

(12) International Application Status Report

Received at International Bureau: 20 November 2011 (20.11.2011)

Information valid as of: 26 April 2012 (26.04.2012)

Report generated on: 21 January 2021 (21.01.2021)

(10) Publication number:

WO2012/065076

(43) Publication date:

18 May 2012 (18.05.2012)

(26) Publication language:

English (EN)

(21) Application Number:

PCT/US2011/060392

(22) Filing Date:

11 November 2011 (11.11.2011)

(25) Filing language:

English (EN)

(31) Priority number(s):

61/413,453 (US)

(31) Priority date(s):

14 November 2010 (14.11.2010)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

H01L 21/326 (2006.01)

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(54) Title (EN): PLASMONIC STRUCTURES, METHODS FOR MAKING PLASMONIC STRUCTURES, AND DEVICES INCLUDING THEM

(54) Title (FR): STRUCTURES PLASMONIQUES, PROCÉDÉS DE FABRICATION DE STRUCTURES PLASMONIQUES ET DISPOSITIFS LES COMPRENANT

(57) Abstract:

(EN): The present invention relates generally to plasmonic structures, methods for making them, and devices including them. In one aspect, a plasmonic structure includes a plurality of metal particles disposed on a substrate; and one or more metal structures electrically coupled to and disposed on a surface of each of the plurality of metal particles. The metal structures have a structure that is different than the structure of the metal particles. The metal structures can be grown, for example, by electrodeposition on the metal particles. Growth of such metal structures can tune the response of the plasmonic structure.

(FR): La présente invention porte d'une manière générale sur des structures plasmoniques, sur leurs procédés de fabrication et sur des dispositifs les comprenant. Selon un aspect, une structure plasmonique comprend une pluralité de particules métalliques disposées sur un substrat; et une ou plusieurs structures métalliques couplées électriquement à une surface de chacune de la pluralité de particules métalliques et disposées sur celles-ci. Les structures métalliques ont une structure qui est différente de la structure des particules métalliques. Les structures métalliques peuvent être développées, par exemple, par électrodéposition sur les particules métalliques. Le développement de telles structures métalliques peut ajuster la réponse de la structure plasmonique.

International search report:

Received at International Bureau: 17 March 2012 (17.03.2012) [US]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

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, 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

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM