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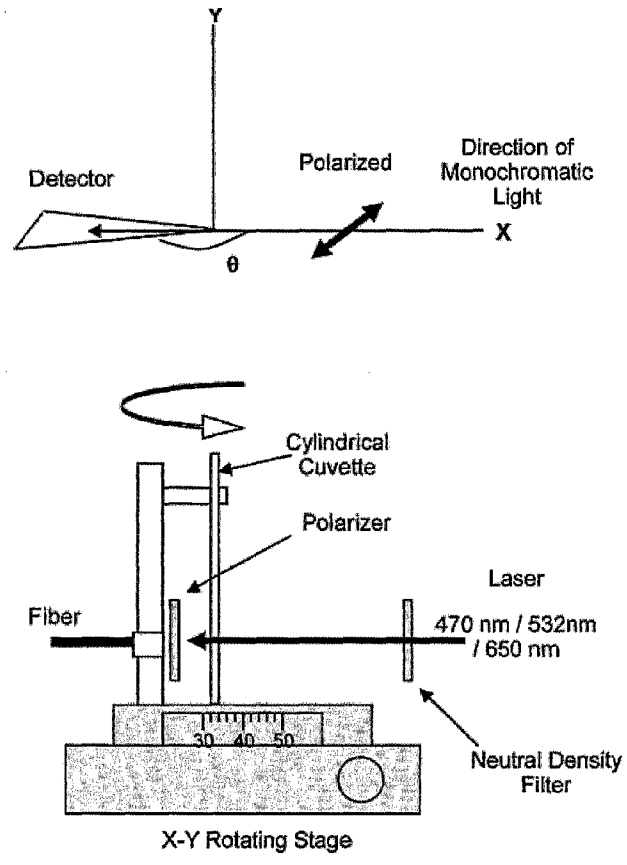
*[Continued on next page]*

(54) Title: BIOASSAYS USING PLASMONIC SCATTERING FROM NOBLE METAL NANOSTRUCTURES




(57) Abstract: The present invention relates to detecting and/or measuring scattering effects due to the aggregating metallic nanostructures or the interaction of plasmonic emissions from approaching metallic nanoparticles. The scattering effects may be measured at different angles, different wavelengths, changes in absorption and/or changes in polarization relative to changes in the distances between nanoparticles.

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# INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01N 21/65 (2007.01)
USPC - 436/164
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G01N 21/47; G01N 21/62-65 (2007.01)
USPC - 435; 436; 977/924,962

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Nalwa (ed.) Nanostructured Materials and Nanotechnology, 2002 by Academic Press

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO EAST System (US, USPG-PUB, EPO, JPO, DERWENT), GoogleScholar, DialogPro

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|---|---|---|
| Y | US 6,361,944 B1 (MIRKIN et al) 26 March 2002 (26.03.2002) entire document | 10, 12, 13 |
| Y | US 6,180,415 B1 (SCHULTZ et al) 30 January 2001 (30.01.2001) entire document | 10, 12, 13 |
| A | US 4,174,952 A (CANNELL et al) 20 November 1979 (20.11.1979) Fig. 2, column 5, line 67 - column 6, line 5 | 1-9, 14-16 |
| P,X | ASLAN et al. Angular-Ratiometric Plasmon Resonance Based Light Scattering for Bioaffinity Sensing. J.Am.Chem.Society 04 August 2005 (04.08.2005) entire document | 1-9, 14-16 |

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| Date of the actual completion of the international search | Date of mailing of the international search report |
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