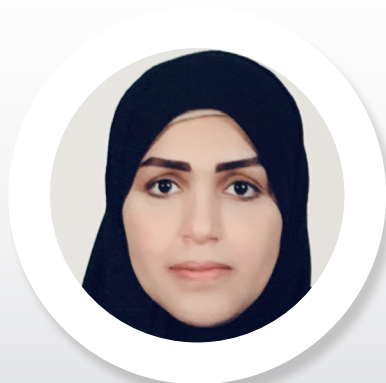


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Wafa A Baker Bawazir

King AbdulAziz University, Saudi Arabia

Synthesis of novel class of fluorinated macrocyclic compounds as Ru-complexes and their cdk2 inhibition activity

During last decade, many classes of azathio crown macrocycles containing two 1,2,4-triazine rings as bioactive subunits have been approached for building of a new chemotherapy antitumor drugs. Sun et al. prepared a stable type of ruthenium complexes containing 3-amino-1,2,4-triazino[5,6-f]1,10-phenanthroline and reported their electrochemical and photophysical properties. Based on these facts, the purpose of this work is to extend and explore more on the scope of our previous studies fluorine substituted 1,2,4-triazines heterocyclic rings was used in order to enhance the complex as CDK2 inhibitors of tumor cell. Novel fluorinated class of cyclic aza-oxo crown macrocyclic systems containing 1,2,4-triazinone moieties (6) and their Ru-complexes 7 have been obtained from the interaction between 5,6-di(4-fluorophenyl)-3-mercapto-1,2,4-triazine (1) with 2,6-diaminopyridine (2) followed by ring closer reaction with diethyl oxalate and reflux with $\text{RuCl}_3 \cdot x\text{H}_2\text{O}$ in *N,N*-dimethylaniline to afford the Ru-complex. Structures of the products were deduced from their elemental analysis and spectral measurements.

Biography

Wafa A Baker Bawazir has gained her Philosophy Doctoral of Organic Chemistry in 2016, thesis entitled "Tandem Reactions to Synthesise sp³ Rich Skeletons", school of Chemistry at The University of Nottingham, United Kingdom. In 2009, she gained her MSc Organic Chemistry, thesis entitled as "Synthesis of Some More Fluorine Compounds derived from Sulfa Drugs as Biological Agents". She has worked as a Lecturer in Faculty of Medicine and Applied Science at KAU for seven years. Since May 2018, she became the Chairwoman of Chemistry Department, King AbdulAziz University. Her research interests are Synthesis of novel 1,2,4-triazine Derivatives Systems, Medicinal Chemistry Synthesis and SAR studies of compounds, Synthesis of Biologically Active Compounds, E-Learning in Chemistry, Sustainability in Chemistry and Pollutants.

wbawazeer@kau.edu.sa