

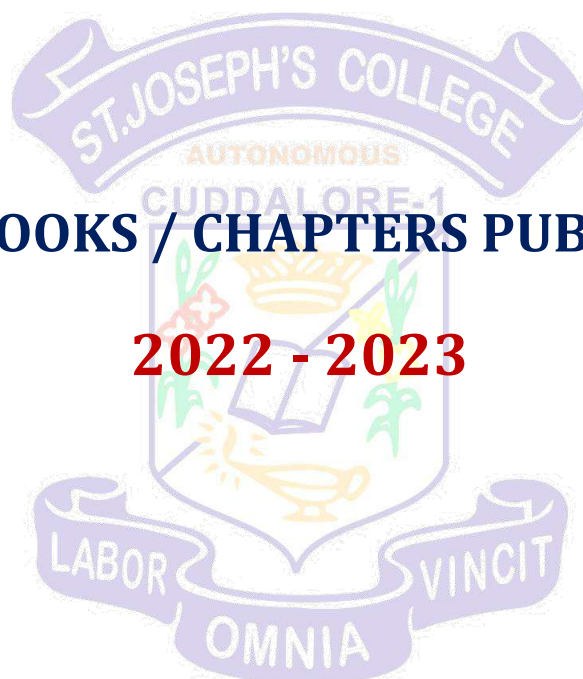


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3.4.4 BOOKS / CHAPTERS PUBLISHED

2022 - 2023





BOOKS / CHAPTERS PUBLISHED

2022-2023

NO. OF BOOKS / CHAPTERS PUBLISHED: 13

Sl. No.	Name of the teacher	Title of the Book/Chapter published	ISBN Number	Name of the Publisher
1	Dr. F. Paul Arokiadoss	Advantages and Disadvantages of Online Education During Covid-19	978-93-93259-13-4	Paramount Publishing House
2	Dr. A. John Pradeep Ebenezer	My Views-Series-1-Fifty Life Oriented Thoughts	9798888154311	Notion Press
3	Dr. A. John Pradeep Ebenezer	My Views on Grief	9798888158777	Notion Press
4	Dr. P. Arul Prasad	Internal Audit	978-8195875290	Wisdom India Publications
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9	Mr. A. Albert Ravi	Corporate Social Responsibility (CSR)	978-8195978632	Wisdom India Publications
10	Dr. F. Paul Arokiadoss	Application of Density Functional Theory in Coordination Chemistry: A Case Study of Group 13 Monohalide as a Ligand	978-1-83969-846-0	IntechOpen Limited
11	Dr. T. Miranda Lakshmi	A Study and Experimentation on Bitcoin Price Forecasting with Time Series Analysis and Recurrent Neural Network (RNN). In Blockchain Technology	9781003138082	Taylor and Francis Group



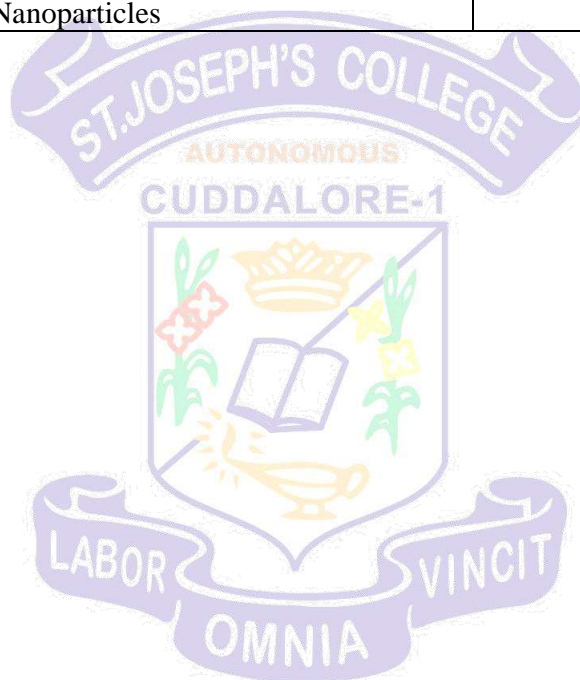
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12	Dr. S. Sebastian	Molecular Structure, Natural Atomic Charge, Mulliken Atomic Charge and Molecular Electrostatic Potential Analysis of Substituted Benzene Derivatives	978-625-8254-21-8	Yaymci Hukuki Adi
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IMPACT OF COVID-19 ON STUDENTS



