Title (en)

NANOELECTRONIC DETECTION OF BIOMOLECULES EMPLOYING ANALYTE AMPLIFICATION AND REPORTERS

Title (de)

NANOELEKTRONISCHER NACHWEIS VON BIOMOLEKÜLEN MIT ANALYTVERSTÄRKUNG UND REPORTERN

Title (fr)

DETECTION NANOELECTRONIQUE DE BIOMOLECULES EN EMPLOYANT L'AMPLIFICATION DES ANALYTES ET DES RAPPORTEURS

Publication

**EP 2007379 A4 20091209 (EN)**

Application

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Abstract (en)

[origin: WO2007114931A2] Methods of detection of biomolecules are described, including methods of amplification of analyte target species and target reporters by analyte-triggered action of an enzyme such a nuclease, polymerase, and the like. Amplified target species (e.g., amplicons and reporters) are detectable by several embodiments of nanoelectronic sensors having aspects of the invention, and by alternative convention biomolecule detection methods.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [A] WO 2005047468 A2 20050526 - UNIV NEVADA RENO [US], et al
- [A] US 2003036065 A1 20030220 - GELLIBOLIAN ROBERT [US]
- [A] US 2005003355 A1 20050106 - LU MANCHUN [US], et al
- [A] US 2004214176 A1 20041028 - OSBORNE JAMES C [US], et al
- [A] WO 2006024023 A2 20060302 - NANOMIX INC [US], et al
- [AP] WO 2006071895 A2 20060706 - NANOMIX INC [US], et al
- [AD] LEE H J ET AL: "Enzymatically amplified surface plasmon resonance imaging detection of DNA by exonuclease III digestion of DNA microarrays", ANALYTICAL CHEMISTRY 20050815 AMERICAN CHEMICAL SOCIETY US, vol. 77, no. 16, 15 August 2005 (2005-08-15), pages 5096 - 5100, XP002551931
- [A] GOODRICH TERRY T ET AL: "Direct detection of genomic DNA by enzymatically amplified SPR imaging measurements of RNA microarrays", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 126, no. 13, 7 April 2004 (2004-04-07), pages 4086 - 4087, XP002551932, ISSN: 0002-7863
- [A] BAEUMNER A J ET AL: "A Universal Nucleic Acid Sequence Biosensor with Nanomolar Detection Limits", ANALYTICAL CHEMISTRY 20040215 AMERICAN CHEMICAL SOCIETY US, vol. 76, no. 4, 1 January 2004 (2004-01-01), pages 888 - 894, XP002551933
- [A] DUCK ET AL: "PROBE AMPLIFIER SYSTEM BASED ON CHIMERIC CYCLING OLIGONUCLEOTIDES", BIOTECHNIQUES, NATICK, MA, US, vol. 9, no. 2, 1 January 1990 (1990-01-01), pages - 147, XP000406092
- See references of WO 2007114931A2

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