earch and Economic Development **OTC Website Find Technologies** Contact Us **Request Information One-Step Manufacture Of Nanowire Biosensors** CONTACT Grace Yee grace.yee@ucr.edu Tech ID: 10283 / UC Case 2004-177-0 tel: 951-827-2212. BACKGROUND Electrochemical biosensors based on nanotubes or nanowires could be widely used in diagnostic, research, and security applications. **INVENTORS** Chen, Wilfred However, the problems associated with functionalizing and placing these nano-elements on a device have prevented the practical application Mulchandani, Ashok K. of this technology. Myung, Nosang V. University of California scientists have developed a simple one-step methodology for the synthesis of functionalized nanowires that act as **OTHER INFORMATION** biosensors. Nanowires of 100 to 200 nm have been tested that can accurately sense the presence of target biological molecules through changes in conductance when the target binds to the wire's functional ligands **CATEGORIZED AS ADVANTAGES** Biotechnology Other Sensors & Instrumentation > One-step in-situ synthesis. Each nanowire is fabricated on the device in seconds and is functionalized as it is grown. There is no need Biosensors

Easy manufacture. UC's methods are compatible with current fabrication technologies and could be used to develop densely packed arrays of heterogonous probes on an array.

Instantaneous, specific, and label-free detection. Biological targets selectively bind to the wire's functional groups, leading to a rapid

and easily measured change in conductance.

for post-synthesis modification or placement.

Versatility. The UC methods could be readily adapted to sense biological materials, chemical species, and gases.

PATENT STATUS

Country	Туре	Number	Dated	Case
United States Of America	Issued Patent	8,034,222	10/11/2011	2004-177

University of California, Riverside Office of Technology Commercialization 200 University Office Building, Riverside,CA 92521 otc@ucr.edu https://research.ucr.edu/

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