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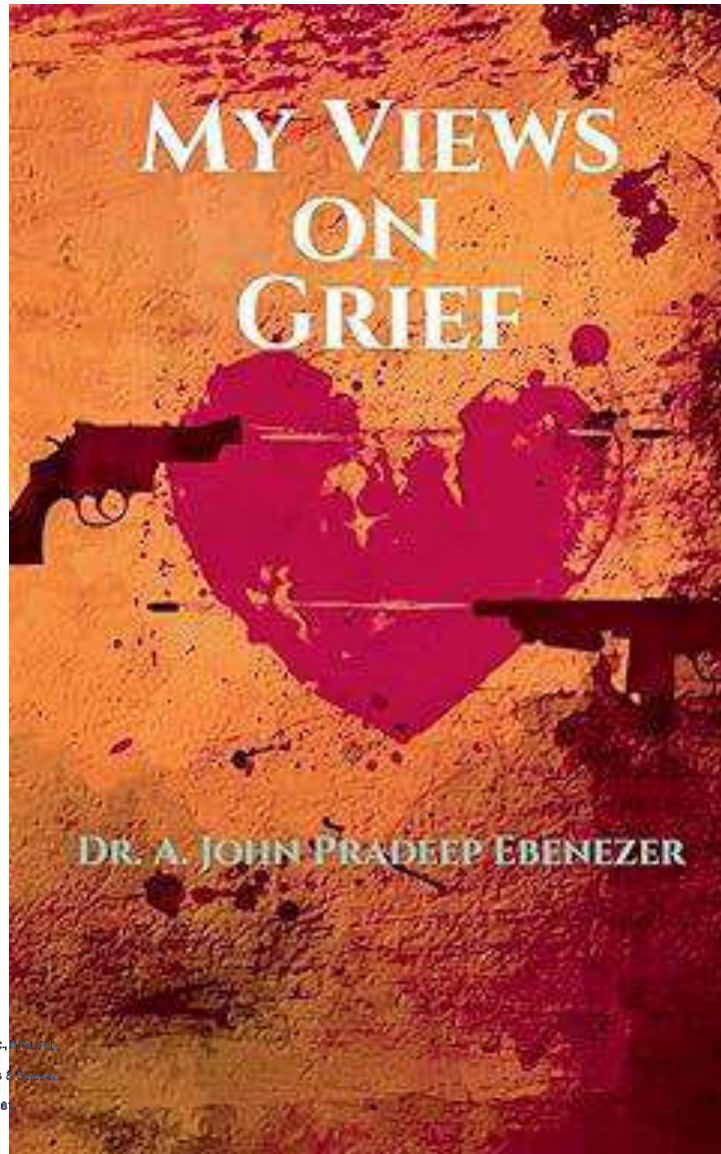
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My View on Life through
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Quotes

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A red rose is in the foreground, partially obscuring an open book. The book's pages are yellowed with age. The background is a light, textured surface.


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Print length: **34 pages**
Language: **English**
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ISBN-13: **979-8888158777**

On October 16th, 2021 I lost my angelic son Master J.Allen Albert. I strongly believe that he has attained angel wings and is rejoicing in heaven. Since that day onwards grief has been in my heart with excruciating pain. This book narrates the feeling I often felt. I hope this book strengthen the person who is in grief.

About the author

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Cuddalore from June-2000 to till date



