

Title (en)
METHOD OF DETERMINING THE SPATIAL CONFIGURATION OF MOLECULES IN PARTICLES OR MACROMOLECULES, ESPECIALLY FOR DETERMINING THE SHAPE OF METAL NANOPARTICLES AND DEVICE FOR THE IMPLEMENTATION THEREOF

Title (de)
VERFAHREN ZUR BESTIMMUNG DER RÄUMLICHEN KONFIGURATION VON MOLEKÜLEN IN PARTIKELN ODER MAKROMOLEKÜLEN, INSBESONDERE ZUR BESTIMMUNG DER FORM VON METALLNANOPARTIKELN, SOWIE VORRICHTUNG ZU SEINER ANWENDUNG

Title (fr)
PROCEDE DE DETERMINATION DE LA CONFIGURATION SPATIALE DE MOLECULES DANS DES PARTICULES OU MACROMOLECULES, NOTAMMENT DE LA FORME DE PARTICULES METALLIQUES NANOMETRIQUES ET DISPOSITIF POUR SA MISE EN UVRE

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Abstract (en)
[origin: WO2009125148A2] The present invention relates to a method and a device for determining the spatial configuration of molecules in particles or macromolecules or the shape of metal nanoparticles. This method provides for the excitation of said particles or macromolecules placed in solution by means of two identical pulsed laser beams (E1, E2) but having different angles of incidence I1, I2 relative to the particles tested, followed by the detection of the SHG (second harmonic generation) light photons and establishment of the polarization-resolved HRS (hyper-Rayleigh scattering) intensity plots for each of the excitation beams. From each HRS plot thus determined, a parameter θ_{E1} , θ_{E2} characteristic of the spatial configuration of the molecules within the tested particles is calculated for each beam, which is determined relative to the parameters calculated in a preconstructed $\theta_{E2} = f(\theta_{E1})$ plot.

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