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(54) Title: AMPLIFICATION OF ANALYTE DETECTION WITH PASSIVATED ENHANCING SURFACES HAVING RECEPTORS

(57) Abstract: This invention comprises devices, compositions and methods for quantitative detecting analytes in complex solutions by Raman spectroscopy. Passivating agents associated with enhancing surfaces can decrease direct, non-specific interaction between analytes and the enhancing surface. By decreasing direct interaction between analytes and enhancing surfaces, relatively more selective detection of the analyte can be performed. Analyte receptors can be either highly selective or have lesser selectivity. Reproducible, concentration-dependent Raman spectroscopic analyses can be performed using flow-through cells incorporating passivated substrates. By using receptors having low selectivity, different analytes can be detected simultaneously. Flow cells are provided that permit rapid, and/or continuous monitoring of samples, thereby permitting automated sample analysis.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US02/24033

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/543
US CL : 435/6

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : Please See Continuation Sheet

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,242,264 B1 (NATAN et al) 05 June 2001 (05.06.2001), see entire document.	1-44
A	US 6,149,868 A (NATAN et al) 21 November 2000 (21.11.2000), see entire document.	1-44
A	US 6,025,202 A (NATAN) 15 February 2000 (15.02.2000), see entire document.	1-44
A	US 5,609,907 A (NATAN) 11 March 1997 (11.03.1997), see entire document.	1-44

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Continuation of B. FIELDS SEARCHED Item 1:
435/6, 7.1;
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Continuation of B. FIELDS SEARCHED Item 3:
EAST
search terms: raman, fractal aggregates