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DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KH, KN, KP, KR,
KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,
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KM, ML, MR, NE, SN, TD, TG).

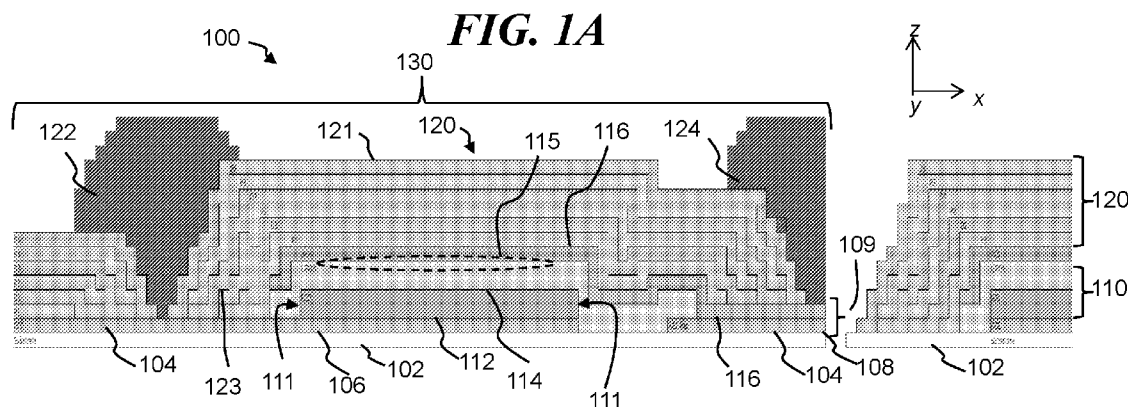
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(54) Title: THIN FILM BATTERY DEVICE AND METHODS OF FORMATION



(57) Abstract: A thin film battery may include: a contact layer, the contact layer disposed in a first plane and comprising a cathode current collector and an anode current collector pad; a device stack disposed on the cathode current collector, the device stack comprising a cathode and solid state electrolyte; an anode current collector disposed on the device stack; a thin film encapsulant, the thin film encapsulant disposed over the device stack, wherein the solid state electrolyte encapsulates the cathode.



A. CLASSIFICATION OF SUBJECT MATTER

H01M 10/04(2006.01)i, H01M 10/0585(2010.01)i, H01M 2/02(2006.01)i, H01M 2/10(2006.01)i, H01M 2/26(2006.01)i, H01M 4/64(2006.01)i, H01M 10/0562(2010.01)i, H01M 4/139(2010.01)i

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)

H01M 10/04; H01M 4/66; H01M 6/00; C23C 14/34; C23F 1/00; H01M 6/40; H01M 4/70; H01M 2/02; H01M 10/0585; H01M 2/10; H01M 2/26; H01M 4/64; H01M 10/0562; H01M 4/139

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

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & keywords: thin film battery, contact layer, cathode current collector, anode current collector, anode current collector pad, thin film encapsulant

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2014-0007418 A1 (SONG, DAOYING et al.) 09 January 2014 See paragraphs [0036]-[0037], [0043]; figures 4A-4J.	1-15
Y	WO 2016-033379 A1 (APPLIED MATERIALS, INC.) 03 March 2016 See paragraph [0022].	1-15
A	US 2012-0214047 A1 (KWAK, BYUNG SUNG et al.) 23 August 2012 See claim 10.	1-15
A	US 2015-0325862 A1 (APPLIED MATERIALS, INC.) 12 November 2015 See claims 1, 5.	1-15
A	US 2008-0032236 A1 (WALLACE, MARK A. et al.) 07 February 2008 See claim 1; figure 18.	1-15

Further documents are listed in the continuation of Box C.

See patent family annex.

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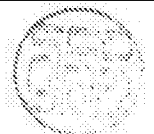
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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