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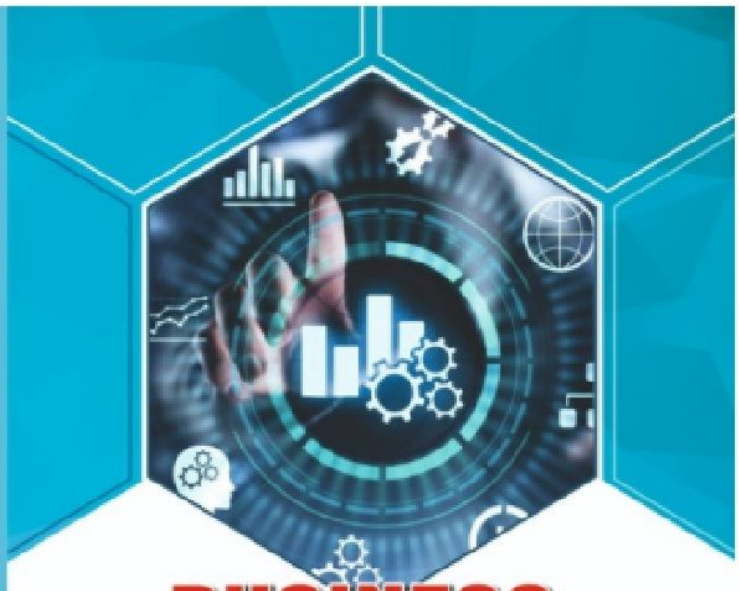

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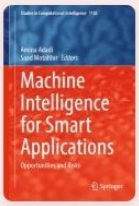

Machine Intelligence for Smart Applications

P. Santhi, K. Deepa, M. Sathya Sundaram & V. Kumararaja

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Abstract

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In recent years, gas sensors are playing a very prominent role in energy consumption, natural observation, and monitoring of air and gas quality, especially in the detection of explosions and dangerous gases. These sensors are attracted keenly by researchers to get rid of air pollution and security issues in the world. There are several techniques being used to sense gases such as gas chromatography, FTIR, mass spectrometer, semiconductor gas sensor, and so on. Among all, gas sensors based on semiconducting materials provide excellent gas sensing efficiency than gas detecting methods. Recently, the fiber optic-based chemical sensor method is also used. The operation is simple and easily fetched even in an unstable situation. In the optical fiber-based sensor, the transmitted light is used to investigate the properties of the refractive index and retention. On the other hand, metal oxide-based gas sensors are facilitated due to their potential applications in monitoring air and gas quality, detection of gas inflammation, defense security, and soon. Gas sensing efficiency is mainly based on the surface of the prepared sensors, morphology, internal structure, and surface area.

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All authors work at Paavai Engineering College.

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Vadivel S.
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THE STUDIES OF CLAD REMOVED FIBRE OPTIC GAS SENSOR

$MnCo_2O_4$, $MgCo_2O_4$, $FeCo_2O_4$, AND $NiCo_2O_4$ NANOPARTICLES AS HIGH-PERFORMANCE ETHANOL AND ACETONE GAS DETECTION

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Energy Storage Technologies in Grid Modernization

Chapter 4

Energy Storage Units for Frequency Management in Nuclear Generators-Based Power System

D. Boopathi, K. Jagatheesan, Sourav Samanta, B. Anand, R. Satheeshkumar

Book Editor(s):Sandeep Dhundhara, Yajvender Pal Verma, Ashwani Kumar

First published: 13 July 2023
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Summary

In this chapter, the Load Frequency Management (LFM) of an interconnected nuclear power network with an energy storage unit (ESU) is explained. The impact of the ESU in the proposed power system during emergency loading is analyzed in detail. A Proportional Integral Derivative (PID) controller is designed and implemented as a secondary controller for the LFM of the proposed power network. The Ant colony optimization (ACO) technique is utilized to optimize the gain parameters of the proposed controller. The impact of various ESUs such as battery energy storage system (BESS), fuel cell (FC), redox flow battery (RFB), ultra-capacitor (UC), proton exchange membrane (PMC) based FC, and supercapacitor energy system (SCES) is analyzed in detail. The proposed optimization technique-based controller is performed well and regulates the stability of the system frequency, in terms of quick settling time, minimal peak over, and undershoots.

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Sahu , P.C. , Mishra , S. , Prusty , R.C. and Panda , S. , 2018 . Improved-salp swarm optimized type-II fuzzy controller in load frequency control of multi area islanded AC microgrid . *Sustainable Energy, Grids and Networks* , **16** , pp. 380 - 392 .

Application of Genetic Algorithm-Based Controllers in Wind Energy Systems for Smart Energy Management

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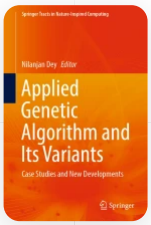

Applied Genetic Algorithm and Its Variants

D. Boopathi, K. Jagatheesan, Sourav Samanta, B. Anand & J. Jaya

Part of the book series: Springer Tracts in Nature-Inspired Computing ((STNIC))

Abstract

This chapter proposes innovative energy management for intelligent smart grid systems by utilizing a Genetic Algorithm (GA) tuned controller. The smart grid contains renewable energy sources and energy storage units. Renewable energy resource comprises wind turbine

Application of Ant Colony Optimizer in Thermal Power System for Frequency Management

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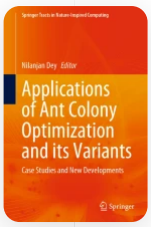

Applications of Ant Colony Optimization and its Variants

D. Boopathi, K. Jagatheesan & Sourav Samanta

Part of the book series: Springer Tracts in Nature-Inspired Computing ((STNIC))

Abstract

This chapter proposes the application of the ant colony optimization (ACO) technique in a thermal power system for system frequency stability. An unconnected and interconnected thermal power network is considered for investigation. The frequency stability is analyzed by a secondary controller (Proportional (P) integral (I) derivative (D) (PID)). To enhance the controlling performance of the PID controller, the gains are fine-tuned by the ACO. The ITAE

Performance Analysis of a Multi-objective Function-Based PID Controller for System Frequency Regulation

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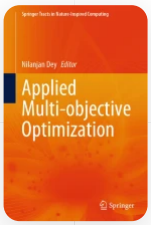

Applied Multi-objective Optimization

D. Boopathi, K. Jagtheesan, Sourav Samanta & Kanendra Naidu

Part of the book series: Springer Tracts in Nature-Inspired Computing ((STNIC))

Abstract

This chapter analyses the weighted sum of the proportional integral derivative (PID) controller response in an interconnected power network. The interconnected network is composed of thermal, PV, and energy storage systems (hydro actualizer (HAE) and fuel cell

Chapter 1

Evaluation of Aluminum 7075 Alloys Mechanical Behavior and Metallographic Properties Using MIG and Friction Stir Spot Welding

S.Sivabalan[1], Mohd Majid[2], R.Sridhar[3], Sathishkumar.G[1], Bharath R[4]

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Abstract:

All alloys are frequently welded using MIG and friction stir spot welding. It is known that a key component of the MIG welding process is shielding gas. The automotive, marine, and aerospace sectors currently struggle greatly with selecting the right kind of welding metal. Numerous studies on the MIG and friction stir spot welding of aluminum alloys have been conducted, and the metallurgical and mechanical characteristics that resulted have been assessed. In both friction stir spot welding and MIG welding, parameters including speed, feed, dwell, and voltage are crucial. Materials such as high carbon steel, low carbon steel, austenitic

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NANOTECHNOLOGY ADVANCEMENTS: BIOSYNTHESIS ROUTES, CHARACTERIZATION AND BIOMEDICAL APPLICATIONS OF ZINC OXIDE NANOPARTICLES

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Abstract:

This study delves into recent strides in biosynthesis, characterization, and the biomedical applications of zinc oxide nanoparticles (ZnONPs). Biosynthesis methodologies have emerged as sustainable alternatives to conventional synthesis routes, harnessing biological organisms such as bacteria, fungi, plants, and algae for eco-friendly ZnONP production. These methods have several advantages, such as less of an adverse effect on the environment and avoidance of hazardous chemicals. Characterization techniques such as X-ray diffraction (XRD), transmission electron microscopy (TEM), scanning electron microscopy (SEM), and spectroscopic analyses, are pivotal in unveiling the structural, morphological, and physicochemical characteristics of ZnONPs. The applications of ZnONPs traverse drug delivery, cancer treatment, environmental remediation, and biomedicine. From antimicrobial coatings and photovoltaic devices to drug delivery systems and biomedical sensors, their adaptability underscores their significance in surmounting critical challenges and propelling technological innovations. In this review, the synthesis, characterization, and applications of ZnONPs epitomize a dynamic domain within nanotechnology. Sustained research endeavours aimed at refining synthesis methodologies, augmenting characterization techniques, and exploring nascent applications will further amplify the potential and impact of zinc oxide nanoparticles across multifarious technological domains.

