

Poster Presentations

Synthesis and characterization of CdO nanoparticles *via* one port calcination of Dmphen-CdI₂ complex

A.S. Aldwayyan¹, F.M. Al-Jekhedab², M. Al-Noaimi³, B. Hammouti⁴, T. B. Hadda⁵, M. Suleiman⁶, I. Warad^{6*}

¹Department of Physics and Astronomy, College of Science, King Saud University, PO Box 2455, Riyadh 11451, Saudi Arabia, dwayyan@ksu.edu.sa

²The National Center for Nanotechnology Research (NCNR), King Abdul-Aziz City for Science and Technology, PO Box 6086, Riyadh 11442, Saudi Arabia

³Department of Chemistry, Hashemite University, P.O. Box 150459, Zarqa-13115-Jordan

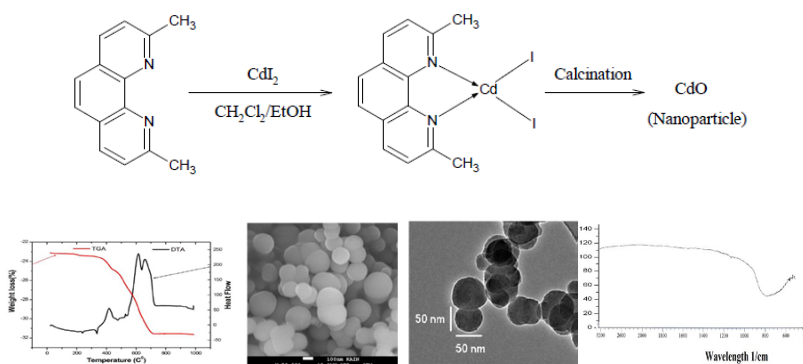
⁴LCAE-URAC18, Faculty of Sciences, University Mohammed Premier, Oujda-60000, Morocco

⁵Laboratoire LCM, Faculty of Sciences, University Mohammed Premier, Oujda-60000, Morocco

⁶Department of Chemistry, AN-Najah National University, Nablus, Palestine

Abstract

Cadmium oxide (CdO) nanoparticles were prepared starting from organometallic *cis*-[dmphen-CdI₂] complex (dmphen = 2,9-Dimethyl-1,10-phenanthroline) through one step calcination process at 800 °C, as seen in the scheme. The thermal behavior of the complex during calcination was recorded by TGA/DTA. The calcination steps reaction was monitored by FT-IR. The obtained product was analyzed by FT-IR, UV-visible, X-ray diffractometer (XRD), EDS, SEM and TEM; the average size of CdO nanoparticles was found to be 50 nm.



References

Synthesis and Characterization of CdO Nanoparticles Starting from Organometallic Dmphen-CdI₂ complex A.S. Aldwayyan¹, F.M. Al-Jekhedab, M. Al-Noaimi³, B. Hammouti, T. B. Hadda, M. Suleiman, I. Warad Int. J. Electrochem. Sci., 8 (2013) 10506-10514.