

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 August 2005 (11.08.2005)

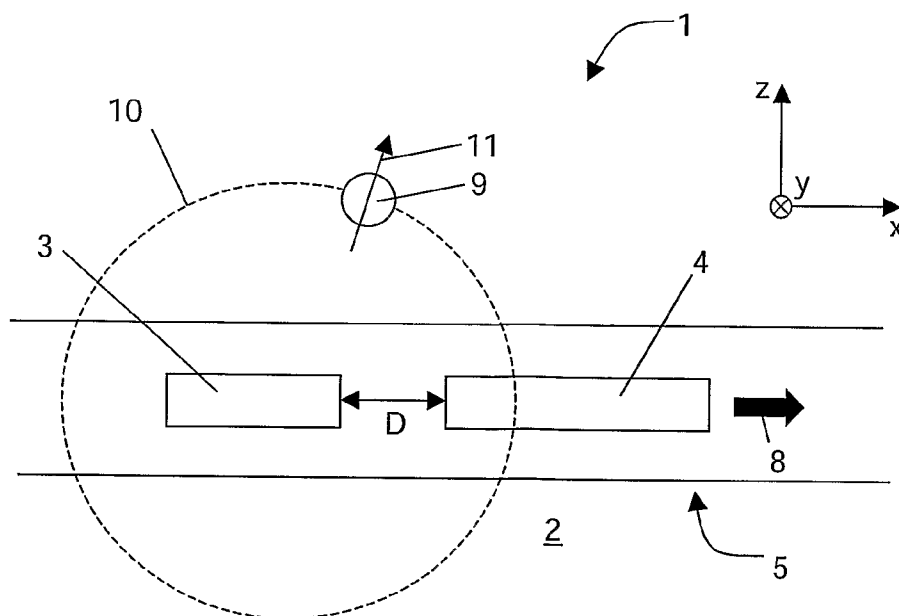
PCT

(10) International Publication Number
WO 2005/073695 A1

- (51) International Patent Classification⁷: **G01N 15/06**, (74) Agents: **VAN WERMESKERKEN, Stephanie, C. et al.**;
G01R 33/12 Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- (21) International Application Number: PCT/IB2005/050158 (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 14 January 2005 (14.01.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 04100267.6 26 January 2004 (26.01.2004) EP
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[Continued on next page]

(54) Title: METHOD AND DEVICE FOR ON-CHIP MAGNETIC RESONANCE SPECTROSCOPY



(57) Abstract: A method and a device for on-chip magnetic resonance spectroscopy (FMR, SPR, EPR, ESR, NMR) is proposed. On-chip magnetic resonance spectroscopy may be applied to non-magnetic as well as magnetic materials and to solids, liquids and gases. The method of the present invention is suitable for miniaturised materials analysis such as for example microfluidics. The strength of the method lies in the combination of highly efficient spin excitation near on-chip current wires with very sensitive on-chip magnetic sensors. The method and device also allows to separately detect different types of magnetic particles or molecules.

WO 2005/073695 A1

**Declaration under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report

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