Review of: "Critical Review on Carbon Nanomaterial Based Electrochemical Sensing of Dopamine the Vital Neurotransmitter"

sushma dave Dave[1]

1 chemistry, JIET Group of Institutions, Jodhpur, India

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The review on carbon nanomaterial-based electrochemical sensing of dopamine provides a comprehensive overview of this important area but requires several revisions for clarity and depth. While the title specifies "Carbon Nanomaterial-Based Electrochemical Sensing," it primarily discusses graphene oxide (GO) and carbon nanotubes (CNT); expanding the scope to include other carbon materials such as fullerenes (C60), carbon nanorods, carbon dots, and g-C3N4 would enhance the discussion. In the abstract, a sentence emphasizing the significance of carbon-based materials and their interaction with dopamine is needed. Additionally, a clearer explanation of the electrochemical mechanisms underlying dopamine sensing, along with brief overviews of the principles behind techniques like cyclic voltammetry (CV), differential pulse voltammetry (DPV), and linear sweep voltammetry (LSV), should be included. The review would benefit from visual representations of electrochemical sensing images and a description of each carbon material's role in dopamine sensing in Section 4.0, alongside information on the insights gained from characterization methods. All abbreviations must be defined upon first use, and mechanisms should be elaborated upon in Sections 4.1 and 4.2. Furthermore, identifying and proposing solutions to existing challenges in the field is crucial for advancing the research. Lastly, incorporating references from relevant literature would strengthen the review and provide necessary context. Addressing these points will significantly enhance the manuscript’s quality and impact.