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Nanotechnology: facts to ponder

Nanotechnology is the field which is rapidly developing nowadays in the applications scenario in the area of science and technology. It deals with the nanomaterials which are smaller than the hundred (100) nanometers in dimensions, which includes the most attractive feature of larger surface area per unit volume, which increases the rate of transfer of mass, particularly at elevated temperatures. Nanomaterials/ Nanoparticles with such characteristic features and properties are encouraged for the development of new approaches or developing nanoprobes for the use in biomedical, drug delivery system, and predominantly in cancer nanotechnology applications. For such instances Gold nanoparticles are used in DNA labeling, cellular imaging, catalysis and biosensor modeling. Palladium nanoparticle exhibits

excellent catalytic properties, its green processing makes it suitable by which Palladium is used in environment friendly ways to clean and purify the air pollution. Vanadium nanoparticle is the most extensively used nanoparticle in the cancer treatment. The nanoparticles are commonly characterized by the various techniques in which the ultra violet-visible spectroscopy (UV-VIS) is the most commonly and primarily rapid used one along with this later SEM (scanning electron microscopy) and TEM (transmission electron microscopy) is used. The surface chemistry of nanoparticles is characterized with the FTIR Spectroscopy. The metal nanoparticles are currently extensively being used in pharmaceutical sciences as novel drug delivery systems.

Biography

Sharad Kumar Yadav has 26 years of teaching and research experience and has served at various senior positions of the university including Registrar of the DUVASU University. He is currently a Professor, Head of Department of Veterinary Microbiology at DUVASU, Mathura, India. He has published a number of papers in reputed international & national journals and has a vast experience in the arena of BHV-1 virus.

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