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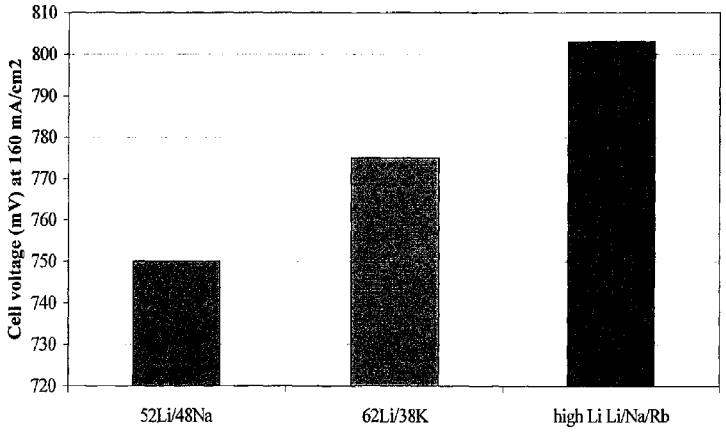


FIG. 2

(57) Abstract: A high-performance carbonate electrolyte for use in a molten carbonate fuel cell comprising a cathode electrode, an anode electrode, an electrolyte matrix and at least a cathode current collector abutting said cathode electrode, the high- performance carbonate electrolyte comprising: a first carbonate electrolyte stored in at least the cathode electrode of the molten carbonate fuel cell comprising a mixture of eutectic Li/Na carbonate electrolyte doped with one or more additive materials and one or more lithium precursors, wherein the additive materials include one or more of Rb_2C0_3, Cs_2C0_3, $BaC0_3$, $La20_3$, Bi_203, Ta_20_5 and mixtures thereof, and a second carbonate electrolyte stored in at least the cathode current collector, the second carbonate electrolyte having a composition that is the same or different from the first carbonate electrolyte.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

H01M 8/14(2006.01)i, H01M 8/02(2006.01)i, H01B 1/06(2006.01)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 8/14; H01M 8/02; H01M 4/86

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: molten carbonate, cesium, lanthanum

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2006-0257722 A1 (ABDELKADER HILMI et al.) 16 November 2006 See abstract; paragraphs [0016]-[0041]; claims 1-37; figures 1-4.	1-5,7,9-10,15-19,21,23-34
A	See the whole document.	6,8,11-14,20,22,35-37
Y	JP 2003-007315 A (OTA KENICHIRO et al.) 10 January 2003 See abstract; paragraphs [0014]-[0035]; claims 1-2; figures 1-4.	1-5,7,9-10,15-19,21,23-34
A	See the whole document.	6,8,11-14,20,22,35-37
A	US 05942345A A (KAUN; THOMAS D. et al.) 24 August 1999 See abstract; column 2,line 62-column 7,line 64; claims 1-17; figures 1-15.	1-37
A	US 2008-0160181 A1 (RYU BO HYUN et al.) 03 July 2008 See the whole document.	1-37

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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"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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Information on patent family members

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US 2008-0160181 A1	03.07.2008	None	