Qeios

Peer Review

Review of: "(Research Conclusion) Performance of Semiconductor Nanowires for (Element Determination) and LOC/Bio Nanosensors"

Veronica Salazar[1]

1. Technology, University of Roma "Tor Vergata", Italy

These types of biosensors (environmental detection) can often be used to detect bacteria or viruses. First, a carbon nanotube is functionalized with antibody conjugates. When a bacterium or virus binds to the antibody, the nanotube's conductivity changes. In another method, the nanotube is connected to a metal and a voltage is passed through it. When a bacterium or virus binds to the nanotube, the current changes and a signal is generated. This method is a rapid method for detecting bacteria.

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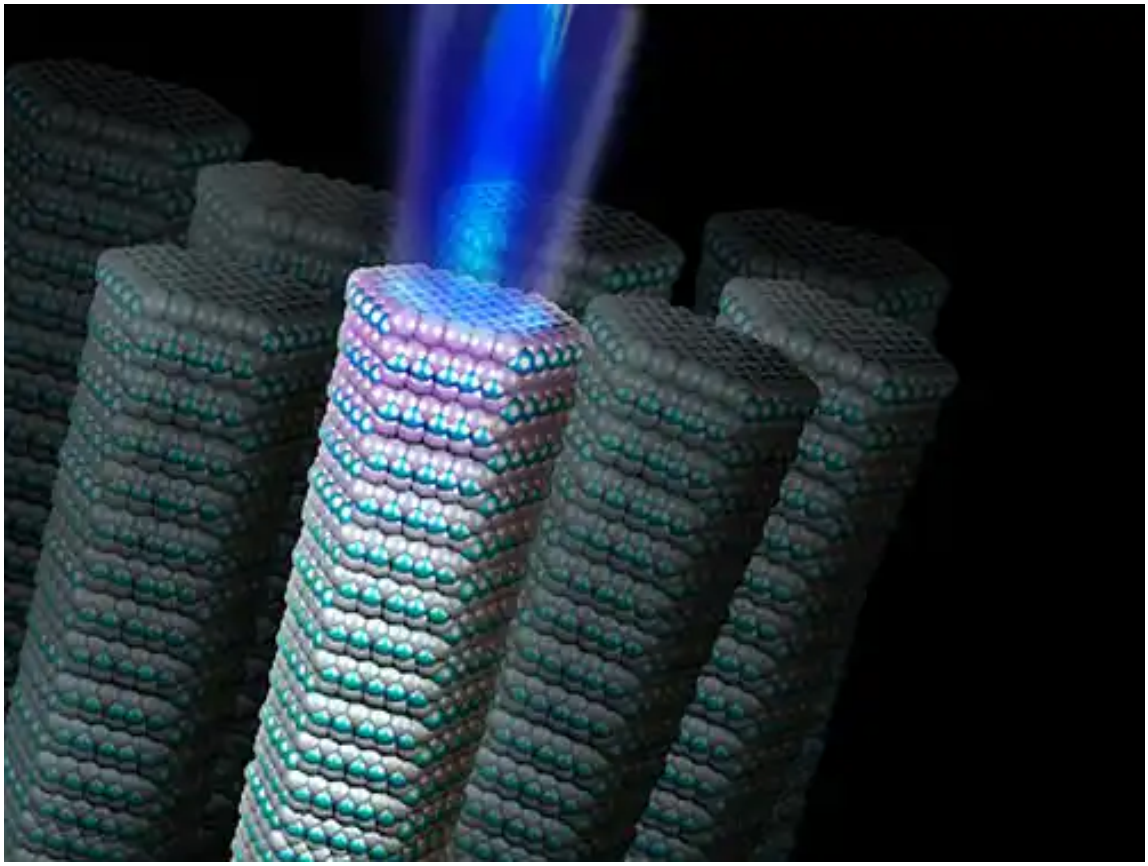

(Research Conclusion) Performance of Semiconductor Nanowires for (Element Determination) and LOC/Bio Nanosensors

The semiconductor nanowires of this device are used to develop LOC / Bio sensors that are capable of determining a molecule. In these sensors, when the molecule to be analyzed is placed on the oscillator (cantilever) of the tweezers, a change is created in the resonant frequency of the cantilever. Coating the cantilever with receptor molecules such as antibodies that can specifically bind to bacteria, viruses, or some biomolecules increases the efficiency of the system . Cantilevers are spring platforms in nano and micro sizes and operate based on the deflection of the platform or the change in the resonant frequency produced on the cantilever surface .

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Attachments: available at https://doi.org/10.32388/FOGLJU

Declarations

Potential competing interests: No potential competing interests to declare.