

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 February 2007 (01.02.2007)

PCT

(10) International Publication Number
WO 2007/013077 A3

(51) International Patent Classification:
H01G 9/155 (2006.01) *H01G 9/02* (2006.01)

(21) International Application Number:
PCT/IL2006/000870

(22) International Filing Date: 27 July 2006 (27.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
169932 27 July 2005 (27.07.2005) IL

(71) Applicant (for all designated States except US): **CEL-
LERGY Ltd.** [IL/IL]; Naiot Technological Center Ltd.,
New Industrial Park, P.o.box 620, 20692 Yoqneam (IL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **LANG, Joel** [IL/IL];
30 Palmach St., Givataim (IL).

(74) Agents: **PYERNIK RUTMAN** et al.; Beit Etzion, 91
Herzl St., P.o.box 10012, 84106 Beer-sheva (IL).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT,
LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC,
SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

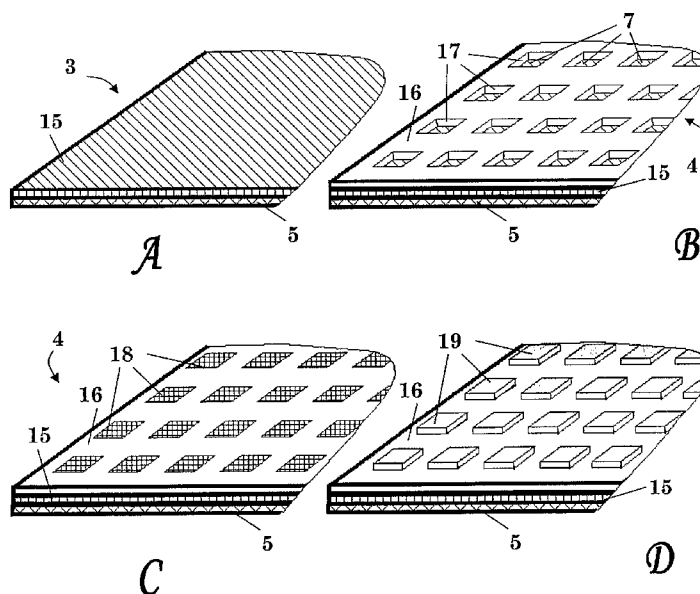
Published:

— with international search report

(88) Date of publication of the international search report:
24 May 2007

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

(54) Title: MULTILAYERED ELECTROCHEMICAL ENERGY STORAGE DEVICE AND METHOD OF MANUFACTURE
THEREOF



(57) Abstract: An energy storage device comprising one or more cells, wherein each cell is defined by a pair of electrodes and a separator placed therebetween, wherein each cell is bounded by two current collectors, the geometric form and size of said separator being identical to the form and size of said current collectors, and wherein in each cell, one electrode is printed on one of said two current collectors and the other electrode is printed on one face of the separator, the two electrodes being electronically insulated by means of said separator, and wherein the peripheral region of the separator, which surrounds the electrode printed thereon, is sealed.

WO 2007/013077 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/IL2006/000870

A. CLASSIFICATION OF SUBJECT MATTER
 INV. H01G9/155 H01G9/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 H01G

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 practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/071563 A (CELLERGY LTD [IL]; LANG YOEL [IL]) 28 August 2003 (2003-08-28) cited in the application the whole document	1-15
A	US 6 212 062 B1 (DAY JAMES [US] ET AL) 3 April 2001 (2001-04-03) cited in the application column 3, line 3 - column 4, line 60; figure 1	1-15
A	US 5 172 307 A (TABUCHI JUNJI [JP] ET AL) 15 December 1992 (1992-12-15) column 15, line 5 - column 16, line 13; figures 7a,7b,8-10	1-15

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* 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 document but 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

Date of the actual completion of the international search

9 February 2007

Date of mailing of the international search report

19/02/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Frias Rebelo, Artur

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IL2006/000870

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03071563	A	28-08-2003	AT 312405 T	15-12-2005
			AU 2003208590 A1	09-09-2003
			CA 2476284 A1	28-08-2003
			CN 1647221 A	27-07-2005
			DE 60302654 T2	14-09-2006
			EP 1481409 A1	01-12-2004
			JP 2005518662 T	23-06-2005
US 6212062	B1	03-04-2001	US 2002031884 A1	14-03-2002
US 5172307	A	15-12-1992	NONE	