بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / حسام الدين محمد مغربي

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات : لا يوجد

Ain Shams University
Faculty of Science
Chemistry Department

Synthesis, spectral and chemical reactivity studies of ruthenium complexes of flexible pyridyl polydentate ligands and their immobilized derivatives in solid supports

A Thesis Submitted for the Degree of Ph.D.

By

Nihad Ghalib Rashid

M.Sc. (2018)

To

Chemistry Department, Faculty of Science, Ain Shams University

Supervised by

Prof. Dr. Ramadan Mohamed Ramadan
Professor of Inorganic Chemistry, Chemistry Department, Faculty of Science, Ain Shams University
Prof. Dr. Ayman Ahmed Abdel Aziz
Professor of Inorganic Chemistry, Chemistry department, Faculty of Science, Ain Shams University
Dr. Mostafa Abdellah Sayed Ahmed
Lectrurer of Inorganic Chemistry, Chemistry department, Faculty of Science, Ain Shams University

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Thesis Advisors **Approved**

Prof. Dr. Ramadan Mohamed Ramadan
Professor of Inorganic Chemistry, Faculty of Science,
Ain Shams University

Prof. Dr. Ayman Ahmed Abdel Aziz
Professor of Inorganic Chemistry, Faculty of Science,
Ain Shams University

Dr. Mostafa Abdellah Sayed
Lecturer of Inorganic Chemistry, Faculty of Science,
Ain Shams University

Head of Chemistry Department
Prof. Dr. Magdy A.M. Ibrahim

2022

Ain Shams University
Faculty of Science
Chemistry Department

Student Name: Nihad Ghalib Rashid

Scientific Degree: Ph.D.

Faculty Name: Faculty of Science

Graduation Year: 1998

Granting Year: 2022

2022

بسم الله الرحمن الرحيم

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

2022

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Níhad Rashíd

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ABSTRACT

Six new bicombartment Schiff bases were prepared via condensation of 2-benzoylpyridine, Di(2-pyridyl)ketone, 2-hydroxy-3-methoxy benzaldehyde with the diamines diethylenetriamine (Dien) and 2,2'-(ethylenedioxy)-bis-(ethylamine) (EDEA) in 2:1 molar ratio using standard synthesis methods. A new series of ruthenium(II) and ruthenium(III) complexes were also prepared and fully characterized by elemental analysis, FT-IR, ^{1}H-NMR, UV-vis, conductivity, and magnetic susceptibility measurements. Biological activities of the synthesized ruthenium(II) complexes were investigated by studying their ability to interact with CT-DNA, antioxidant scavenging, cytotoxicity against some cancer line cells. In addition, the Ru(II) complexes were immobilized on silica surface and factors affecting their adsorption capacity such as pH, contact time and silica dose were studied.

KEYWORDS: Flexible ligands; Tetradentate dipyridyl derivatives; Ruthenium complexes, Bio efficiency; Solid support.

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