



(51) International Patent Classification:
H01L 27/115 (2006.01) **H01L 21/8247** (2006.01)

(21) International Application Number:
PCT/US2011/022390

(22) International Filing Date:
25 January 2011 (25.01.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/705,928 15 February 2010 (15.02.2010) US

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(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

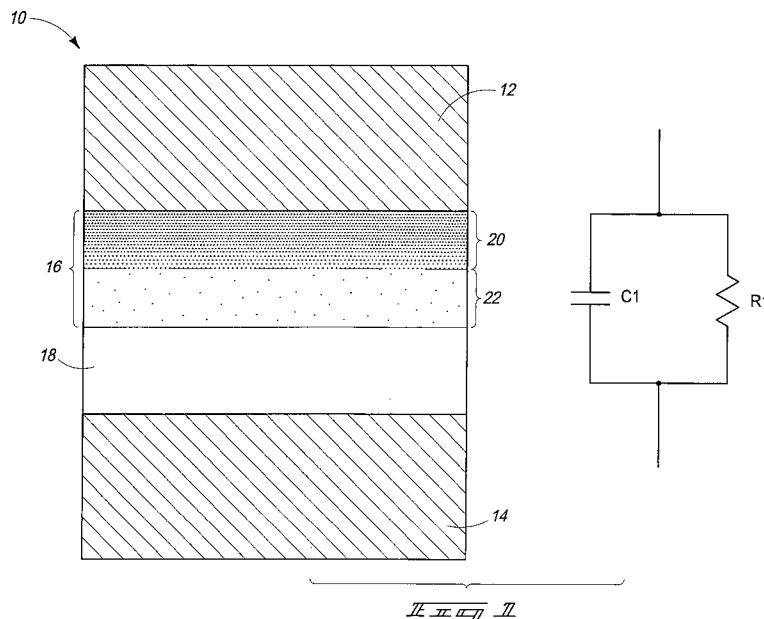
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, 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, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: MEMCAPACITOR DEVICES, FIELD EFFECT TRANSISTOR DEVICES, NON-VOLATILE MEMORY ARRAYS, AND METHODS OF PROGRAMMING



(57) Abstract: A memcapacitor device includes a pair of opposing conductive electrodes. A semiconductive material including mobile dopants within a dielectric and a mobile dopant barrier dielectric material are received between the pair of opposing conductive electrodes. The semiconductive material and the barrier dielectric material are of different composition relative one another which is at least characterized by at least one different atomic element. One of the semiconductive material and the barrier dielectric material is closer to one of the pair of electrodes than is the other of the semiconductive material and the barrier dielectric material. The other of the semiconductive material and the barrier dielectric material is closer to the other of the pair of electrodes than is the one of the semiconductive material and the barrier dielectric material. Other implementations are disclosed, including field effect transistors, memory arrays, and methods.



(88) Date of publication of the international search report:
24 November 2011