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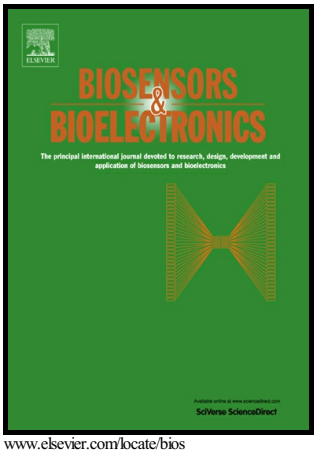

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Radially oriented nanostrand electrodes to boost glucose sensing in mammalian blood

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Abstract

Architecture of nanoscale electrochemical sensors for ultra-trace detection of glucose in blood is important in real-life sampling and analysis. To broaden the application of electrochemical sensing of glucose, we fabricated, for the first time, a glucose sensor electrode based on radially oriented NiO nanostrands (NSTs) onto 3D porous Ni foam substrate for monitoring, as well as selective and sensitive sensing of glucose in mammalian blood. The simple, scalable one-pot fabrication of this NST-Ni sensor design enabled control of the pattern of radially oriented NSTs onto 3D porous Ni foam substrate. The