

Title (en)

DEVICE AND METHOD FOR DETERMINATION OF THE CHEMICAL COMPOSITION OF SOLID LIQUID OR GASEOUS MATERIALS

Title (de)

VORRICHTUNG UND VERFAHREN ZUR BESTIMMUNG DER CHEMISCHEN ZUSAMMENSETZUNG VON FESTEN, FLÜSSIGEN ODER GASFÖRMIGEN STOFFEN

Title (fr)

DISPOSITIF ET PROCÉDE DE DETERMINATION DE LA COMPOSITION CHIMIQUE DE MATIERES SOLIDES, LIQUIDES OU GAZEUSES

Publication

**EP 1716407 A1 20061102 (DE)**

Application

**EP 05700034 A 20050214**

Priority

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- AT 2592004 A 20040218

Abstract (en)

[origin: WO2005078416A1] The invention relates to a device and a method for determination of the chemical composition of solid, liquid or gaseous compositions, in particular, fused metals, by means of laser-induced plasma spectroscopy (LIPS). According to the invention, a device is disclosed, permitting rapid, reliable, simple and highly accurate changes to a separation of sample materials (3) from a focussing device (15) for laser light, in particular, for the observation of fused metals with prevention of erroneous measurements, said device comprising a laser source (11), for the generation of laser light, selected optical components (22) and a focussing device for focussing the laser light on a surface of the solid or liquid material, or for introduction thereof into the gaseous material and to generate a plasma therein, an analytical device (12), for determining the chemical composition of the material by means of spectral analysis of the radiation emitted by said plasma and a position-sensitive detector (13) for the radiation emitted by the plasma. Furthermore, the laser light and the plasma radiation emitted for determining the chemical composition are directed along a first optical axis (4) and the additional plasma radiation, required for determination of the separation is directed along a second optical axis (5), different to the first optical axis, to the position sensitive detector.

IPC 8 full level

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