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Design of Targeted Metal Chelation Therapeutics Nanocapsules as Colloidal Carriers and Blood–Brain Barrier (BBB) Translocation to Targeted Deliver Anti– Cancer Nano Drugs into the Human Brain to Treat Alzheimer's Disease under Synchrotron Radiation

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HDS (Hydrodesulphurization Reaction) is a catalytic chemical process widely used to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation[1-23]. The purpose of removing the sulphur is to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation[24-44]. Another important reason is that sulphur, even in extremely low concentrations, poisons the novel metal catalysts (Platinum and Rhenium) in the catalytic reforming units that are subsequently used to upgrade the octane rating of the naphtha streams[45-73]. In this short communication, paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin are most used anti–cancer nano drugs, which are tested for nano-medicinal and pharmaceutical applications. The anti–cancer nano drugs are mostly encapsulated into the liposomes or micelles or conjugated with Polyethylene Glycol (PEG) were coated with WO_3 nano-particles to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. The loading capacity of the W species on paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin was studied by the X–Ray Diffraction (XRD) technique. The activity of as–prepared paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin supported Ni–W catalysts with respect to the traditional Mo–based HDS (Hydrodesulphurization Reaction) catalysts were evaluated with the special set up. Results demonstrated that the paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin supported Ni–W catalysts have superior activity in relation to the traditional Co–Mo catalysts to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation.

Paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin which play a vital role in enzymatic processes in the mitochondria, cell nucleus and cytoplasm to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. In addition, paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin,

with a Cobalt (III) core, serve as catalyst for oxidation of olefins. Mesoporous materials are ideal supports for immobilization and extraction of this large bio-molecule to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. SBA–3 mesoporous silica is synthesized by CTAB surfactant via liquid phase deposition procedure. The synthesized mesoporous silica is characterized by Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM), Dynamic Light Scattering (DLS), Pulsed Laser Deposition (PLD), X–Ray Diffraction (XRD) and Energy–Dispersive X–Ray Spectroscopy (EDX). Then, immobilization of paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin within the mesoporous silica is studied for the first time. Characterization of paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin containing mesoporous support is described using Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM), Dynamic Light Scattering (DLS), Pulsed Laser Deposition (PLD), X–Ray Diffraction (XRD) and Energy– Dispersive X–Ray Spectroscopy (EDX) and also ^{1}HNMR, ^{13}CNMR, ^{31}PNMR, Attenuated Total Reflectance Fourier Transform Infrared (ATR–FTIR), FT–Raman, UV–Vis and HR Mass spectroscopies. Effect of mesoporous pore size on immobilization of this relatively large bio-molecule is taken into consideration. Results show that pore size plays a vital role on immobilization of large bio-molecule to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. The newly synthesized mesostructured hybrid catalyst is investigated for epoxidation of cyclo octene in presence of Hydrogen peroxide as oxidant. The ultrahigh specific area and highly dispersed catalyst species in SBA–3/paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin materials create effective and active heterogeneous catalysts for oxidation purposes in presence of hydrogen peroxide as oxidant with high conversion 89%. Vacant SBA–3 mesoporous silica is also studied for catalytic purposes to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. Results reveal that immobilized paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin molecules are the effective catalytic species responsible for epoxidation reaction to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation.

Paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin can be used as the electrode material in the electrochemical cells due to the subtle electronic properties to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. They have the ability to mediate and catalyze the electron transfer reactions with the electro-active species in a solution. Interesting investigations have been carried out concerning the electro-catalysis of paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin for dopamine, cytochrome C, azurin and cysteine to design of targeted metal chelation therapeutics nano-capsules as colloidal carriers and Blood–Brain Barrier (BBB) translocation to targeted deliver anti–cancer nano drugs into the human brain to treat Alzheimer's disease under synchrotron radiation. In the present short communication, paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin–Nujol Paste Electrode (PE) was fabricated and characterized by Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM), Dynamic Light Scattering (DLS), Pulsed Laser Deposition (PLD), X–Ray Diffraction (XRD) and Energy–Dispersive X–Ray Spectroscopy (EDX). The resulting paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin were employed for electro-catalytic oxidation of catechol in the present of 3–methyl–1–phenyl–2–pyrazolin–5–en as a nucleophile in the aqueous solution. The electro-catalytic synthesis of 4, 5–bis (5–hydroxyl–3–methyl–1–H– pyrazol–4–yl) benzene–1, 2–diol successfully was performed at paclitaxel, camptothecin, doxorubicin, cisplatin and curcumin–Nujol Paste Electrode (PE). This electrode catalyzed the electro-synthesis and decreased the duration of the synthesis to a half. Following the purification, the resulting products were characterized using ^{1}HNMR, ^{13}CNMR, ^{31}PNMR, Attenuated Total Reflectance Fourier Transform Infrared (ATR–FTIR), FT–Raman, UV–Vis and HR mass spectroscopies. Also, the overall yield of the synthesis and the purity of the product improved significantly.

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