Keywords: Zinc Oxide Nanoparticles, Biosynthesis, Characterization, SEM, TEM, XRD.

Introduction:

Nanotechnology has emerged as a revolutionary field with profound implications across various disciplines, including materials science, electronics, medicine, and environmental science. Among the myriad nanomaterials, zinc oxide nanoparticles (ZnONPs) have garnered significant attention due to their unique properties and versatile applications. This review explores the recent advancements in the biosynthesis, characterization, and biomedical applications of zinc oxide nanoparticles. Zinc oxide nanoparticles hold immense potential in biomedical applications owing to their biocompatibility, low toxicity, and photocatalytic

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Chapter - 7

An in-Depth Pharmacological and Pharmacokinetic Properties of Bexagliflozin in Individuals Afflicted with Type 2 Diabetes Mellitus

Dr. Pravin Cumar R, Thabitha Zelin Rachel V, Ponmanian M, Suma R, Sangeetha G and Dharshini D

Abstract

The abstract provides a concise summary of the pharmacological and pharmacokinetic properties of Bexagliflozin in individuals with Type 2 Diabetes Mellitus (T2DM). Bexagliflozin, a sodium-glucose co-transporter-2 inhibitor, has emerged as a promising therapeutic agent in managing T2DM. This review delves into the pharmacological mechanisms, highlighting its selective inhibition of SGLT-2 and subsequent reduction in renal glucose reabsorption. The pharmacokinetic profile, including absorption, distribution, metabolism, and elimination, is scrutinized to elucidate Bexagliflozin's behavior in diabetic populations. Moreover, the abstract underscores clinical implications, potential adverse effects, and the drug's role in personalized diabetes management, leveraging data from our cohort for a nuanced understanding of Bexagliflozin's efficacy and safety profile in real-world scenarios. This comprehensive examination aims to provide a nuanced understanding of Bexagliflozin, fostering informed decision-making in the treatment of T2DM.

Keywords: Bexagliflozin, type 2 Diabetes Mellitus (T2DM), pharmacokinetic profile

1. Introduction

1.1 Type 2 diabetes mellitus

Type 2 diabetes, sometimes referred to as the second form of diabetes mellitus, is a chronic illness marked by elevated blood sugar (glucose) levels. The condition makes up 90-95% of all instances of diabetes, making it the most prevalent kind of the disease [1]. Diabetes arises when there is an increase in glucose because the pancreas is not releasing enough insulin. Numerous ancillary situations could arise from the disease, such as cardiac issues, nerve

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Organizing Chair

Head of the Department

Principal

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REF ID: ME008

DESIGN AND DEVELOPMENT OF QUANTUM ENABLED COAXIAL DRONE FOR EFFECTIVEMULTIPURPOSE DISASTER RELIEF OPERATIONS

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Paavai Engineering College, Namakkal, TamilNadu, India[12345].

In the midst of chaos and devastation in disaster zones, there arises a revolutionary solution: the quantum-enabled coaxial drone. This innovative concept aims to redefine disaster relief efforts by integrating the cutting-edge capabilities of quantum computing with the established efficiency of coaxial drone design. The key lies in the seamless synergy between these technologies. The drone harnesses the immense computational power of quantum computing to execute tasks with unprecedented precision, navigating through complex environments with unmatched accuracy. Furthermore, leveraging quantum computing for trajectory optimization ensures efficient movement and mitigates the risk of collateral damage or oversight of critical areas.

However, the true innovation lies in the drone's real-time adaptive decision-making capabilities. Equipped with a quantum core, the drone analyzes the dynamic conditions of the disaster zone in real-time, enabling it to adjust its trajectory, tasks, and priorities on the fly. This dynamic responsiveness proves invaluable in handling unpredictable situations, allowing the drone to effectively address the evolving needs of the disaster zone. This fusion of quantum technology with coaxial drone design has the potential to revolutionize disaster relief efforts. It offers unparalleled precision, optimized operations, and real-time adaptability, ultimately saving lives and expediting the path to recovery.

Keywords: Quantum-enabled drone, Coaxial Design, Disaster relief operations, unparalleled precision, Real-time Decision-Making.

REF ID: ME009

REF ID: ME007

DESIGN AND FABRICATION OF ADVANCE AGRICULTURE DRONE FOR CROP HEALTHMONITORING

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Paavai Engineering College, Namakkal, TamilNadu, India[1234].

This project is a significant advancement in farming because it involves the creation of drones for crop monitoring. Drones, which provide real-time data for farmers' decisions on how to improve their crops, have empowered them to make more informed choices, reduce environmental damage and maintain sustainability in the long run. For farmers this means that they now have a new evolutionary tool–crop monitoring drones – that can help them comprehensively analyze field sand intervene eat the right time. These unmanned aerial vehicles (UAVs) are equipped with high-resolution cameras and sensors that captured etailedimages and data on crop health, irrigation patterns, nutrient distribution, and potential pastor disease infestations. The information captured using this technology is the analyzed using complex algorithms to produce insights which can be acted upon directly as fares agriculture activities are concerned. Crop monitoring drones do not only help increase yields but also do other things. In addition, through helping farmers identify issues early enough these devices may lead to decreased use of pesticides and fertilizers which in turn lessens environmental degradation whiles ate guarding human life. Moreover, irrigation practices can be optimized thus ensuring efficient water use there by conserving such resources.

Keywords: crop monitoring, real-time data, high-resolution, irrigation.

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STRUCTURAL DESIGN AND DEVELOPMENT OF VORTEX BLADELESS WIND TURBINE FOR WIND ENERGY HARVESTING

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Abstract

This work presents a novel design and fabrication approach for a vortex bladeless wind turbine (VBWT). Unlike conventional wind turbines with rotating blades, VBWTs harness wind energy through vortex shedding, a phenomenon where wind flowing past a stationary structure creates oscillating vortices. This innovative design aims to address limitations associated with traditional wind turbines, such as noise generation, bird strike hazards, and large land use requirements.

The proposed VBWT focuses on "optimizing the structure's shape to enhance vortex shedding efficiency" and "utilizing a unique material combination for a lightweight yet robust design". This design is particularly suited for applications in "urban environments with limited space constraints" and "off-grid power generation in remote locations". The anticipated benefits of this renovative design include "improved energy extraction efficiency from wind" and "reduced noise pollution compared to traditional turbines". The successful development of this VBWT could contribute significantly to the advancement of sustainable and environmentally friendly energy solutions.

DESIGN AND DEVELOPMENT OF H-DARRIEUS TURBINE AND SOLAR PHOTOVOLTAIC SYSTEMS FOR MAXIMIZING POWER GENERATION

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ABSTRACT

This study explores the design, development, and implementation of a hybrid system combining a H-Darrieus wind turbine and a solar photovoltaic (PV) system. The increasing demand for clean and sustainable energy sources necessitates innovative solutions. The goal is to maximize power generation by harnessing complementary wind and solar resources, aiming for a more consistent and reliable power supply compared to standalone wind or solar systems. The H-Darrieus turbine's omnidirectional operation makes it suitable for various wind conditions, while the solar PV system capitalizes on sunlight for electricity production. Small VAWT is more suited for an urban setting, using Darrius type turbine over Savonius type turbine for more suitable applications. Using NACA4412 blade shape design for a high tip speed ratio. Darrius turbine gives us the benefit of the wind's drag and lifts force. This wind turbine consists of three blades, technically an airfoil which is connected to radial arm and rotating main shaft. In this paper, the components required for this wind turbine like airfoil, main shaft and bearing are properly designed. The power calculation with respect to the wind velocity, swept area and number of blades are included. This project's primary goal is to employ vertical axis wind turbines and solar panels in daily life.