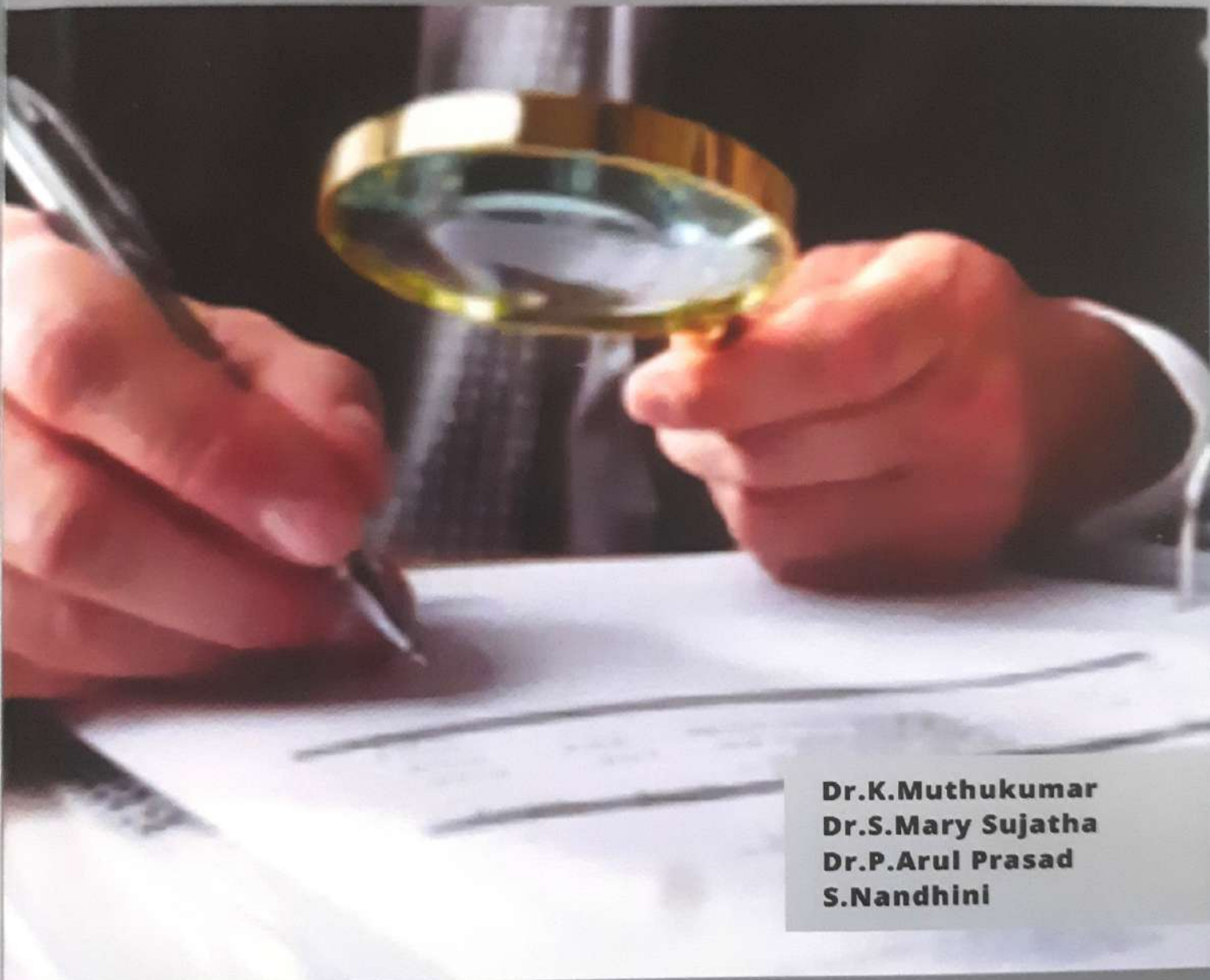
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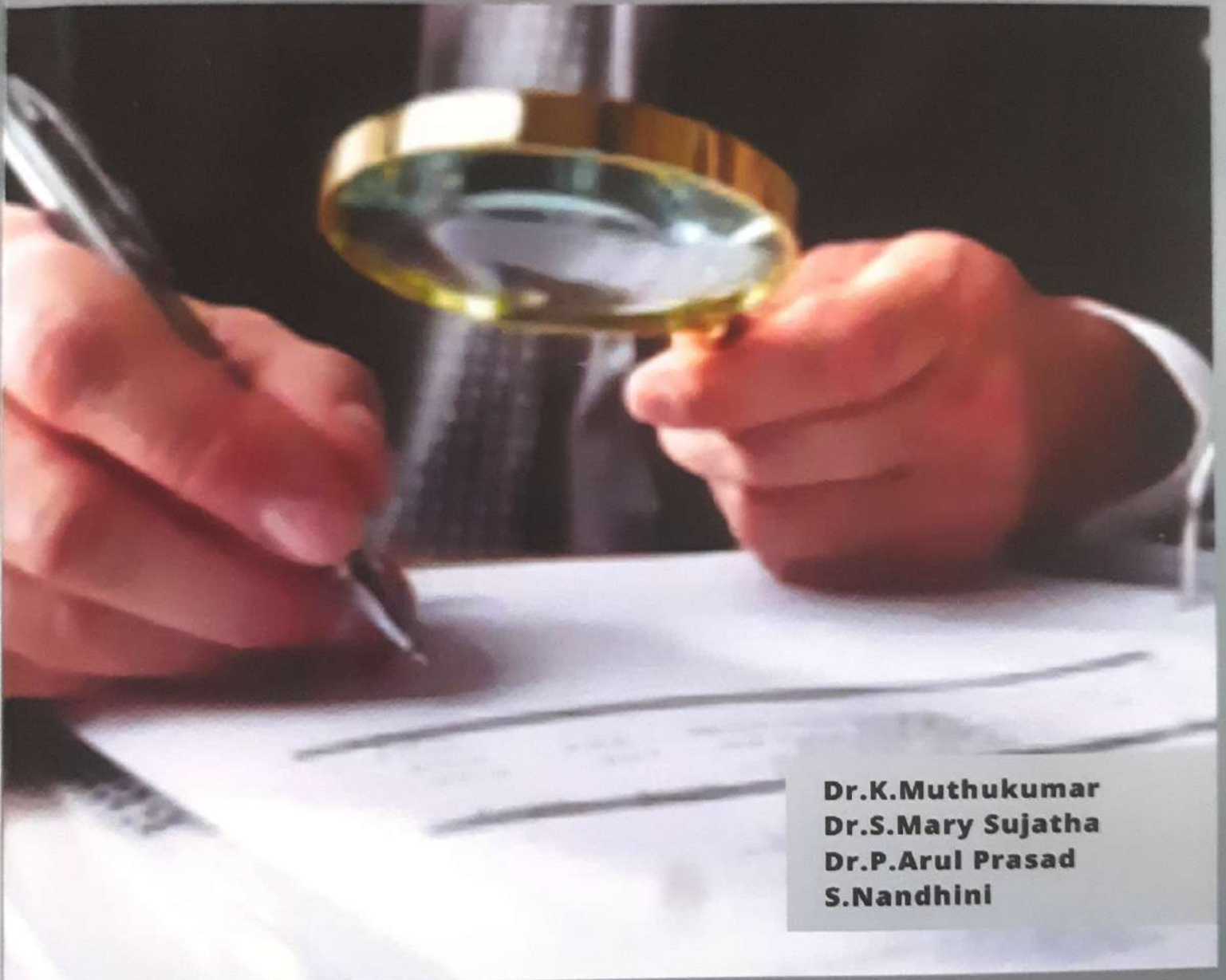
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Deep Learning and its Applications

