(54) Title: POLYMER-MODIFIED ELECTRODE FOR ENERGY STORAGE DEVICES AND ELECTROCHEMICAL SUPER- CAPACITOR BASED ON SAID POLYMER-MODIFIED ELECTRODE

(57) Abstract: An energy storage device (1), such as a battery or supercapaci- tor, that includes at least two electrodes (2 & 3), at least one of the electrodes (2) includes an electrically conducting substrate having a layer of energy accumulating redox polymer complex compound of transition metal having at least two different degrees of oxidation, which polymer complex compound is formed of stacked transition metal complex monomers. The stacked transition metal complex monomers have a planar structure with the deviation from the plane of no greater than 0.1 nm and a branched system of conjugated π-bonds. The polymer complex compound of transition metal can be formed as a polymer metal complex with substituted tetra-dentate Schiff’s base. The layer thickness of redox polymer is within the range 1 nm-20 μm.
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
29 January 2004
# INTERNATIONAL SEARCH REPORT

<table>
<thead>
<tr>
<th>A. CLASSIFICATION OF SUBJECT MATTER</th>
</tr>
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<tr>
<td>IPC(7) : H01M 2/06</td>
</tr>
<tr>
<td>US CL : 429/213, 194, 185, 181, 211, 162, 184</td>
</tr>
<tr>
<td>According to International Patent Classification (IPC) or to both national classification and IPC</td>
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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 429/213, 194, 185, 181, 211, 162, 184

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

EAST SEARCH

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 5,527,640 A (RUDGE et al) 18 June 1996 (18.06.1996), see entire document.</td>
<td>1-23</td>
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<tr>
<td>Y</td>
<td>US 5,948,562 A (FULCHER et al) 07 September 1999 (07.09.1999), see entire document.</td>
<td>1-23</td>
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</tbody>
</table>

Further documents are listed in the continuation of Box C.

See patent family annex.

Date of the actual completion of the international search

30 October 2003 (30.10.2003)

Date of mailing of the international search report

20 NOV 2003

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