DESIGN AND DEVELOPMENT OF ANEMOKINETICS BASED ENERGY HARVESTING SYSTEM

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ABSTRACT

This project presents a new Energy harvesting technique for capturing minute amounts of energy from one or more of the surrounding energy sources, accumulating them and storing them for later use. The energy harvesting trees are super eco-friendly synthetic trees will make use of renewable energy from the sun along with wind power, which are an effective clean and environmentally sound medium of gathering solar radiation and wind energy. The artificial trees are implanted with Nano leaves, a composite of nano photovoltaic nano-Thermo voltaic and nano-piezo sources transforming light, heat and wind energy into eco-friendly electricity. Another name given to energy harvesting is energy scavenging. Energy harvesting as an alternative technique that has been applied to solve the problem of finite node lifetime and it refers to harnessing energy from the environment or other energy sources for converting it to electrical energy. Harvesting energy from the surrounding environment is of growing interest to the research community. So a technique has been presented here which can be used for the efficient energy harvesting by creating trees. The electrical energy from all the leaves and twigs is stored at the bottom of the tree by using the storing device. The piezoelectric sensor will then send the signal into the NODEMCU and transform it into electrical energy. The Internet net of things (IOT) will then displayed the amount of voltage generated by the circuit.

ENHANCING IMAGE AND DATA PROCESSING FOR REAL TIME OBJECT RECOGNITION DRONE

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ABSTRACT

The Design and Fabrication of Enhancing Image and Data Processing for Real-Time Object Recognition Drone aims to revolutionize surveillance and reconnaissance operations through advanced image and data processing capabilities integrated into UAVs. Traditional drones often rely on pre-defined algorithms or external processing units for object recognition, limiting their adaptability and real-time response. This project proposes a novel approach by embedding sophisticated image processing and machine learning algorithms directly onto the drone, enabling real-time object recognition and classification.

The project encompasses the design and fabrication of a custom UAV platform equipped with high-resolution cameras, onboard processing units, and communication interfaces. Additionally, the development of efficient algorithms for image preprocessing, feature extraction, and deep learning-based object recognition plays a crucial role in achieving real time performance and accuracy.

The proposed drone system holds significant potential across various applications, including surveillance, search and rescue, agriculture, and environmental monitoring. By enhancing image and data processing capabilities for real-time object recognition, the project aims to elevate the effectiveness, efficiency, and autonomy of UAV-based operations, paving the way for more advanced and intelligent aerial platforms in the future.

EGG BASED GASTRIC DISORDER ANALYZER USING ELECTRODES

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ABSTRACT

In human physiology, digestive system is one of the most important systems, in which the stomach plays a major role with its accessory such as Esophagus, Duodenum, small intestine, large intestine, etc. Many people around the world are suffering from stomach dysrhythmias' associated with gastric motility disorders such as dyspepsia (improper digestion), unexplained nausea (vomiting sensation), vomiting, abdominal pain, stomach's ulcer, gastroesophageal reflux diseases, etc. In this thesis, investigation of digestive system disorders is performed by acquiring the Electrogastrogram and analyzing it using different techniques. Investigation of digestive system disorders is performed using ART1, LVQ and BP-MRAN neural network. ART1 network is used to classify EGG signals as either normal subject or abnormal subject based on the vigilance parameter (ρ). In LVQ, the classification efficiency depends on the training vectors i.e., for 60 % of training vector, maximum efficiency is obtained with less execution time for different learning rate. In BPNN, the number of hidden layer neurons is determined using MRAN algorithm. BP-MRAN network is trained with nine different training algorithms and the performance is compared. Sensitivity, Specificity analysis is also performed.

Keywords : EGG, Gastroesophageal, BP- MRAN neural network, EGG signals.

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Dental Diagnosis From X-Ray Images Using Fuzzy Computing

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ABSTRACT

As the usage of digital dental X-ray images keep growing, computer aided analyses become highly desirable for improving the accuracy and efficiency of treatment planning and individual identification from the enormous database. Subclinical disease has no recognizable clinical findings, thus it is desirable to segment the dental X-Ray image into groups and to check the possibility of whether or not any disease occurs therein.

KEYWORDS

Dental image segmentation Fuzzy clustering Performance assessment Semisupervised fuzzy clustering X-ray images.

INTRODUCTION

Dental X-ray imaging (DXRI) has been developed as the foundation for dental professionals across the world because of the assistance provided in detecting the abnormalities present in the teeth structures. For dentists, radiography imparts a significant role in assisting imaging assessment in providing a thorough clinical diagnosis and dental structures preventive examinations. However, to analyze a dental X-ray image, researchers primarily use image processing methods to extract the relevant information. Typically, dental X-rays represent pictures of the teeth, soft tissues, and bones within the mouth, teeth, and jaw. In dental diagnosis, fuzzy inference system (FIS) is one of the most common approaches for determining a projection from a given input data set to an output data set using fuzzy logic.

SOFTWARE REQUIREMENTS

Operating system : Windows 7/10.

Ocular melanoma identification using python with deep learning

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ABSTRACT

The proliferation of deep learning and image analysis technologies in healthcare has made early detection of diseases possible, including the early detection of retinoblastoma, a form of eye cancer that affects children and can be deadly if left undetected. This paper outlines the development of a computer vision system which uses machine learning and image analysis to detect retinoblastoma, a type of eye cancer, through automated analysis of fundus photographs (photographs of the fundus of the eye taken with a digital camera). This system uses novel techniques in deep learning and segmentation to detect retinoblastoma with high accuracy and speed, and it is capable of detecting the cancer at an earlier stage than traditional methods. Further, this system also employs techniques in computer vision to automate the process of extracting meaningful information from the fundus images for accurate diagnosis. This work opens up possibilities for a more reliable and cost-effective approach towards detecting eye cancer in its early stages, assisting healthcare professionals in providing better clinical care to their patients.

Keywords

Convolution Neural Network, Deep Learning, Retinoblastoma, Segmentation.

INTRODUCTION

Automated Eye Cancer Detection through deep Learning and Image Analysis in Healthcare is an invaluable tool for accurate and timely treatment of a variety of eye diseases. Automation of the detection process brings accuracy, speed and cost-efficiency unlike any other method. The application of deep Learning and Image Analysis to the detection process allows for accurate detection of diseases at early stages of the process. This increases the probability of successful treatment and also leads to faster and more cost-efficient recovery from illnesses. With the aid of deep Learning and Image Analysis, automated detection of

Iris-enabled mobility wheelchair navigation via intraocular lens commend

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Abstract

The Iris-Enabled Mobility Wheelchair Navigation via Intraocular Lens project presents a novel approach to enhance the mobility and independence of visually impaired individuals. Leveraging the intraocular lens (IOL) technology, the system utilizes iris recognition to provide precise and intuitive navigation for wheelchair users.The system consists of a camera integrated into the wheelchair, which captures real-time images of the user's surroundings. The captured images are processed to identify landmarks and obstacles. Through iris recognition, the system identifies the user's intended direction and navigates the wheelchair accordingly, avoiding obstacles and ensuring safe travel.The project's innovation lies in its use of IOL technology, which offers a non-intrusive, hands-free navigation solution for visually impaired individuals. By providing a reliable and intuitive navigation system, the Iris-Enabled Mobility Wheelchair Navigation via Intraocular Lens project aims to significantly improve the quality of life for wheelchair users with visual impairments.

Keywords

Iris recognition,Intraocular lens, Mobility, Wheelchair navigation, Visual impairment, Assistive technology.

