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(54) Title: MATERIALS FOR BATTERY ELECTROLYTES AND METHODS FOR USE

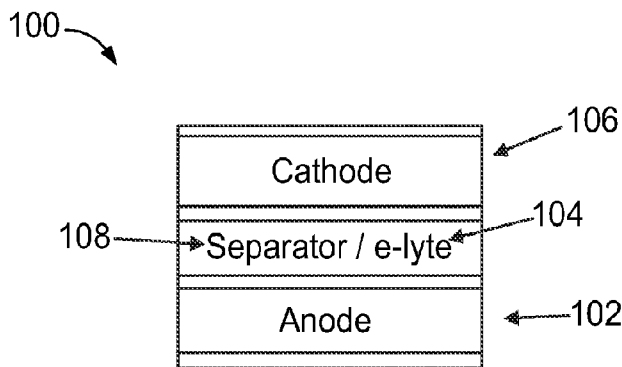


FIG. 1

(57) Abstract: Materials for use in electrolytes that provide a number of desirable characteristics when implemented within batteries, such as high stability during battery cycling up to high temperatures high voltages, high discharge capacity, high coulombic efficiency, and excellent retention of discharge capacity and coulombic efficiency over several cycles of charging and discharging are disclosed. A high voltage electrolyte includes a base electrolyte and a set of additive compounds, which impart these desirable performance characteristics.

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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8) - H01M 6/18 (2012.01) USPC - 429/313; 252/62.2		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8) - H01M 6/18 (2012.01) USPC - 429/313; 252/62.2: keyword search, as below		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO PubWest (databases: PGPB,USPT,USOC,EPAB,JPAB), Google Scholar -- Search Terms: battery, electrochemical, lithium, silicon, silyl, silic, alkylated, alkoxy, aryl, alkene, alkyne, cathode, positive, anode, negative, capacity, specific, efficiency, retain, retention, charge, coulombic, nickel, manganese, cobalt, ni, mn, mah		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/0304224 A1 (YOSHIMURA et al.) 02 December 2010 (02.12.2010), Table 1; para	1, 5-16, 18-20
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Y	[0165]; [0116]; [0119];	2-4, 17
Y	US 2010/0216036 A1 (SHIMA et al.) 26 August 2010 (26.08.2010), abstract; [0095]; [0151]; [0367]; Table 1	2-4, 17
A	US 7,588,859 B1 (OH et al.) 15 September 2009 (15.09.2009), claim 19	1-20
A	US 7,598,003 B1 (YOON et al.) 06 October 2009 (06.10.2009), col 32-34	1-20
A	US 2010/0159336 A1 (KIM et al.) 24 June 2010 (24.06.2010), entire document	1-20
A	US 6,872,493 B2 (YAMADA et al.) 29 March 2005 (29.03.2005), Col 3-6	1-20
A	US 2007/0298320 A1 (BARRANDON et al.) 27 December 2007 (27.12.2007), entire document	1-20
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"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
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