



US007721590B2

(12) **United States Patent**
Kolosov et al.

(10) **Patent No.:** **US 7,721,590 B2**

(45) **Date of Patent:** **May 25, 2010**

(54) **RESONATOR SENSOR ASSEMBLY**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 702 days.

(21) Appl. No.: **10/550,075**

(22) PCT Filed: **Mar. 19, 2004**

(86) PCT No.: **PCT/US2004/008552**

§ 371 (c)(1),
(2), (4) Date: **Nov. 22, 2006**

(87) PCT Pub. No.: **WO2004/086003**

PCT Pub. Date: **Oct. 7, 2004**

(65) **Prior Publication Data**

US 2007/0052970 A1 Mar. 8, 2007

Related U.S. Application Data

(60) Provisional application No. 60/456,517, filed on Mar.
21, 2003.

(51) **Int. Cl.**
G01N 11/16 (2006.01)

(52) **U.S. Cl.** **73/54.41; 73/53.05**

(58) **Field of Classification Search** **73/24.05,**
73/30.01, 32 A, 54.24, 54.26, 54.41, 32 R
See application file for complete search history.

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(57) **ABSTRACT**

An improved method and assembly, wherein the method generally includes the steps of providing a coated or uncoated sensor element having an exposed sensing surface; attaching the sensor element to a platform so that the exposed sensing surface is spaced from the platform; and optionally applying a protective layer over the platform while maintaining the sensing surface as exposed. The assembly includes a resonator having a free portion with a sensing surface is incorporated onto a platform, components of the sensor are physically shielded from harsh operating conditions, the requisite space is maintained between the free portion of the resonator and the platform, and the sensing surface of the resonator remains exposed for sensing.

20 Claims, 4 Drawing Sheets

