Quantum dot applications endowing novelty to analytical proteomics

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Abstract:

This review surveys all the state-of-art applications of quantum dots (QDs) in conventional and modern analytical methods in proteomic studies. A brief introduction of QDs and their properties is initially presented followed by outlining the application of QDs in fluorescence, MS, imaging, and cancer-based proteomics. The in-depth application of QDs in MALDI-MS and surface assisted laser desorption/ionization-MS has been elaborately discussed, summarizing the speculated mechanism behind the protein-QDs interactions during QD matrix applications leading to enhanced detection sensitivity.

Keywords:

MALDI-MS; Nanoproteomics; Proteins; Quantum dots; SALDI-MS

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