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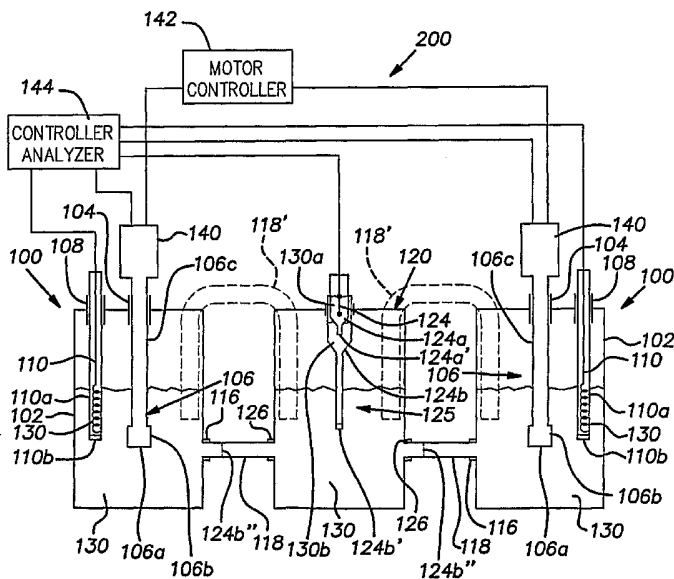
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(54) Title: HIGH THROUGHPUT MULTI-CHANNEL ROTATING DISK OR RING-DISK ELECTRODE ASSEMBLY AND METHOD



(57) Abstract: An electrochemical cell assembly including a plurality of testing cells (100), a reference cell (120), and fluid connections between the testing cells (100) and the reference cell (120). Each of the testing cells (100) includes a working electrode (106), which is a rotating disk or ring-disk electrode, and a counter electrode (110). A chemical composition, whose intrinsic kinetic properties under defined mass-transfer are to be investigated, is deposited on the working electrode (106). The reference cell (120) holds a reference electrode (124) that serves as a common reference electrode for each of the testing cells (100). The assembly permits simultaneous testing of many chemical compositions under identical environment.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/26555

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : G01N 27/403, 416 US CL : 205/775; 204/409,435 According to International Patent Classification (IPC) or to both national classification and IPC																									
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 205/775; 204/400, 409,434, 435 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet																									
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>US 4,911,794 A (PARCE et al) 27 March 1990 (27.03.1990), fig. 12, col. 21, lines 34-64.</td> <td style="text-align: center;">1, 9</td> </tr> <tr> <td style="text-align: center;">X</td> <td>WO 01/25774 A1 (LAITINEN-VELLONEN) 12 April 2001 (12.04.2001), fig. 3 and 4, p. 5, lines 24-34, p. 8, lines 5-8, p. 11, lines 12-16.</td> <td style="text-align: center;">1, 9</td> </tr> <tr> <td style="text-align: center;">A</td> <td>US 2002/0074244 A1 (SONNENBERG et al) 20 June 2002 (20.06.2002), see entire document.</td> <td style="text-align: center;">1-21</td> </tr> </tbody> </table>	Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 4,911,794 A (PARCE et al) 27 March 1990 (27.03.1990), fig. 12, col. 21, lines 34-64.	1, 9	X	WO 01/25774 A1 (LAITINEN-VELLONEN) 12 April 2001 (12.04.2001), fig. 3 and 4, p. 5, lines 24-34, p. 8, lines 5-8, p. 11, lines 12-16.	1, 9	A	US 2002/0074244 A1 (SONNENBERG et al) 20 June 2002 (20.06.2002), see entire document.	1-21	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>US 4,911,794 A (PARCE et al) 27 March 1990 (27.03.1990), fig. 12, col. 21, lines 34-64.</td> <td style="text-align: center;">1, 9</td> </tr> <tr> <td style="text-align: center;">X</td> <td>WO 01/25774 A1 (LAITINEN-VELLONEN) 12 April 2001 (12.04.2001), fig. 3 and 4, p. 5, lines 24-34, p. 8, lines 5-8, p. 11, lines 12-16.</td> <td style="text-align: center;">1, 9</td> </tr> <tr> <td style="text-align: center;">A</td> <td>US 2002/0074244 A1 (SONNENBERG et al) 20 June 2002 (20.06.2002), see entire document.</td> <td style="text-align: center;">1-21</td> </tr> </tbody> </table>	Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 4,911,794 A (PARCE et al) 27 March 1990 (27.03.1990), fig. 12, col. 21, lines 34-64.	1, 9	X	WO 01/25774 A1 (LAITINEN-VELLONEN) 12 April 2001 (12.04.2001), fig. 3 and 4, p. 5, lines 24-34, p. 8, lines 5-8, p. 11, lines 12-16.	1, 9	A	US 2002/0074244 A1 (SONNENBERG et al) 20 June 2002 (20.06.2002), see entire document.	1-21
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<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;">                 * Special categories of cited documents:                  "A" document defining the general state of the art which is not considered to be of particular relevance                  "E" earlier application or patent published on or after the international filing date                  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)                  "O" document referring to an oral disclosure, use, exhibition or other means                  "P" document published prior to the international filing date but later than the priority date claimed             </td> <td style="width: 50%; vertical-align: top;">                 "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention                  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone                  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art                  "&amp;" document member of the same patent family             </td> </tr> </table>		* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family																						
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Date of the actual completion of the international search 19 September 2005 (19.09.2005)	Date of mailing of the international search report <div style="text-align: right; font-weight: bold; font-size: 1.2em;">13 OCT 2005</div>																								
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Kaj K. Olsen Telephone No. 571-272-1300 <div style="text-align: right; font-size: 0.8em;">                     Jean Proctor                      Paralegal Specialist                 </div>																								

**INTERNATIONAL SEARCH REPORT**

International application No.

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Continuation of B. FIELDS SEARCHED Item 3:

CAPLUS

search terms: rotaf?, electrode, common, bias, reference, rde, rrde, ring, disk