



(51) International Patent Classification:

B01J 21/06 (2006.01) **B01D 53/56** (2006.01)
C01G 23/047 (2006.01)

(21) International Application Number:

PCT/US2012/065616

(22) International Filing Date:

16 November 2012 (16.11.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/560,669 16 November 2011 (16.11.2011) 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, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, 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))

(54) Title: NEUTRAL, STABLE AND TRANSPARENT PHOTOCATALYTIC TITANIUM DIOXIDE SOLS

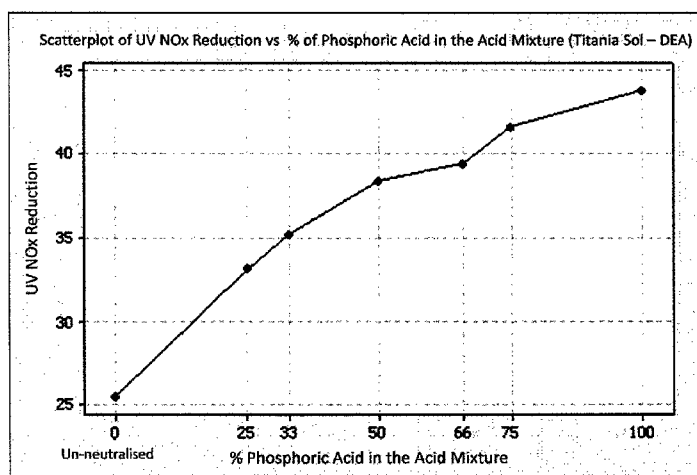


FIG. 1

(57) Abstract: A method for preparing a neutral, stable and transparent photocatalytic titanium dioxide sol is provided. The method comprises (1) contacting an alkaline titanium dioxide sol with an alkaline peptizing agent to provide a peptized alkaline titanium dioxide sol; (2) neutralizing the peptized alkaline titanium dioxide sol; and (3) obtaining or collecting the neutral, stable and transparent photocatalytic titanium dioxide sol. The titanium dioxide sol is stable and transparent over a range of pH of about 7.0 to about 9.5. The titanium dioxide sol may include crystallites of titanium dioxide having an average particle size of less than about 10 nm with at least 90% of the crystallites being in the anatase form.