

Title (en)  
NITRIC OXIDE SENSOR.

Title (de)  
SENSOR FÜR STICKSTOFFOXYDE.

Title (fr)  
DETECTEUR D'OXYDE NITRIQUE.

Publication  
**EP 0637379 A4 19960508 (EN)**

Application  
**EP 93909598 A 19930416**

Priority  
• US 87146392 A 19920421  
• US 9303701 W 19930416

Abstract (en)  
[origin: WO9321518A1] A nitric oxide (NO) microsensor (34) based on catalytic oxidation of NO comprises a thermally-sharpened carbon fiber with a tip diameter of about 0.5-0.7  $\mu\text{m}$  coated with several layers of p-type semiconducting polymeric porphyrin and cationic exchanger deposited thereon. The microsensor (34) which can be operated in either the amperometric voltametric or coulometric mode utilizing a two or three electrode system, is characterized by a liner response up to about 300  $\mu\text{M}$ , a response time better than 10 msec and a detection limit of about 10 nM. The sensor (34) of the present invention also discriminates against nitrite, the most problematic interferant in NO measurements. The amount of NO released from a single cell can thus be selectively measured in situ by a porphyrinic microsensor (34) of the invention. A larger scale sensor (12) utilizing porphyrin and cationic exchanger deposited on larger fibers or wires, platinum mesh or tin indium oxide layered on glass, can also be employed when measurement of NO concentration in chemical media, tissue or cell culture is desired.

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IPC 8 full level  
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Citation (search report)  
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• [Y] PATENT ABSTRACTS OF JAPAN vol. 013, no. 406 (P - 930) 8 September 1989 (1989-09-08)  
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• See references of WO 9321518A1

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