



Nanomaterials in Glucose Sensing (Hardback)

By Krishna Burugapalli, Nick Wang, Jakub Trzebinski,

American Society of Mechanical Engineers, U.S., United States, 2014. Hardback. Condition: New. Language: English. Brand new Book. Up to 40 volumes are planned for this concise monograph series, which focuses on the implementation of various engineering principles in the conception, design, development, analysis and operation of biomedical, biotechnological and nanotechnology systems and applications. The smartness of nano-materials is attributed to their nanoscale and subsequently unique physicochemical properties and their use in glucose sensing has been aimed at improving performance, reducing cost and miniaturizing the sensor and its associated instrumentation. So far, portable (handheld) glucose analysers were introduced for hospital wards, emergency rooms and physicians' offices; single-use strip systems achieved nanolitre sampling for painless and accurate home glucose monitoring; advanced continuous monitoring devices having 2 to 7 days operating life are in clinical and home use; and continued research efforts are being made to develop and introduce increasingly advanced glucose monitoring systems for health as well as food, biotechnology, cell and tissue culture industries. Nanomaterials have touched every aspect of biosensor design and this chapter reviews their role in the development of advanced technologies for glucose sensing, and especially for diabetes. Research shows that overall, nanomaterials help address the problems with conventional optical and electrochemical...



Reviews

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