INTRODUCTION

Individuals living with severe mobility impairments face significant challenges in navigating their surroundings and maintaining independence. Traditional assistive devices, such as wheelchairs, often require manual input or limited control options, which can be restrictive for individuals with complex motor disabilities. In recent years, advancements in

EXPERIMENTAL INVESTIGATION ON PARTIAL REPLACEMENT OF FINE AGGREGATE BY HALITE IN HIGH PERFORMANCE CONCRETE

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Abstract

Concrete is mixture of cement, fine Aggregate, coarse aggregate, and wet or Concrete, plays a vital role in the development of infrastructure viz, building industrial Structures, bridge and highway etc. Leading to utilization of large quantity of concrete, as cost of concrete is attributed to the cost if its ingredients, which is expensive, leads to usage of economically alternative materials in its production. This requirement is drawn the attention of investigation to explore new replacement of fine aggregate with Halite (sodium chloride) at a different proportion. Bore water contain high levels of minerals including Sodium, calcium, magnesium, potassium, chloride, bicarbonate and iron. Sodium and chloride occur naturally in groundwater, those sources Such as road salt, water softeners, underground Salt deposits, pollution from septic systems as well as salt water intrusion diet to proximity to ocean. The ground water with 200 to 1200 TDS per liter. Halite contains high level of total alkalinity and high level of calcium, silicates, iron, manganese, salt has allow pH and high temperature. Compressive strength 50% replacement of sand with Halite. In our experimental investigation, it is observed that, the compressive strength of concrete has been increased by 10% the concrete mix of M25 prepared was Tested at 7-, 14- and 21-days Halite being a byproduct serves as an eco-friendly material, our current investigation shows that the most economical way of using Halite (sodium chloride) in construction is to mixed with other building materials. It can be mixed in added of molds are dried and fixed on a wall surface.

Experimental Investigation of Geopolymer Concrete with Nano Silica

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Abstract

Cement production became responsible for polluting the atmosphere through the emission of greenhouse gases. Nano silica produced from physically-processed white rice husk ash agricultural waste can be incorporated into geopolymer cement-based materials to improve the mechanical and micro performance. Geopolymer cement is eco-friendly. It increases the strength, durability, and resistance to attack in peaty/acidic environments. It is proposed to determine and compare the differences in properties of Ferro cement geopolymer concrete with Nano silica. The investigation is to be done by using several tests which include a workability test, sieve analysis, specific gravity test, compression test, and flexural strength. Nano silica was then added to the optimum geopolymer concrete sample by ratios 1, 2, and 3% of the total weight of cement materials. Samples tested for mechanical properties. The results showed that using a hot activator and oven-curing, samples gives higher mechanical properties. Also using nano-silica up to 2% increases the compressive strength up to 24% at age 28 days.

Keywords

Geopolymer concrete, Mix proportion, Nano-silica, Compressive strength, Modelling.

Introduction

Concrete, after water, is the second most useful material for the construction industry. Every year, 25 billion tons of concrete are produced worldwide, acquiring 2.6 billion tons of cement, which will increase by 25% over the next ten years. Cement production has a negative impact on the environment because one ton of cement emits one ton of CO2 into the atmosphere, alarming the ecology. However, cement-based concrete remains the most

An Experimental Investigation of Concrete by using Glass Powder and Fly Ash as Partial Replacement of Cement

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Abstract

The effect of adding glass powder to concrete to improve the properties of concrete and also the addition of glass powder and fly ash is to minimize the risk of the environmental pollution. The effect of adding glass powder as an admixture on the durability and the thermal insulation. To understand the effectiveness of glass powder and fly ash in strength. In general, first we are going to collect all the materials such as cement, sand, aggregate, glass powder and fly ash. We conduct fineness test, initial test, final setting time test, consistency test for cement impact test. The compressive strength test is spilt one test, compaction factor test and test for the hardened concrete.M30 mix design can be done by this project. We are going to replace the cement up to 10%, 20%. The compressive strength can be compared by normal concrete to fly ash and glass powder mixed concrete in 7, 14, 28 days. Design work are carried out by IS 456-2000, recommended guidelines for concrete mix design. The use of fly ash concrete admixture not only extents technical advantages to the properties of concrete but also contributes to the environmental pollution control. In India the total production of fly ash is more than 100 million tons. The project details can be used to construct with aesthetic appearance of the building without distributing the environment. This project mainly focuses on reduction cost of construction material and it will give high strength when comparing to ordinary concrete.

Keywords

Glass powder, fly ash, fine aggregate, coarse aggregate, water, compressive strength.

DATA PROTECTION USING AES WITH QUICK RESPONSE CODE

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ABSTRACT

Information security issues are the most important concerns in the information technology driven world. The security concern of electronic data becomes so important and the responsibility of cryptography has increased so much. This project introduces a novel approach to file-to-video encryption and decryption. The project explores the integration of Quick Response (QR) codes and Advanced Encryption Standard (AES) techniques to enhance the security of file transfers. The integration of QR codes introduces a practical dimension to the encryption process, capitalizing on their capacity to encode information efficiently and their user-friendly nature. QR codes are strategically employed to embed encrypted data within video files, streamlining the sharing and transmission process. Concurrently, the implementation of AES, a widely recognized cryptographic standard, ensures a high level of confidentiality and integrity for the encrypted data. By marrying the advantages of QR codes' accessibility with the cryptographic strength of AES, this project offers a comprehensive and innovative solution to the complex challenges associated with securing electronic data in an increasingly interconnected and information-driven world.

KEYWORDS

QR: Quick Response, AES: Advanced Encryption Standard, MD5: Message Digest Algorithm 5

INTERNAL MARKS CALCULATION SYSTEM USING PHP AND JAVASCRIPT

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ABSTRACT

The Internal Marks Calculation System is an application-based website designed to automate process of calculating internal assessment scores for educational institutions. It is a user-friendly System Developed using HTML and JavaScript. This System provides efficient ways for faculty members to input, manage and compute assessment scores of students. Through this System, faculties can enter assignment scores, Internal exams, Model lab, Semester lab which are processed and calculated as internal marks. JavaScript for computing and validating the internal marks, this system assures exactness of data and constancy. In addition to that CSS is employed for perceptive and visually attractive to enhance the experience of the user. By this System, educational institutions can improve exactness in internal marks, reducing the manual errors and to promote feedback to students respecting their performance on academics.

KEYWORDS

Compute assessment scores, High accuracy, reducing manual errors.

ARTIFICIAL INTELLIGENCE IN CYBER SECURITY

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ABSTRACT

Over the past decade, cyber attacks have increased in frequency, impact and sophistication, largely due to the integration of artificial intelligence (AI). This technology, while providing organizations with the ability to strengthen their cyber defenses, also presents a dual challenge in cyber security. On the one hand, AI empowers organizations to strengthen their security measures, yet on the other hand, it provides cybercriminals with the means to plan highly targeted and rapidly scalable attacks that can evade traditional detection methods. This growing prevalence of AI-driven cyberthreats underscores the paradoxical nature of AI as a tool to both enhance and mitigate cybersecurity. As cyber threats continue to evolve, there is a great need for advanced technology to effectively detect and respond to attacks. In this context, AI has emerged as an indispensable tool, enabling comprehensive threat detection and automated response mechanisms to protect digital assets and networks.

INTRODUCTION

In the ever-evolving landscape of cybersecurity, the integration of artificial intelligence (AI) has emerged as a pivotal factor shaping the dynamics of digital defense and offense. Over the past decade, the frequency, impact, and sophistication of cyberattacks have surged, propelled by the capabilities afforded by AI technology. While AI offers promising avenues for organizations to bolster their cyber defenses, it also presents a dual-edged sword, confronting cybersecurity professionals with formidable challenges. On one front, AI empowers organizations to enhance their

PRIVACY-PRESERVING EMERGENCY RESPONSE SYSTEM: A UNIQUE IDENTIFIER APPROACH FOR SOCIAL MEDIA PLATFORMS

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ABSTRACT

This paper presents a novel approach to managing emergency messages on social media platforms, focusing on preserving privacy and ensuring efficient message tracking. The proposed system uses unique identifiers for each emergency message, allowing for effective tracking and management of the message lifecycle. The system is designed to handle various types of emergencies, including blood needs, missing persons, and kidnapping cases. The unique identifier approach ensures that personal information is not revealed, maintaining the privacy of the individuals involved. The system also allows for the deletion or updating of messages once the emergency need has been fulfilled.

