

Commissionerate of Collegiate Education
Government of Andhra Pradesh

GDC Madakasira JUNE 2023



S.Y.T.R GOVERNMENT DEGREE COLLEGE

(Accredited by NAAC with 'B' grade)

**Near Begarlapalli Cross, Amarapuram Road,
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Vision: To impart higher education with quality and Provide passport to the Students for Global citizenship.

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Staff Achievements:

Event: Paper publication

Date: 27.06.2023

Name: Dr M sulochana

Dr.M.Sulochana, lecturer in Chemistry has published a research paper in "European Chem Bulletin" on "Synthesis and Characterization of CD Complexes containing Bidendate Heterocyclic Nitrogenous Bases", ISSN:2063-5346.,2023.

Link: <https://eurchembull.com/issue-content/synthesis-and-characterization-of-cd-complexes-containing-bidentate-heterocyclic-nitrogenous-bases-8048>



SYNTHESIS AND CHARACTERIZATION OF CD COMPLEXES CONTAINING BIDENTATE HETEROCYCLIC NITROGENOUS BASES

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Abstract

Two new Cd(II) complexes of the type $[Cd(opd)(dafone)]NO_3(1)$ and $[cd(phen-dion)(dafone)]NO_3(2)$ that opd=ortho-phenylenediamine, dafone=4-5 diaza- diazafloren-9-on and phen-dion =1,10-phenanthroline-5,6-dione, have been synthesized. These compounds have been characterized using the IR, UV-Vis, ¹H-NMR spectroscopies and elemental analysis. Also electrochemical behavior of complex (1) and (2) were studied by Cyclic Voltammetric method. The FT-IR results showed that the ligands adduct to metal center as a bidentate ligand by nitrogen atoms.

Keywords: H-NMR spectroscopies; metal center; electrochemical behavior; adduct

1. Introduction

In coordination chemistry, bipyridine, 1,10-phenanthroline, and their derivatives are important chelating agents that are frequently used to synthesize complexes with diverse nuclearity and intriguing properties. These polypyridyl ligands make up important first-row transition metal complexes because they can be used as catalysts, as molecular scaffolding for supramolecular assemblies, as building blocks in the synthesis of metallo-dendrimers, as building blocks in electrochemistry, and in ring-opening metathesis polymerization. Design and synthesis of physicochemically relevant coordination compounds. Due to the synthetic accessibilities and spectroscopic properties of their own and the complexes derived from them, various dimer ligands are utilized in this direction. Our group has recently reported a number of transition and innertransition metal complexes derived from diimine donors as a part ligand.

We now report the syntheses, spectral characterization, and cyclic voltammetric of two coordinate mixed ligand complexes of Cd (II) with Phenanthroline-5,6-dione (phendion), Ortophenylenediamine, and 4-5 diaza- diazafloren-9-on (dafon), extending our previous research on Metal ion heterocyclic base adducts. As an auxiliary ligand, the bidentate base 1,10-phenanthroline

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(phen) was utilized. The synthesis of two brand-new Cadmium(II) addition compounds with formulas $[Cd(opd)(dafone)]NO_3(1)$ and $[cd(phen-dion)(dafone)]NO_3(2)$ is described in this paper. IR, UV-vis, and NMR spectroscopy were utilized to characterize these complexes. The electrochemical behavior of title complexes was investigated through the use of cyclic voltammetry (CV). The relationship between electronic excitation data and theoretical results was examined. The outcomes were shown and discussed.

Experimental



Departmental Activities:

Department of Chemistry

1. Event: Environment Day

Objective: 1. To make Students understand the essence of fresh air and to Plant the Trees

.Date: 05.06.2023

Name of the Lecturers: Dr E nagaraju Vice Principa of SYTR GDc ,Dr M Sulochana, Sri S Naga Sai Prasad

