

# اولین همایش ملی نانو تکنولوژی مزایا و کاربردها



محل برگزاری : همدان دانشکده شهید مفتاح

۱۵ اسفند ۱۳۹۲



ارژمان محیط زیست گلستانه اداره کل حفاظت محیط زیست استان همدان

## Nanobiosensing Electronics for Biosensor Packaging

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**Abstract :** The nanobiosensor technology, an integral part of bioelectronics, is revolutionizing the health care industry, forensic medicine, home-land security, food and drink industries, environmental protection, genome analysis of organisms and communications. In this paper, the biosensing electronics building blocks such as biosensing, signal conversion and signal processing, and biosensing mechanisms have been described. A critical account on biological probe design, probe preparation and interfacing with signal transducer element of the biosensor is given. Various transducer elements have been enumerated. The application of Bioelectronics for biosensing packaging, with special reference to surface modification and biofunctionalization of sensor devices, and integration of biosensor system with system-on packaging (SOP) are detailed. Finally, this paper concludes with future trends in biosensor technologies and a brief summary.

**Keywords:** Bioelectronics , nanobiosensor building blocks , surface modification , nanobiosensor packaging