

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 September 2003 (12.09.2003)

PCT

(10) International Publication Number
WO 03/074421 A1

(51) International Patent Classification⁷: **C01B 37/00**,
39/08, B01J 29/89, C07B 41/00, C07C 29/00

(21) International Application Number: PCT/JP03/02154

(22) International Filing Date: 26 February 2003 (26.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2002-61541 7 March 2002 (07.03.2002) JP
60/363,554 13 March 2002 (13.03.2002) US
2003-26530 3 February 2003 (03.02.2003) JP
2003-36747 14 February 2003 (14.02.2003) JP

(71) Applicant (for all designated States except US): **SHOWA DENKO K. K.** [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TATSUMI, Takashi**

[JP/JP]; 4-29-1-301, Kamiasao, Asao-ku, Kawasaki-shi, Kanagawa 215-0021 (JP). **WU, Peng** [CN/JP]; 1-214, 1-5, Kosugaya, Sakae-ku, Yokohama-shi, Kanagawa 247-0007 (JP). **TSUJI, Katsuyuki** [JP/JP]; C/O Corporate R & D Center, SHOWA DENKO K.K., 5-1, Ogimachi, Kawasaki-ku, Kawasaki-shi, Kanagawa 210-0867 (JP).

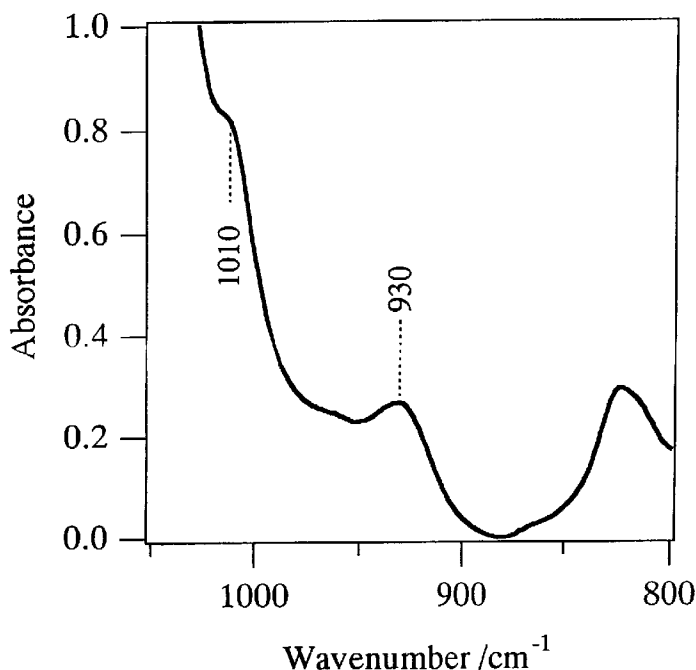
(74) Agents: **ISHIDA, Takashi** et al.; A. AOKI, ISHIDA & ASSOCIATES, Toranomom 37 Mori Bldg., 5-1, Toranomom 3-chome, Minato-ku, Tokyo 105-8423 (JP).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: TITANOSILICATE, PROCESS FOR ITS PRODUCTION, AND ITS USE IN PRODUCING OXIDIZED COMPOUND



(57) Abstract: A titanosilicate represented by the following compositional formula (1), wherein in the infrared absorption spectrum measured in the dehydrated state, the absorption spectrum has an absorption band having a relative maximum value at 930 ± 15 cm⁻¹: Compositional Formula (1) $x\text{TiO}_2 \cdot (1-x)\text{SiO}_2$ (wherein x is from 0.0001 to 0.2).



WO 03/074421 A1



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.