SYNTHESIS AND CHARACTERIZATION OF Ag NANOPARTICLES BY BIOREDUCTION WITH HENEQUÉN

Luisa Briones-Gómez, Pedro Márquez Aguilar, Jorge Ascencio Gutiérrez

1Centro de Investigación en Ingeniería y Ciencias Aplicada, Universidad Autónoma del Estado de Morelos, Av. Universidad 1001, Col. Chamilpa, Cuernavaca Mor. 2Instituto de Ciencias Físicas, Universidad Nacional Autónoma de México, Av. Universidad 1001, Col. Chamilpa, Cuernavaca Mor.

The use of novel mechanisms to produce nanoparticles, considering sustainable methods, but also searching to induce aggregate value to the agriculture efforts of the country, has induced our group to find biosynthesis methodologies by using plants of vast production, including those called pests; in this work we present an example of results with enormous perspectives, particularly for the Yucatán Peninsula. Small particles of Ag have been synthesized by a bioreduction method using as a reducing agent Henequén biomass. The controlling parameter was the pH of the solution where they were grown in1. High Resolution Transmission Electron Microscope, TEM and Uv-vis have been used to characterize the morphology and structural properties of such small particles in the range of 1-4 nanometers. Our results demonstrate the success on the biosynthesis, but also it opens the methodology for some other equivalent plants and other nanoparticles composition.

Keywords: Ag NANOPARTICLES, BIO-SYNTHESIS, HENEQUÉN

References:


Presenting author’s email: brilugo.89@gmail.com