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Chapter Seven

DeepQ OpenFlow Comparison of Software Defined Networks using Virtualized Provisioning Services



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ABSTRACT

Software defined Networking (SDN) could be a new principle in networking a paradigm that forms a communication network programmable. With this tool, the security features are often remodelled. SDN provides new facts for security applications implement security services. With SDN there are choices created by a centralized SDN controller that decides this the best path and instructs the device on that path about what The ONF is a non-profit trade syndicate that spearheads the development of SDN, standardizing key parts of the SDN design, and honours the OpenFlow protocol, which structures the communication between the control and knowledge planes of supported network devices. OpenFlow is the initial common interface designed specifically for SDN, providing high-performance, granular control across network devices from different vendors. During this paper, we will explore the step-by-step process of virtualization revolution, virtualized network. This post deals with technical challenges, latest trends, and security issues in SDN and prediction of future analytics directions in SDN safety.

7.1 INTRODUCTION

Traditional network architectures are not suitable for meeting the needs of today's enterprises, operators, and end users. Through a broad business effort led by the Open

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CORPORATE RISK MANAGEMENT, COMPLIANCES AND ETHICS



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CORPORATE RISK MANAGEMENT, COMPLIANCES AND ETHICS

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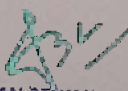


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CORPORATE RISK MANAGEMENT, COMPLIANCES AND ETHICS

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Application of Density Functional Theory in Coordination Chemistry: A Case Study of Group 13 Monohalide as a Ligand

*Thayalaraj Christopher Jeyakumar
and Franciscxavier Paularokiadoss*

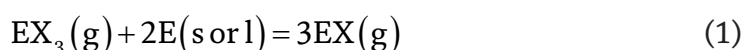
Abstract

The chemistry of Group 13 Monohalide is of great interest due to its isoelectronic relationship with carbon monoxide and dinitrogen. In recent years, theoretical and experimental studies have been evolved on the group-13 atom-based diatomic molecules as a ligand. The synthetic, characterisation and reactivity of various metal complexes have been well discussed in recent reviews. The nature of the metal bonding of these ligands of various types has been explained in addition by the variety of theoretical studies (using DFT methods) such as FMO and EDA. This chapter has a comprehensive experimental and theoretical study of group 13 monohalides as a ligand in coordination chemistry.

