Abstract

iMedPub Journals
www.imedpub.com

Nano Research & Applications
ISSN 2471-9838

2021
Vol.7 No: S2

Synthesis, Characterization and Antitumor Activity of New Cu(II) Mixed ligand Coordination Polymers at Bulk-size and Nano powders

Alireza Aslani-Zakariya
Ataturk University, Turkey.

Abstract

New cupper(II) mixed ligand coordination polymer at bulk and nanopowders [Cu3(μ3-BTCA)2(Pyr)3.3(H2O)]n [BDCA = Benzene 1,3,5-Tree Carboxylic Acid and Pyr = Pyridine], has been synthesized by the reaction of a mixture Cu(II) Acetate and BDCA in pyridine/water by simple Branched tube and sonochemical method. The nanopowders of CuO was prepared from the calcinations of the NCP at air atmosphere. The structure of the CP and NCP (CP = Coordination Polymers and NCP = Nano Coordination Polymers) were determined by X-ray crystallography, while nano-structural materials were characterized by X-ray powder diffraction (XRPD), Thermal Gravimetric Analysis (TGA) and Scanning Electron Microscopy (SEM). These binary complexes (CP and NCP) were tested in vitro as potential antitumor agents with Human Embryonic Kidney 293 cells. It was observed that the most stable NCP and CuO nanopowders exhibited a high antitumor activity respectively.

Biography

He is Academic Staff. He specializes in the design, Synthesis, Characterization and Analysis of Nano materials, Modern Nano materials, Nano chemistry, Nanomedician, Nano drugs. Coordination Polymers, Nano-Coordination Polymers, Supramolecular Chemistry and Nuclear Nanoparticles and is currently working in this areas of Nanotechnology and Nano-Chemistry. His TEZ is Paramount TEZ in Tarbiat Modares University at 2009; He has 10 patent and more than 200 Papers in ISI or International journals. He is editor of more than 5 International Journals and Reviewer more than 250 papers at international journals.