



- (51) International Patent Classification:
C01B 31/00 (2006.01)
- (21) International Application Number:
PCT/US2014/048303
- (22) International Filing Date:
25 July 2014 (25.07.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/958,482 27 July 2013 (27.07.2013) US
- (71) Applicant: FARAD POWER, INC. [US/US]; 428 Oakmead Parkway, Sunnyvale, CA 94085 (US).
- (72) Inventor: MITRA, Shantanu; 965 Hillsborough Blvd., Hillsborough, CA 94010 (US).
- (74) Agent: BARAN, Alexandra, J.; A. J. Baran Consulting, Inc., 555 Bryant Street, Suite 264, Palo Alto, CA 94301 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,

BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

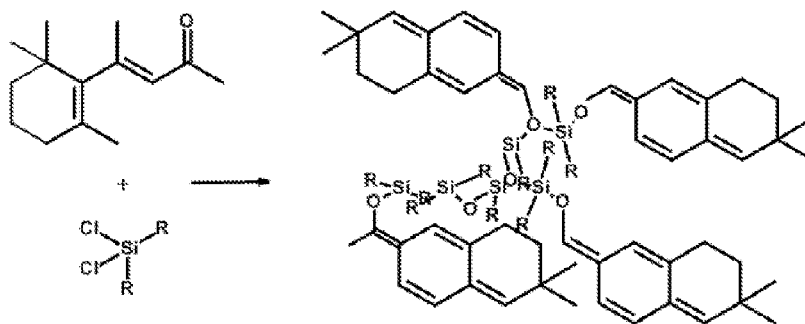
Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:

29 October 2015

- (54) Title: SOL-GEL METHOD FOR SYNTHESIS OF NANO-POROUS CARBON

FIGURE 2

- (57) Abstract: The present patent application discloses a novel sol-gel process to synthesize a nano-porous solid carbon material - suitable for use in electrodes in energy storage applications - from a combination of liquid reagents that undergo a polymerization reaction to form a matrix.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2014/048303

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C01B 31/00 (2014.01)

CPC - B01J 21/185 (2014.09)

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)

IPC(8) - C01B 31/00, C01B 31/02, C01B 31/04, C09C 1/44, C09B 1/46, D01F 9/12 (2014.01)

USPC - 423/445R, 423/447.4, 423/447.5, 423/448; 502/180, 502/182

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

CPC - B82Y 30/00, B01J 21/185, B01J 21/063, C01 B 31/02, C04B 35/524, C04B 38/022 (2014.09)

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

PatBase, Orbit, Google Patents, Google Scholar, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 7,718,155 B2 (ZHANG et al) 18 May 2010 (18.05.2010) entire document	1-20
Y	US 2006/0057355 A1 (SUZUKI et al) 16 March 2006 (16.03.2006) entire document	1-20

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

* 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 application or patent 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

13 October 2014

Date of mailing of the international search report

14 NOV 2014

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774