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Applications of different agro-industrial wastes in petroleum biotechnology

Millions tons of agro-industrial wastes are produced annually all over the world. These wastes are not economically reused, create air, soil and water pollution that has negative impact on human health, tourism, economy and environment. My talk will briefly summarize how these wastes can be applied to solve many of pollution, waste management, energy etc; problems for example; bioremediation of different oil polluted environments and our successful effort in real field case studies, bio-upgrading of petroleum and its fractions throughout the application of biodesulfurization, biodenitrogenation etc, biosorption and wastewater treatment. Recycling of different kinds of agro-industrial wastes to produce valuable products; e.g., nano-materials, biosurfactants, biocides, catalysts to be applied in biodiesel production, corrosion inhibitors and green-catalyst with high photo-catalytic degradation properties etc. Production of different valuable industrial products from algae, which would have many applications in industries of food, cosmetics, pharmaceuticals, food supplements, animal feed etc and production of different kinds of biofuels as complementary and/or alternative to petro-fuels; biodiesel from waste cooking oil and micro-algae and bioethanol from macro-algae, different lingo-cellulosic wastes and sugarcane and sugar beet molasses.

Biography

Nour Shafik Emam El-Gendy is a Professor of Petroleum and Environmental Biotechnology and Head Manager of Petroleum Biotechnology Lab in EPRI. She has authored 6 books in the fields of biofuels, nanobiotechnology, petroleum refinery and biotechnology and about 125 research papers in the fields of oil pollution, bioremediation, biosorption, biofuels, microbial-corrosion, green chemistry, wastewater treatment, biodesulfurization, biodenitrogenation and nanobiotechnology and its applications in petroleum industry and biofuels. She is an Editor in 19 international journals and Reviewer in 42 international journals. She has also participated in 29 international workshops and training courses and 43 international conferences. She is a Member in many international associations concerned with petroleum, biotechnology and environmental health and sciences.

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