KEYWORDS

message tracking, privacy maintaining, updation message,

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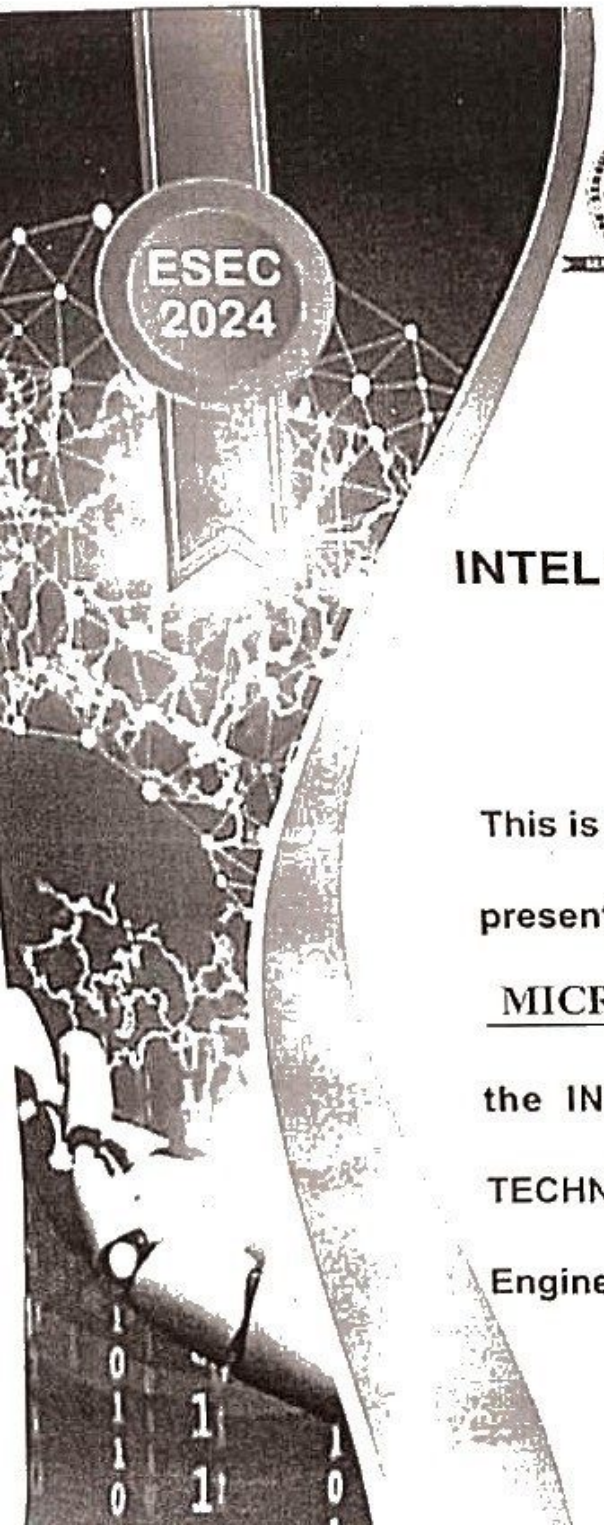

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Automatic Frequency Control for Interlinked DSTS Power Grid Using Dragonfly algorithm tuned PID Controller

Publisher: IEEE

Boopathi D ; Jagatheesan K ; Satheeshkumar R ; Sourav Samanta ; Anand B ; Jaya J **All Authors •••**

Abstract:
This article discussed the automatic frequency fluctuation control in an interlinked power network. Power quality issue arises at the time uncertainty in the loading. The... **View more**

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This article discussed the automatic frequency fluctuation control in an interlinked power network. Power quality issue arises at the time uncertainty in the loading. The power network is framed by two unequal power sources for investigation. By the complexity of the network the maintain the power quality is too much risk. Area one consists of a dish Stirling thermal system (DSTS). Area two has a thermal power plant alone. For automatic frequency stability control, the Load frequency control (LFC) scheme is presented with a secondary controller. In this study proportional integral derivative (PID) controller is recommended. The parameters of PID are optimized by the Dragonfly algorithm (DA) using Integral Time Absolute Error (ITAE) cost function. The DA technique supremacy is proved by comparing the results of the Ant colony optimization (ACO), Differential evolution (DE), Genetic algorithm (GA), and Particle swarm optimization (PSO) technique with DA. The DA - PID controller response is better than the GA, ACO, DE, and PSO techniques. The control response proved the quick oscillation control at 16s, also very minimal peak values.

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Mayfly Algorithm Optimized FOPID Regulator for Frequency Improvement in Wind Power Systems

Publisher: IEEE

Boopathi D ; Jagatheesan K ; Sourav Samanta ; Nilanjan Dey ; Jaya J ; Anand B **All Authors •••**

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The purpose of this article is to discuss frequency improvement in wind power systems (WPS). The result of the Mayfly algorithm (MA) to frequency enhancement is studied in the WPS with the support of secondary controllers PID and FOPID controllers (proportional-integral-derivative and fractional-order PID). The autonomous WPS includes a battery energy storage system (BESS) to aid the secondary controller. The responsiveness of the suggested approach to frequency variation was investigated in the MATLAB, Simulink working environment with a 1% load disturbance. The control response of the MA-FOPID and PID controllers is compared with the results of standard optimization techniques to show the preeminence of the proposed technique. The evaluation of the results indicates that the MA technique performs better than other optimization techniques for frequency improvement.

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Presented a Paper Titled DEEPWATER LI-FI COMMUNICATION FOR MONITORING DIVERS HEALTH.

in the International Conference organized by Paavai Engineering College (Autonomous), Namakkal, Tamilnadu

on 27th April 2024

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NATIONAL CONFERENCE ON RECENT ADVANCES IN AGRICULTURE

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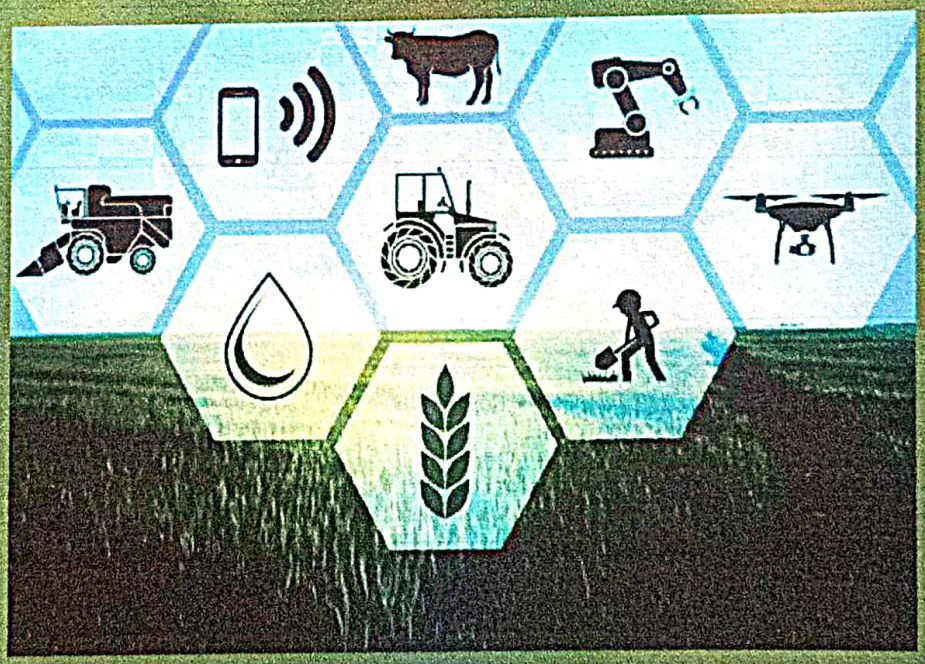

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PRECISION AGRICULTURE

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ABSTRACT

Present day agriculture has two major challenges: increasing productivity to feed the growing population and reducing the environmental degradation caused by the input-intensive agriculture. Precision agriculture, sometimes called site-specific management, is an emerging technology that allows for adjustments to address within-field variability in characteristics such as soil fertility, soil moisture, weed intensity and insect-pest infestation. The technology has the potential to reduce production costs through more efficient and effective application of crop inputs. It also reduces environmental degradation by allowing farmers to apply agricultural inputs at appropriate rates at places where these are needed. Spatial, temporal and predictive aspects of soil and crop variability are the vital elements of precision agriculture. It involves the sampling, mapping, analysis, and management of specific areas within a field in recognition with spatial and temporal variability with respect to soil fertility, moisture availability, crop characteristics and insect-pest population. Large-scale variability has long been encountered with different cropping practices in different regions. However, precision agriculture responds to spatial variability within individual fields or orchards.

