(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
11 February 2010 (11.02.2010)

PCT

(10) International Publication Number
WO 2010/016798 A1

(51) International Patent Classification:
B82B 1/00 (2006.01) *B22F 1/00* (2006.01)
B22F 9/00 (2006.01) *B82B 3/00* (2006.01)

(21) International Application Number:
PCT/SG2008/000289

(22) International Filing Date:
6 August 2008 (06.08.2008)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant *(for all designated States except US)*: **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 20 Biopolis Way, #07-01, Centros, Singapore 138668 (SG).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **YING, Jackie, Y.** [US/SG]; Institute of Bioengineering and Nanotechnology, 31 Biopolis Way, #04-01 Nanos, Singapore 138669 (SG). **YANG, Jun** [CN/SG]; Institute of Bioengineering and Nanotechnology, 31 Biopolis Way, #04-01 Nanos, Singapore 138669 (SG).

(74) Agent: **ROBINSON, Kristian**; Ella Cheong Spruson & Ferguson (Singapore) Pte Ltd, P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, 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))*

WO 2010/016798 A1

(54) Title: NANOCOMPOSITES

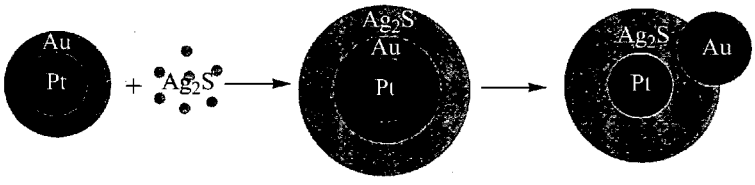


Figure 10

(57) Abstract: The invention describes a nanocomposite particle comprising a nanoparticle having a surface comprising a silver salt, and at least one region of metallic gold on said surface. The invention also provides a nanocomposite material comprising said particles and processes for making the nanocomposite material, either by allowing gold in nanoparticles having a silver salt on the surface thereof to at least partially diffuse through the silver salt so as to form at least one region of metallic gold on said surface, or else by depositing metallic gold on the surfaces of nanoparticles having the silver salt on the surface thereof.