ICNAN'25

INTERNATIONAL CONFERENCE ON NANOSCIENCE AND NANOTECHNOLOGY

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OF PRESENTATION

THIS IS TO CERTIFY THAT

Dr./Mr./Ms. KAMESHWAR YVR

SRI VENKATESWARA COLLEGE, UNIVERSITY OF DELHI

has presented a paper (oral/poster) at the 3rd International Conference on Nanoscience and Nanotechnology (ICNAN'25) organised by the Centre for Nanotechnology Research (CNR), Vellore Institute of Technology, Vellore, India, during 16th – 19th December 2025.

Title of the paper: Purification And characterization Of Acid Phosphatase From Vigna Radiata

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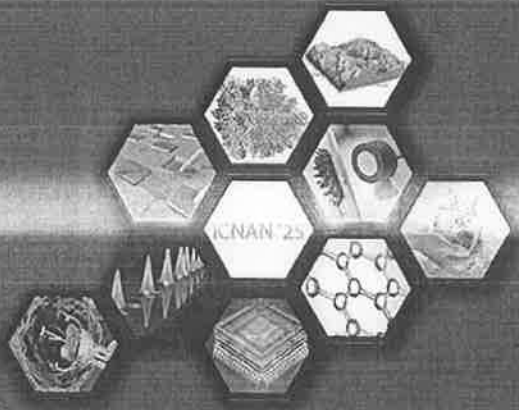
3rd International Conference on Nanoscience and Nanotechnology

16th - 19th December 2025



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Abstract ID: 138

Purification And Characterization Of Acid Phosphatase from Vigna Radiata

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Acid Phosphatase (AP) represents phosphatases, active in acidic media that is crucial for phosphate metabolism and stress adaption in plants by scavenging inorganic phosphates (Pi) from phosphate monoesters via hydrolysis. The present study envisages the characterization of AP from germinating mung beans *(Vigna radiata)* by partial purification subjecting to ammonium sulphate precipitation (30-60%) followed by ion exchange chromatography using DEAE Sephadex A-50. The activity table shows the enhanced specific activity and significant peaks in the chromatogram of Ion exchange chromatography. The pooled peaks were analysed for the activity and evaluated for protein estimation. This may further progress with molecular and biophysical characterization to study stability effects.

Keywords: Acid Phosphatase, Phosphate metabolism, Pi scavenging, Ammonium sulphate precipitation, Ion exchange chromatography.

Abstract ID: 140

Development of Electrochemical Sensor for Neurotransmitter Epinephrine Detection using MXene/$NiCo_2O_4$ nanocomposite.

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A highly sensitive electrochemical biosensor was fabricated using a MXene/$NiCo_2O_4$ nanocomposite for the detection of epinephrine, a key neurotransmitter implicated in several neurological and cardiovascular disorders. The incorporation of two-dimensional titanium carbide (Ti_3C_2) MXene with binary metal oxide $NiCo_2O_4$ provided superior conductivity, electrocatalytic activity, and surface area for enhanced electrochemical interaction. Cyclic voltammetry, Electrochemical impedance spectroscopy and differential pulse voltammetry techniques were used to quantify epinephrine concentrations. The sensor exhibited high selectivity, fast response and demonstrated a linear detection range in micromolar concentrations with an ultralow detection limit, high selectivity, and excellent stability, signifying its potential for clinical monitoring of neurotransmitter-related diseases.

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Invitation to submit your Manuscript in iScience A Cell Press Journal - ICNAN 2025

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