Keywords: Input-intensive agriculture, site-specific, weed intensity, spatial variability

IC ENGINE

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ABSTRACT

There are six primary sources of power in agriculture: human labour, domestic animals, wind, flowing water, electricity, and heat engines. The primary sources of power for modern agriculture are the internal combustion engine and electric motor. Someday, the primary source of power may change to fuel cells, solar energy, or atomic energy, but in the immediate future the primary

sources of power for agriculture will continue to be internal combustion heat engines and electric motors. Spark ignition engines, based on the Otto_cycle, are the most popular internal combustion engines. They burn a range of fuels including gasoline, natural gas, propane, biogas and landfill gas. Most use a four-stroke cycle but some utilise the two-stroke cycle. In these engines fuel and air are premixed before being fed into the cylinder of the engine where the mixture is compressed then ignited to generate a power stroke. The compression ratio of a spark ignition engine is limited by the tendency for the fuel–air mixture to ignite spontaneously. Natural gas is more resistant and a higher compression ratio can be used, leading to higher efficiency. Emissions are also an important consideration in modern engines.

Keywords: Fuel Cells, Heat Engines, Spark Ignition, Gasoline, Propane, Biogas

INFORMATION TECHNOLOGY (IT) IN AGRICULTURAL SECTORS: ISSUES AND CHALLENGES

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ABSTRACT

Agriculture is the backbone of food production in every nation and the central elements in economic development. Rapid changes in information technology (IT) have promised substantial potential Benefits in return, especially for developing countries. The success of IT application in agriculture is widely reported in numerous previous studies. Regardless of its success, the transformation has brought many issues and challenges for farming businesses. Thus, this article aimed to review the major issues and challenges of IT usage and how technology resources can address the needs of demand for food production. The findings reveal three main themes of issues and challenges, which are infrastructure, people, and organisation. Due to these issues, there is a greater need for changes in IT resources in agriculture to meet food demand for the rapid growth of the population by the year 2050. A systematic review using existing literature has been used in writing this article.

Keywords: Agriculture, information technology, food production, population

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CHEMICAL CONSERVATION IN PLASTIC WASTE INTO FUEL

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Abstract

The increased demand and high price for energy sources are driving efforts to convert organic compounds into useful hydrocarbon fuels. Although much of this work has focused on biomass, there are strong benefits to deriving fuels from waste plastic material. Waste plastic is abundant and its disposal creates large problems for the environment. Plastic does not break down in landfills, it is not easily recycled and degrades in quality during the recycling process, and it can produce waste ash, heavy metals, and potentially harmful gas emissions if incinerated at high temperatures. However, thermal processes can be used to convert plastics into hydrocarbon fuels such as gasoline, diesel, aviation jet fuel, which have unlimited applications in airline industries, helicopter, heavy transportation, and electricity generation. The method and principal of the production / process will be discussed.

KEY WORDS

Organic compounds, Hydrocarbon fuels, Biomass, Waste plastic

COMPARATIVE ANALYSIS OF CROP YIELD USING AQUAPONICS

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ABSTRACT

This project aim is to provide a demonstration how fish and plant can be cultivated efficiently with minimal waste, space and maintenance. In this project, we have chosen clay pebbles as soilless mediums. With this medium different crop such, Tomato, Chilli, and two more leafy vegetable will be raised up. The crop yield will be analyzed with this medium on the basis of aquaponics. In principle the soilless medium is a substrate that is part of an artificial system of cultivation in which plants have grown without soil. Aquaponics emerged from multiple agriculture method that were seeking to provide a more environmentally sustainable means of food production. It has little market saturation and lack required attention to grow. It is a system of aquaculture in which the waste produced by farmed fish or other aquatic creatures supplies the nutrients for plants grown hydroponically which in turn purifies the water. It involving nitrifying bacteria for converting ammonia into nitrates.

Keywords

Aquaponics, Soilless, Medium, Fish, Aquaculture, Ammonia, Nitrates, Yield.

Nano Technology Used in Agriculture By mode of Biosensors

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Abstract

Nanotechnology emerged as gift to mankind with great potential in a broad variety of areas in research and everyday life. In contract to conventional biosensors results in a highly effective nanobiosensor with tiny shape. Nano biosensors is an electrochemical sensors that use the biological element as a diagnostic component and the electrode as a transducer. It refers to a system in which at least one of the nanostructure is used to detect gases, chemicals, biological agents, electric field lights, heat etc... The use of nanostructure in these systems is done to fill the gap between the convertor and the bioreceptor which is at the nanoscale. Biosensors may be used utilized in a number of agricultural applications such as assessing toxins in soils and crops.

Keywords

Biosensors, Bioreceptor, Applications, Transducer, Nanoscale.

AUTOMATIC SPRINKLER IN CONTROLLED ATMOSPHERE

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ABSTRACT

Watering the plant is the most important cultural practice and one of the labor intensive tasks in daily greenhouse operation. Watering systems ease the burden of getting water to plants when they need it. Knowing when and how much to water is two important aspects of watering process. To make the gardener works easily, the automatic plant watering system is created. There have a various type using automatic watering system that are by using sprinkler system, tube, nozzles and other. This project uses Arduino board, which consists of ATmega328 Microcontroller. It is programmed in such a way that it will supply the water when required.

Keywords

Plant irrigation, Sprinkler Robot, Arduino, Water pump

INTRODUCTION

The objective of this project is to smart agricultural robot controlling system using android phone. The main scope of this project multipurpose system gives an advance method to plow minimum man power and labor making it an efficient vehicle using Bluetooth. In the modern society is now fully dependent upon technology and the technological approach has brought a revolutionary change in each and every field.

This project a multipurpose robot to be used in the battle field. This robotic vehicle is an agricultural machine of a considerable power and great soil clearing capacity. The machine will cultivate the farm by considering particular rows and specific column at fixed distance

Tomato Preservation By Using Irradiation Method

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Abstract

Irradiation has recently emerged as possible alternative to currently used post harvest photo sanitary treatments research has also highlights other benefits associated with irradiation in post harvested technology. This review presents that effects and irradiation on post harvest and nutritional quality of tomatoes. The application of electric field rays irradiation of tomatoes is discussed including its effect on biological (respiration rate, ethylene production and microbial growth) physico – chemical (firmness, colour, total soluble solids and titratable acidity) and nutritional (vitamins, carbohydrates, anti oxidants) quality. Irradiated electrical rays treated tomatoes have shown resistance to microbial growth and decay. Although irradiation reduces the loss of vitamin C during storage, the loss of vitamin E remains a concern. Irradiated treatments lead to higher antioxidant capacity, flavonoids and phenolic content. The effect of harvest maturity and seasonal differences in the efficacy of Irradiation treatments is required to be investigated

Keywords

Tomatoes, Postharvest, Quality, electrical field rays, Irradiation.

