(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 September 2007 (20.09.2007)

(51) International Patent Classification: H01M 8/00 (2006.01) H01M 4/02 (2006.01)

(21) International Application Number:

PCT/US2007/064119

(22) International Filing Date: 16 March 2007 (16.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/782,792 16 March 2006 (16.03.2006) US

(71) Applicant (for all designated States except US): INFI-NITE POWER SOLUTION [US/US]: 14998 West 6th Avenue, Bldg. E, Suite 600, Golden, Colorado 80401 (US).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): SNYDER, Shawn W. [US/US]; 14083 West 22nd Avenue, Golden, Colorado 80401 (US). NEUDECKER, Bernd J. [US/US]; 8 Blue Cedar. Littleton, Colorado 80127 (US). BRANTNER, Paul C. [US/US]: 29259 Thunderbolt Circle, Conifer, Colorado 80433 (US).
- (74) Agents: SCHWARTZ, Jeff E. et al.; Dewey & LeBoeuf LLP, 1101 New York Avenue, NW, Suite 1100, Washington, DC 20005-4213 (US).

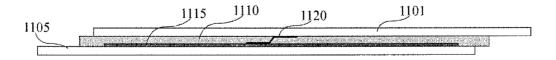
(10) International Publication Number WO 2007/106910 A3

- (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, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, 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, MT, 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
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 19 June 2008

(54) Title: METAL FILM ENCAPSULATION



(57) Abstract: The present invention relates to metal foil encapsulation of an electrochemical device. The metal foil encapsulation may also provide contact tabs for the electrochemical device. The present invention may also include a selectively conductive bonding layer between a contact and a cell structure.

INTERNATIONAL SEARCH REPORT

International application No. . PCT/US 07/64119

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - H01M 8/00 (2008.01); H01M 4/02 (2008.01) USPC - 429/12, 211 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum do	cumentation searched (classification system followed by cl M 8/00 (2008.01); H01M 4/02 (2008.01); USPC: 429/12,	assification symbols) 211	
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC: 429/12, 211, 13 (keyword limited see keywords below)			
tab, wire, me	ta base consulted during the international search (name of sh, perforated, alloy, stainless, disk, slit, thin film battery, rator, insulator, electrode	data base and, where practicable, search ter cell, encapsulate, planar, notch, foil, elect	ms used) rochemical, contact, tab,
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.
Х	US 2002/0028377 A1 (GROSS) 07 March 2002 (07.03.2002), entire document; Abstract; para [0007], [0021]-[0022]; para [0023], [0026]-[0028]; Fig 1-2; para [0031]; Fig 3; para [0037]-[0043]		81, 85-92, 94, 100
- Y	[0007], [0021]-[0022]; para [0023], [0026]-[0028]; Fig 1-2 Fig 6; para [0025].	2; para [0031]; Fig 3; para [0037]-[0043].	29, 32-33, 69-70, 73-74, 82-84, 93, 95-99, 101, 109-119
Y	US 6,723,140 B2 (CHU et al.) 20 April 2004 (20.04.2004), entire document; Abstract; col 11, ln 33-59; Fig 3; col 11, ln 64-65; col 12, ln 14-24; col 11, ln 5-12; col 12, ln 31-42; col 18, ln 33-34; col 11, ln 64-col 12, ln 13.		1-80, 102-108, 120-129
Y .	US 2005/0266161 A1 (MEDEIROS et al.) 01 December 2005 (01.12.2005), entire document; Abstract; para [0018], [0023]-[0024]; Fig 1; para [0010]; para [0029]; Fig 2.		1-80, 102-108, 120-129
Y	US 6,916,679 B2 (SNYDER et al.) 12 July 2005 (12.07.2005), entire document; Abstract; col 8, In 50-52; Fig 1-3; col 5, In 27-29; col 11, In 6-10; Fig 6; col 6, In 14-19; col 6, In 29-42; col 8, In 64-col 9, In 4; col 10, In 24-49.		4, 18, 24, 27, 43, 57, 64, 67, 82-84, 93, 95-99, 101, 109-119, 127
Further documents are listed in the continuation of Box C.			
* Special categories of cited documents: "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			
to be of particular relevance "E" earlier application or patent but published on or after the international "X" document of particular relevance; the claimed invention cannot be filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive			
cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is			
"O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than "&" document member of the same patent family			
the priority date claimed			
Date of the actual completion of the international search 20 March 2008 (20.03.2008) Date of mailing of the international search report 0.7 APR 2008			·
Name and mailing address of the ISA/US Authorized officer:			
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774			
PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774			