Keywords: Group 13 Monohalides, Coordination Chemistry, DFT, FMO, BDE

1. Introduction

The monohalides of group 13 elements (EX) are an isoelectronic relationship with molecules like CO and N₂. The separation of metal complexes containing monohalides of group 13 elements as ligands is made possible by the recent developments in synthetic chemistry and with the investigations on electronic structural analysis and the reactivity of the coordinated diatomic group 13 monohalides. In general, the +3 oxidation states of group 13 elements have dominated the chemistry of their compounds. The applications of these compounds like catalysis, sensing, etc., are due to their inherent Lewis acidic behaviour [1–3]. Research in group 13 elements having lower oxidation states have been normally influenced by clusters of boranes. The availability of sub-valent systems reflects on the development of the ground-breaking synthetic approach in organic synthesis and the applications of some reagents specifically sub-valent indium compounds. For example, the study of Schnoekel et al. approved to access metastable monohalides of aluminium and gallium, by utilising the entropic factor at a high temperature can be driven the equilibrium to the right and defined by Eq. (1) (E = B, Al, Ga, In and Tl) [4–14].



is 66 kcal mol^{-1} [150], assuming that it is made up of three BF bonds and two $[\text{CpRu}(\text{CO})_6]$. This corresponds to BF bond length 1.348 \AA [47], which is significantly larger than the formal triple bond in BF diatoms (1.263 \AA) [35], but slightly shorter than the Valence Radius co-beam (1.46 \AA) [151]. The GaI distance in the terminal cationic iodoaromatic compound is 2.444 \AA , which is less than the parent diatom's (2.575 \AA) distance. Even with gallium's low coordination number, the Fe-Ga bond length is found to be quite short. This is owing to the strong M-Ga π -orbital interaction, rather than the s -orbital donation of a considerable amount of gallium sorbate to the M-Ga [53] bonding orbital. The orbital interaction between the model $[\text{CpFe}(\text{PMe}_3)_2]^+$ and $[\text{GaI}]$ fragments is dominated by ΔE , indicating that GaI ligands are mostly utilised as donors. Quantum chemistry investigations of comparable neutral charge complexes containing GaI ligands, particularly the $[(\text{CO})_4\text{Fe}(\text{GaI})]$ axis, found significant electronic/geometric similarities to the cationic system, including the gap between Ga and GaI. The modest overall interaction energy, the short distance, and the contribution ratio of all interaction energies with similar electrostatic and covalent interactions (about 1:1). (Approximately 20%). These results suggest that GaI ligands interact similarly in each of these systems [53, 116]. Given the long history of capturing coordination chemistry and subsequent spectroscopic/structural interrogation of species with highly unstable kinetics, as well as the recent isolation of complexes containing terminally bound CF, GaI, BO^- and even Ga^+ ligands [85–87, 152–158], it appears that more progress in this field will be made soon. Because it offers precise experimental comparisons of electronic structures with CO and N_2 textbook systems, the BF terminal junction complex would be an appealing target. The key to this experiment is to establish a new preparation-scale procedure to make the most of the kinetic depressant chemical, despite quantum chemistry studies showing it to be thermodynamically stable. Comparing experimental results with theory will help to resolve the current controversy over the possible ways of binding in these molecules.

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Chapter

A Study and Experimentation on Bitcoin Price Forecasting with Time Series Analysis and Recurrent Neural Network (RNN)

By *Martin Aruldoss, V. Adarsh, Miranda Lakshmi Travis*

Book [Blockchain Technology](#)

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Volume-II

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MOLECULAR STRUCTURE, NATURAL ATOMIC CHARGE, MULLIKEN ATOMIC CHARGE AND MOLECULAR ELECTROSTATIC POTENTIAL ANALYSIS OF SUBSTITUTED BENZENE DERIVATIVES**S. Sebastian¹, S. Silvan², S. Sylvestre³, Clive Nyanga⁴**

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ABSTRACT

In this work we analyzed the deviation in the molecular structure of Benzonitrile, Toluene and Benzaldehyde molecule with reference to Benzene molecule. We also compute the Natural atomic charge and Mulliken charge of the above said molecule. We found that the presence of functional groups on the benzene ring can cause drastic change in the aromatic ring system as evident from the charge analysis and molecular geometry. MEP analysis shows the charge density of the molecular system to find electrophilic and nucleophilic attack in the molecules.