Introduction

In the realm of food preservation, the quest for maintaining freshness while extending shelf life is a constant challenge. Tomatoes, with their delicate texture and susceptibility to spoilage, present a particularly demanding case. However, advancements in food

Studies on Floatation of Waste Mobile Printed Circuit Boards

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ABSTRACT

Vast varieties of appliances which apply electricity are termed as electrical and electronic equipment (EEE). Waste Printed Mobile Circuit Board is a heterogeneous mixture of polymers, ceramic and metals. Characterization of these heterogeneous material is critical in identification of elements present in it. The powdered waste printed circuit boards were investigated by optical stereomicroscope for liberation and shape identification. Flotation studies were conducted to separate metals and nonmetals. The experimental results indicated that the metallic values are enriched in the sink product and polymer were separated from the float. The enrichment of metal values helps in reducing the cost of downstream process such as leaching and extraction of metal values.

Introduction

The electrical and electronic equipment after end-of-life (EoL) period becomes electrical and electronic waste (E-Waste). E-waste is one of the rapid growing solid waste stream in every nation globally [1]. Mobile phones are potable device which receive calls over radio frequency link while the user is around telephone service area. In recent decade mobile phones support various other services such as text message, MMS e-mail, Internet access, short range wireless communications (infrared, Bluetooth), digital photography were commonly defined as featured phones. Mobile phones which offer advanced computing devices are referred as smart phones. Usage of mobile phones worldwide have increases vigorously from 500 million (2000) to 5000 million (2011) [2]. Mobile phone consists of various parts such as case housing, keypad, display, printed circuit boards, battery and charger. The total mobile phone is made up of 50% of polymers and the remaining was made up of other materials such as ceramics and metals [5]. Most of the materials used in mobile phones can be recycled [4]. The polymers used in mobile phones were made of engineering grade polymers such as Polycarbonate (PC), Acrylonitrile–Butadiene–Styrene

Studies on Production of Pulp and Paper from Sugarcane Bagasse

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ABSTRACT

Vast varieties of appliances which apply electricity are Paper has multiple purpose in the society by preserving knowledge transformation, communication among peoples, disposable good and eco-friendly product since it can be decomposable easily. The different agricultural waste used in paper production are cotton liners, wheat straw, corn stalk, cotton stalk, banana fruit stem, cereal straw, sugarcane bagasse, etc. Sugarcane (Saccharum officinarum) is cultivated in tropical countries. Sugarcane production was 1.84 billion tons in 2017 worldwide. India is the second-highest producer of sugarcane in the world. Bagasse is a fibrous residue remaining after the extraction of the sweet juice from sugarcane. Bagasse consists of 36.3 – 69.4% cellulose, 6 – 30% hemicellulose, 4.4 – 29 % lignin, 0.6 – 5.5 waxes and the rest are ash, saccharose, glucose and silica. In the present work paper was produced from sugarcane bagasse by chemical pulping method and Hydrogen Peroxide is used as a bleaching agent to increase the brightness of the paper. The various characterization techniques of the paper are discussed here to validate the quality of paper.

Introduction

Sugarcane (Saccharum officinarum) is cultivated in tropical countries. Sugarcane production was 1.84 billion tons (2017) worldwide. India is the second-highest producer of sugarcane in the world after Brazil. Uttar Pradesh, Karnataka, and Maharashtra together contribute to 80% of the total sugarcane production in India. Sugarcane is a tropical and subtropical crop that requires a hot and humid climate to grow. Sugarcane bagasse is defined as the residue generated after extracting sugar from sugarcane. It consists of 36.3 – 69.4% cellulose, 6 – 30% hemicellulose, 4.4 – 29 % lignin, 0.6 – 5.5 waxes and the rest are ash, saccharose, glucose and silica. The bagasse is used in production of paper for writing, packaging and newsprint purposes. The worldwide pulp and paper industry is gradually

Cellulose-Based Hydrogel Synthesis

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Abstract

This paper presents the synthesis and characterization of cellulose-based hydrogels tailored for agricultural use. The hydrogels were synthesized through a facile and environmentally friendly process involving the crosslinking of cellulose with a suitable crosslinker. Various characterization techniques including Fourier transform infrared spectroscopy (FTIR), scanning electron microscopy (SEM), and swelling studies were employed to assess the structural, morphological, and swelling properties of the hydrogels. The impact of different synthesis parameters such as cellulose concentration, crosslinker concentration, and reaction time on the properties of the hydrogels was investigated systematically. The potential of the synthesized hydrogels for agricultural applications, particularly as soil moisture retainers and nutrient carriers, was evaluated through in vitro and in situ studies. The results demonstrate that the cellulose-based hydrogels exhibit excellent water retention capacity and swelling behavior, making them promising candidates for improving soil moisture content and nutrient availability in agricultural settings. This research contributes to the development of sustainable and effective hydrogel-based solutions for enhancing agricultural productivity and sustainability.

Keywords

Cellulose-based hydrogel, synthesis, characterization, agricultural applications, soil moisture retention, nutrient carrier.

Introduction

Background

The agricultural sector faces significant challenges in meeting the growing demand for food while minimizing environmental impact. One critical aspect of sustainable agriculture is the efficient utilization of water resources, especially in regions prone to drought and water scarcity. Hydrogels have emerged as promising materials for enhancing soil moisture

COMPARATIVE ESTIMATION OF B-COMPLEX VITAMIN CONTENT IN CHICKEN EGG, BUFFALO MILK AND GOAT MILK

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ABSTRACT

Vitamins are very essential for human beings. It mostly supplied by diets. Vitamins are classified into fat soluble and water soluble. Accordingly they are called Vitamin A, D, E, K and B-complex vitamins respectively. Among those Vitamin B-Complex content was estimated from different sources like chicken egg, buffalo milk and goat milk and compared with each other to predict which of these sources having high content of vitamin B-complexes by thin layer chromatography, Spectroflurophotometry quantitatively and qualitative analysis done by HPLC methods. Finally, cyanocobalamin (Vitamin B12) was enormously found in all the mentioned sources among all B-complex vitamins which was predicted by TLC.Quantitative analysis was done by spectroflurophotometric method to estimate cyanocobalamin (Vitamin B-12) and it was found only egg mixed (both white and yolk) sample 2 contains high quantity of cyanocobalamin (Vitamin B- 12).Then Qualitative analysis was done to predict whether the content present in egg mixed (both white and yolk) sample 2 was cyanocobalamin (Vitamin B-12) by comparing with standard. It was concluded the cyanocobalamin (Vitamin B-12) was abundant in egg mixed (both white and yolk) sample 2 and revealed whole chicken egg will replace or supplement for cyanocobalamin (Vitamin B-12) which is essential as human diet.

Making of Bioplastic from pectin by citrus peels

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Abstract

This research paper investigates the feasibility and sustainable synthesis of bioplastics from pectin extracted from citrus peels. With the growing concern over environmental pollution and the depletion of fossil fuel resources, there is a pressing need to explore renewable and biodegradable alternatives to conventional plastics. Citrus peels, a major byproduct of the citrus processing industry, contain substantial amounts of pectin, a polysaccharide known for its gelling and thickening properties. In this study, citrus peels were collected, processed, and subjected to pectin extraction using environmentally benign methods. The extracted pectin was then utilized as a precursor for the synthesis of bioplastics through a series of chemical and physical treatments. The properties of the resulting bioplastic films, including mechanical strength, thermal stability, and biodegradability, were characterized using various analytical techniques. Additionally, the environmental impact of the bioplastic production process was assessed through a life cycle analysis.This research contributes to the development of eco-friendly alternatives to traditional plastics, paving the way towards a more sustainable future.

Introduction

Background

Plastics, once hailed for their versatility and contributions to technology and medicine, have now become a global environmental concern due to their extensive consumption and persistent pollution. Governments worldwide, including India's, are intensifying efforts to address plastic waste's detrimental impacts on ecosystems and human health. Amidst this crisis, the quest for sustainable alternatives has gained momentum, with bioplastics emerging as promising solutions.

