Green Synthesis of Palladium, Silver, Iron and Magnetite Zero Vallent Nano Particles

Taha, Bawar (School: Bend Science Station)
Harki, Aryan (School: Bend Science Station)
Hamad, Farhang (School: Bend Science Station)

Euphorbia condylocarpa from the family of Euphorbiaceae is one of the wild plants of North Iraq. The presence of potent antioxidant polyphenolics in the plant made it as a potential green source for production of nano sized metals. During this study we synthesis Pd, Fe, Ag and Fe3O4 zero valentnano particle as super tiny and nano sized particles through a simple and green method using aqueous extract of the Euphorbia condylocarpa. All Nano structures were confirmed using TEM, SEM, UV. FTIR and XRD, also the diameter of Nano substances were between 10 to 50 nm which proved the formation of super tiny Nano metals and highly potential of the plant as an non toxic and ease avoidable source for this goal. Simple methodology, high yield, low cost and environmental benign are distinguished points of the method.