

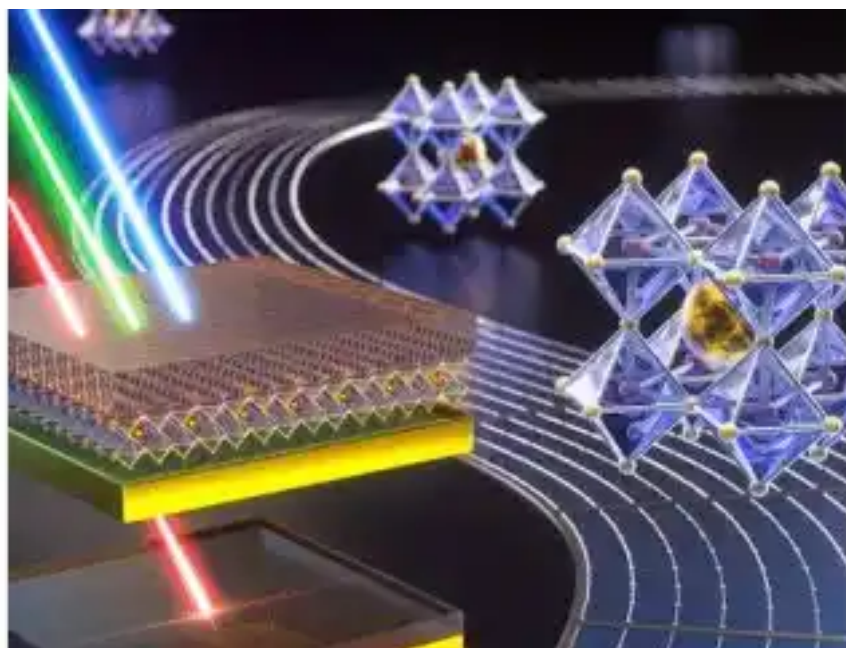
Peer Review

Review of: "One of the potential advantages of nanobiosensors over conventional sensors is their high sensitivity"

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In addition to being able to produce an output signal indicating the presence of an analyte, a sensor must be able to identify a specific analyte. This ability is called specificity and is the factor by which the sensor can be effective in an unobserved environment containing large amounts of unknown substances. Unlike sensitivity, measuring the performance of a specific nanobiosensor is difficult because the number of substances that should not produce an output signal is very large. Specificity is most useful when a sensor must detect a small concentration of a specific analyte in an environment containing large amounts of non-target substances, many of which may bind non-specifically to the sensor and thus produce an unusual signal. Gold nanoparticles have the ability to rapidly and directly transfer electrons between a wide range of electroactive materials. They also have light scattering properties and the ability to enhance a local magnetic field. Gold nanobiosensors can be classified into three categories: optical nanobiosensors, electrochemical nanobiosensors, and piezoelectric nanobiosensors. Metal nanoparticles such as platinum and silver are also of great interest due to their unique size and optoelectronic properties. Their size is related to optical, magnetic, chemical, and electrical properties.



Conclusion :

One of the potential advantages of nanobiosensors over conventional sensors is their high sensitivity. The intrinsic sensitivity of a sensor is defined as the ratio of the sensor output signal to the change in sensor properties due to the amount of analyte bound to the sensor. This parameter can be considered as the ability of the sensor to convert an input signal into an output signal.

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Declarations

Potential competing interests: No potential competing interests to declare.