

Cobalt oxide-based nanomaterials as efficient platform for the electrochemical detection of target molecules

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Abstract

There exist and extended list of metal oxides, which have been employed as catalysts for various technological applications. Amongst the library of many metal oxides cobalt oxide Co_3O_4 has gained envisioned interest by the researchers due to its diverse morphology, high surface to volume ration, simple preparation methods, low cost and well defined electrochemical redox activity. Co_3O_4 has been employed in various fields such as engineering, medicine and biomedical fields, and in the field of pure sciences. More specifically in the filed electrochemical application it has shown promising results as an electrode material for electrochemical energy storage/conversion applications and electrochemical detection of target molecules. The current study presents the use of Co_3O_4 and Co_3O_4 based nanocomposites as efficient platform for the detection of target molecules.

Received: January 01, 2022; **Accepted:** January 08, 2022; **Published:** January 18, 2022

Biography

Shahid Mehmood has completed his master degree leading to Ph.D. in Physics from University of Malaya with Distinction. He earned his first master's degree in electronics from Sarhad University of Science and information technology, Pakistan. He is currently pursuing his post-doctoral fellowship in Thammasat University, THAILAND.

He has a 3 Years of post-doctoral fellowship experience. His area of research interest is synthesis of 2D materials and their binary and ternary nano composite for electrochemical applications such as sensors and detection of water contaminations; besides this he is also working on fuel cells, CO_2 reduction, water splitting, solar cells, and super capacitors applications.