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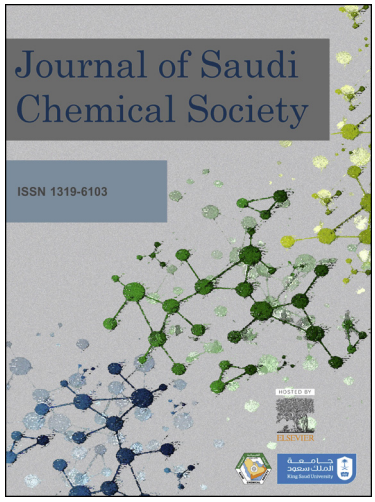

Original article

Synthesis, characterization, molecular docking and biological activity of 5,6-Bis-(4-fluoro-phenyl)-3,4,7,8-tetraaza-bicyclo [8.3.1]tetradeca-1(13), 4,6,10(14),11-pentaene-2,9-dione and its transition metal complexes

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1. Introduction

Transition metal macrocyclic complexes have been broadly studied by scientists in search of designing new chemotherapeutic agents because of their excellent biological activities, including antimicrobial, antioxidant and anticarcinogenic [1-4]. Presence of metal ions often accelerates the efficiency and drug action of organic therapeutic agents [5]. Metal complexes block the pathogen's enzymes which develop interference in the cellular respiration and inhibit the protein synthesis [6, 7]. Among various type of macrocyclic metal complexes, the metal complexes based on hydrazides of carboxylic acids have displayed wide range of pharmacological activities including anticancer and antibacterial [8]. The formation of amide (–CONH-) linkage gives higher stability to these molecules because of the presence of a chelatophore group of donor atoms in their coordination sphere [9].