Title (en)

Method and device for the contactless excitation of torsional oscillations in a sprung cantilever, fixed on one side, of an atomic force microscope

Title (de)

Verfahren und Vorrichtung zur berührungslosen Anregung von Torsionsschwingungen in einem einseitig eingespannten Federbalken eines Rasterkraftmikroskops

Title (fr)

Procédé et dispositif pour exciter sans contact des oscillations de torsion dans une poutre élastique, fixée sur un cote, d'un microscope a force atomique

Publication

EP 1623433 A1 20060208 (DE)

Application

EP 04731578 A 20040507

Priority

• EP 2004004876 W 20040507
• DE 10321931 A 20030515

Abstract (en)

[origin: WO2004102583A1] The invention relates to a method for exciting free torsional oscillations in a sprung cantilever, which is fixed on one side and has a longitudinal extension, of an atomic force microscope (AFM). The invention is characterised in that the sprung cantilever, fixed on one side, is placed above a surface at a distance from the latter, an acoustic coupling medium being located between said surface and the sprung cantilever, that the surface is subjected to lateral oscillations that are polarised in a linear manner along an oscillation direction and that the polarisation axis defined by the oscillation direction runs perpendicular to the longitudinal extension of the sprung cantilever.

IPC 1-7

G12B 21/08; G01H 9/00

IPC 8 full level

G01Q 60/32 (2010.01); **G01H 9/00** (2006.01)

CPC (source: EP US)

B82Y 35/00 (2013.01 - US); **G01Q 60/32** (2013.01 - EP US)

Citation (search report)

See references of WO 2004102583A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 2004102583 A1 20041125; DE 10321931 A1 20041216; DE 10321931 B4 20050602; EP 1623433 A1 20060208; JP 2007505324 A 20070308; JP 4680196 B2 20110511; US 2007089497 A1 20070426; US 7657947 B2 20100202

DOCDB simple family (application)

EP 2004004876 W 20040507; DE 10321931 A 20030515; EP 04731578 A 20040507; JP 2006529758 A 20040507; US 55679204 A 20040507