Keywords: Benzene derivatives, Natural atomic charge, Mulliken atomic charge, DFT, MEP.

INTRODUCTION

Organic chemistry is one of the branch of chemistry to study organic molecules contain carbon, hydrogen and other atoms. The organic molecules may be able to contain carbon, hydrogen, phosphorus, nitrogen, and oxygen sulfur. All of the above said atoms combine to make functional groups or in other words functional groups denote the groups of atoms to have a specific behavior. The simplest aromatic hydrocarbon is known as benzene, it is made up of six membered ring having three π bonds and three σ bond. Benzene is a lipid soluble and highly evaporate at room temperature. The benzene observed in human body was rapidly distributed and tend to accumulate fatty tissues. The benzene was also presented in the lungs, kidney, liver and spleen were reported [1]. The liver plays an important function in body to produce reactive metabolites [2]. Benzonitrile is a phenolic cyanide compound used in industrial sectors and pharmaceutical industry. The main products of

About the Editors



Dr. Anand Shanker Singh is associate Professor in Chemistry. He has authored 20 reputed books and he supervised 11 students for PhD. He has a dozen of national and international patents for his innovative work. He had contributed as subject expert to the board of Uttarakhand. Presently he is contributing as subject expert in board of studies of Shakumbhari University Saharanpur Uttar Pradesh. He has published a number of research papers in the international Journals.

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**INVESTIGATION ON OPTICAL PROPERTIES,
ANTIBACTERIAL AND PHOTOCATALYTIC
ACTIVITY @ SnO_2 NANOPARTICLES****A. Ameer Baig¹, R. Sagayaraj², V.Ramya³**

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ABSTRACT

SnO_2 nanoparticles were successfully prepared by co-precipitation method. XRD study confirms that the SnO_2 nanoparticles have acquired rutile phase and the particle size is obtained as 41nm. FE-SEM microstructure images show agglomeration of irregularly shaped particles. Bacterial growth was assessed using disk diffusion susceptibility tests. According to available data, the nanoparticles showed antimicrobial activity against E. coli and S. aureus. Nanoparticles were found to perform well in photosynthetic activity. Degradation of methylene orange (MO) dye by UV radiation can be detected by the photocatalyst, which makes the nanoparticles work better. The photoluminescence spectra showed strong UV emission broadband around 392.5nm. It is hoped that the severe problems of wastewater treatment, bacterial and dye contamination can be reduced with SnO_2 nanoparticles.

Keywords: Co-precipitation; Photocatalytic activity; Antimicrobial activity, Photoluminescence; Nanoparticles; microorganisms

INTRODUCTION

Nanotechnology is reaching new heights nowadays. That is, it explains the most important and exciting leading field in material science related to the new generation in terms of consumer yield, production methods and product quality. Also semiconductor-based technologies are cost-effective, efficient, non-toxic chemical dyes, wastewater treatment projects and antibacterial agents [1, 2]. Semiconductor nanoparticles (NPs) have a remarkable impact on optical properties, photocatalytic processes and microbial activity, electrical and magnetic properties, and related studies. Currently, studies suggest that semiconducting metal oxide particles such as

About the Editors



Dr. Anand Shanker Singh is associate Professor in Chemistry. He has authored 20 reputed books and he supervised 11 students for PhD. He has a dozen of national and international patents for his innovative work. He had contributed as subject expert to the board of Uttarakhand. Presently he is contributing as subject expert in board of studies of Shakumbhari University Saharanpur Uttar Pradesh. He has published a number of research papers in the international Journals.

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Dr. Aruna Kumari Nakkella has been involved in search for innovative measures to study the analogy of Engineering Chemistry for more than a decade. She has a vast experience in teaching field over 15 years in various streams of Engineering. Presently she is working as Assistant Professor in Engineering Chemistry and Acting as Assistant Principal, College of Engineering, Dr B R Ambedkar University, Etcherla, Srikakulam. Accomplishing the strategies of Engineering Chemistry, she has been awarded her Doctorate in Chemistry from Andhra University, Visakhapatnam. She not only accumulating with the present sources, but also challenging to generate new sources for teaching chemistry. For that, she also achieved Post Graduate Diploma in Environmental Science from Andhra University.



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