No. of Participants: 25

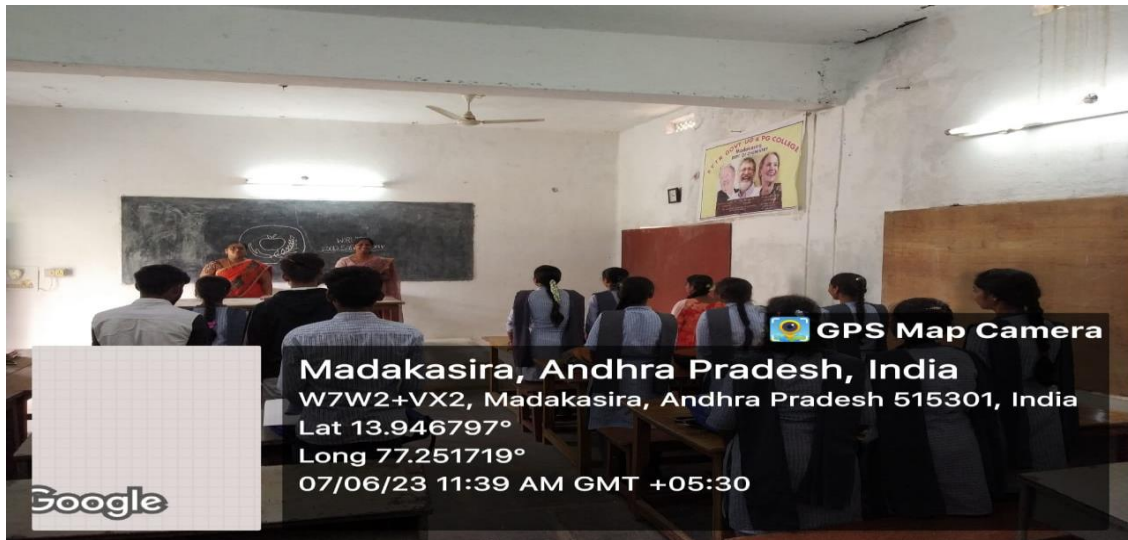


2 Event: world food safety day

Objective: World Food Safety Day on 7 June aims to draw attention and inspire action to help prevent, detect and manage foodborne risks, contributing to food security, human health, economic prosperity, agriculture, market access, tourism and sustainable development.

Date: 07.06.2023

No.of Participants: 20



DEPARTMENT OF ENGLISH

Event: National Webinar on "Role of NEP in Career Guidance" through APSSDC

Speaker: Prof. Rama Mohan Rao, Vice-Chairman, APSICHE.

No. Students attended: 45

No.of staff Participated: 06

Date:07.06.2023

Under Janbhagidari program of Central Government, Department of English and IQAC participated in the National Webinar on "Role of NEP in Career Guidance" through APSSDC platform on 07.06.2023.



DEPARTMENT OF BOTANY:

Event: JUST A MINUTE PROGRAMME

Date: 06.2023

No. Of students Participated: 50

No. Of Staff Participated: 02



DEPARTMENT OF PUBLIC ADMINISTRATION

EVENT|: Guest Lecture

Date: 26.06.2023

Name of the Lecturer: H.S.KRISTAPPA.

Name of the Chief guest: B.Akkulappa.

No of students Attended:26.

Objective of the Activity:-1.Having to do with Knowledge and mental skills. 2.having to do with physical motor skill. 3.having to do with feeling and attitudes. -Description about Activity:-lectures across different categories work together, thus and instructor may give a semiformal, problem- solving, chalk and talk lectures while another may offer a lecture-discussion point by point, multimedia lecture



DEPARTMENT OF POLITICAL SCIENCE

Event: clean and green of campus

Date: 12.06.23

No. Of students Participated: 30

No. Of Staff Participated: 01

Name of the lecture . M Krishna Prasad

Objectives of the Activity :- The clean and green campaign aims to protect and care for the environments in leading an environmentally conscious life style.

Description about activity :- support sustainable human and ecological use and reuse of remediated land minimize impacts to water Quality and water resources.

Out come of the activity :- Here are 5 Major benefits of green cleaning

1. Purer environments
- 2.Safer products
3. Better air quality
4. Less expensive
5. Fewer anti bactials.



ANY OTHER INFORMATION:

Event: YOGA DAY

Date: 21.06.23

No. Of students Participated: 130

No. Of Staff Participated: 20

Objective: To make students Practice Yoga in their daily life and to make them understand how yoga helps for healthy life

