

High Enzyme Loading and Enhanced Sensing Performance of ZnO Nanosheets Hierarchical Microspheres

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Nanostructures with higher surface specific area has great potential applications in sensing devices because higher surface specific area can not only improve enzyme immobilization efficiency, but also enhances charge transport and sensing properties. Herein, ZnO nanosheets hierarchical microspheres (ZNHMs) were synthesized by facile one-pot solution process at low temperature and used for the fabrication of glucose biosensor. Results showed that as-synthesized ZNHMs possess higher specific surface area which significantly increases enzyme immobilization efficiency and sensing performances for glucose detection.