which includes a closed auger for transferring the residue from the pyrolysis chamber into a bin. A pressure sensitive switch which maintains a minimum level of solid material in the bin which acts as a seal to prevent air or oxygen from entering the pyrolysis chamber. The residue is transferred to a screening collector having an upper and a lower screen. The screens are vibrated and the finer sized metals are collected from the bottom of the screening collector, the heavier metals off the lower screen and the paper and plastic off the upper screen.

5633098

BATTERIES CONTAINING SINGLE-ION CONDUCTING SOLID POLYMER ELECTROLYTES

Narang Subhash; Ventura Susanna C Redwood City, CA, UNITED STATES assigned to SRI International

Novel batteries containing single-ion conducting polymer electrolytes (SPEs) are provided. The polymers are polysiloxanes substituted with fluorinated poly(alkylene oxide) side chains having associated ionic species. The polymers have the following structure (*See Patent for Chemical Structure*) (I) in which R1, R2 and n are as defined herein.

5633099

CARBONATE COMPOUNDS, NON-AQUEOUS ELECTROLYTIC SOLUTIONS AND BATTERIES COMPRISING NON-AQUEOUS ELECTROLYTIC SOLUTIONS

Yokoyama Keiich; Hiwara Akio; Fujita Shigeru; Omaru Atsuo Sodegaura, JAPAN assigned to Mitsui Petrochemical Industries Ltd; Sony Corporation

A novel carbonate compound represented by the general formula (I): (*See Patent for Tabular Presentation*) PS wherein R3 represents an alkyl group or an alkyl group substituted with one or more halogen atoms, and R4 represent an alkyl group having no hydrogen atom at the beta-position thereof or an alkyl group substituted with one or more halogen atoms having no hydrogen atom at the beta-position thereof, with the proviso that R3 is not identical to R4, which has excellent properties as solvent, is disclosed. A non-aqueous electrolytic solution and a battery utilizing the novel carbonate compound are also disclosed.

5635138

APPARATUS FOR IN SITU X-RAY STUDY OF ELECTROCHEMICAL CELLS

Amatucci Glenn G; Tarascon Jean-Marie Raritan, NJ, UNITED STATES assigned to Bell Communications Research Inc

An apparatus and method for monitoring structural changes of an electrode in a rechargeable battery include an in situ x-ray study electrochemical cell holder comprising top and bottom cell holder members including at least one beryllium window element for transmission of diffractometer x-radiation. A