Utilizing agricultural waste, such as citrus peels, for bioplastic production has garnered attention due to its potential to mitigate plastic pollution and promote circular economy

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Of Paavai engineering college In recognition of your active participation and valuable contributions of paper presentation titled "Yoga recomadation and monitoring system us ai

" presented on 12th april 2024. We extend our sincere appreciation and gratitude. The Department of Visual Communication at Sathyabama Institute of Science and Technology (Deemed to be University) acknowledges your presence and involvement in the "International Conference on Innovative Techniques in Artificial Intelligence and Communication Technologies (ICITAICT 2K24)". Your presence and engagement have greatly enriched the discussions and activities of the conference, fostering an AI of learning and collaboration. Your commitment to excellence and dedication to the field are truly commendable.

Dr.T Sasipraba
Vice Chancellor

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Formulation and optimization of herbal tea mix for treating insomnia

Karthik M.G., Pragathi S., Dhevahi B., Priyadharshini K., Santhosh S., Akash R., & Dharani M.

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

Insomnia is a common sleeping disorder raised due to difficulty in starting or maintaining sleep or of non-restorative sleep among all age groups. It is also caused due to mental illness, anxiety disorder and bipolar disorder. Lifestyle changes is one of the common and major factors causing Insomnia. Development of different herbal formulations from *Nelumbo nucifera, Opium poppy, Anisomeles malabarica, Mucuna pruriens, Cycas circinalis, Myristica fragrans, Glycyrrhiza glabra* and *Coriandrum sativum* can be used to treat insomnia with the minimal side effects. The extracts from the samples were screened for the presence of various bioactive compounds. The result shows that the samples are rich in antidepressant, antianxiety agents that accelerates melatonin secretion which helps to reduce stress, depression thus inducing better sleep. The formulation and optimization studies were performed by using mixture design provided by Design Expert Software. The better and effective formulation are identified over the 18 runs of the blending sample mixture through sensory analysis. The sensory evaluation including colour, appearance, flavour, taste, aroma and texture of the tea sample was analysed by 7 points hedonic scale. Owing to the above results, these herbal tea mixtures can be successfully used for treating Insomnia.

Keywords: Insomnia, herbal beverage, bioactive compounds, antidepressant, antioxidant, antianxiety, sensory analysis, design expert software

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Frontiers of Sustainable Research in Health Care, Food, Agriculture and Environmental Management

BOOK OF ABSTRACTS | FIRST EDITION | ISBN: 978-93-340-1117-3 | 22nd & 23rd FEBRUARY 2024

Biosynthesis and characterization of silver nanoparticles from *Drynaria quercifolia*: wound healing application of diabetic patients

Karthih M.G., Pragathi S., Adaikala Selvan G., Santhiya R., Kiruba V., Vaishnavi P., & Guru Prasanna S.

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

Drynaria quercifolia is commonly known as oak leaf and possesses various pharmacological properties such as antimicrobial, antioxidant, anti-inflammatory, antipyretic, wound healing, bone regenerative and anti-rheumatic activity. It plays an important role in curing medical related problems especially for wound healing in diabetic patients. *Drynaria quercifolia* leaf is rich in silver which is responsible for its antimicrobial activity and blood clotting. It also fastens tissue regeneration in wounds of diabetic patients. The extract of oak leaf was subjected to biosynthesis of silver nanoparticles. The presence of synthesized AgNP's was confirmed by UV-Visible Spectrophotometer in the range between 400-450 nm. FTIR analysis were done to determine the presence of various functional groups. The surface morphology of AgNPs were determined using SEM Analysis followed by electron diffraction (EDX) to detect the elemental composition of the sample. The result obtained from the characterization studies confirmed the presence of silver nanoparticles. Thus, the Ag NP's will be blended with suitable additives for formulating the nano gel for treating wounds of diabetic patients.

Keywords: Diabetes, wound healing, silver nanoparticles, FTIR, SEM

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Development of floral tisane to combat premature aging

Pragathi S., Karthih M G., Dhevahi B., Ponsumanraj S., Thirumalai A., Menaga C., & Ezhilarasan E.

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

Aging of skin is an irreversible process associated with both intrinsic and extrinsic factors. The intrinsic aging or chronological aging is regulated by cellular and molecular level and it is a natural process whereas extrinsic aging or premature is highly associated with our day to day activities. So it is easy to delay or prevent premature aging because the underlying mechanism of aging is still unclear. Developing bio-remedies to treat premature aging can delay the mechanism of aging process at both molecular and genetic level.

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Premature aging can be controlled by intake of proper balance diet. Edible flower is one such source rich in antioxidants and polyphenols. These compounds play a prominent role in treating premature aging. The edible flower such as *Gomphrena globosa*, *Matricaria chamomile*, fruit of *Illicium verum* were used to prepare herbal beverage by infusion method. Qualitative phytochemical analysis was first carried out to determine the possible active compounds in edible flowers. The phytochemical screening reveals the presence of flavonoids, polyphenols. The design expert software and origin pro software were used for optimization and sensory analysis studies. The liquid chromatography mass spectroscopy (LC MS) technique identifies the individual compounds of floral tisane. In future studies, the antioxidant potential, antiaging potential, and nutritional value were determined. The final floral tisane with anti-aging potential will be recommended for incorporation into daily dietary practices to combat premature aging.

Keywords: Edible flowers, antioxidant, anti-inflammatory, antimicrobial, antifungal, phytochemical screening, bioactive compounds, LC-MS analysis

Biomediated calcium oxide nanoparticles using *Terphrosia purpurea* for treating gingivitis

Adaikala Selvan G., Pragathi S., Karthih M G., Dharshini D., Kumaresan D., Jansirani V., & Venkatesh V.

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

According to epidemiological studies, gingivitis is a common gum disease. It is generally characterized by formation of bacterial plaque over the tooth surface. It is usually painless, rarely causes spontaneous bleeding, and its clinical symptoms are not obvious enough for most patients to recognize the disease. Gingivitis can be prevented by using natural remedies. *Terphrosia purpurea* is a medicinal plant having potent pharmacological activity against oral pathogens such as *Streptococcus mutans* which is an aetiological agent in causing gingivitis and caries. The calcium oxide nanoparticles were green synthesized from the whole plant extract of *Terphrosia purpurea*. The calcium oxide nanoparticles presence was confirmed by measuring the absorbance at 360 nm using UV Visible spectrophotometer. The presence of various kinds of functional groups were determined using FTIR. The surface morphology study of calcium oxide nanoparticles was carried out in scanning electron microscopy. The antibacterial activity of CaO NP's was determined against oral pathogen such as *Streptococcus mutans, Streptococcus oralis, Streptococcus salvarius, Enterococcus faecalis, Lactobacillus acidophilus*. The result shows better antibacterial activity against these oral pathogens. The synthesized CaO nanoparticles were blended with other suitable additives for formulating the tooth paste which will be potent in treating gingivitis.

Keywords: Gingivitis, medicinal Plant, *Terphrosia purpurea*, calcium oxide nanoparticles UV Visible spectrophotometer, antibacterial activity, tooth paste

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Frontiers of Sustainable Research in Health Care, Food, Agriculture and Environmental Management

BOOK OF ABSTRACTS | FIRST EDITION | ISBN: 978-93-340-1117-3 | 22nd & 23rd FEBRUARY 2024

A review on biosynthesis of silver nanoparticles and their antidiabetic potential

Dhevahi B., Karthih M.G.,[1] Pragathi S.,[1] Vijayakumar V.,[2] Srimathi T.,[2] Harish S.,[2] & Loganathan P.[2]

[1]Paavai Engineering College, Namakkal
[2]Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

This comprehensive review focus into the field of nanotechnology, specifically focusing on silver nanoparticles (AgNPs) synthesized through environmentally sustainable biosynthesis from plant extracts. The exploration of plant-based biosynthesis methods underscores the potential for eco-friendly and cost-effective nanoparticle production. The review thoroughly examines the diverse array of plant sources employed in this process, highlighting their unique attributes and applications in nanomedicine. Characterization of silver nanoparticles is a critical aspect discussed in this review, encompassing parameters such as size, shape, and surface characteristics. Understanding these features is essential for tailoring nanoparticles to achieve optimal therapeutic outcomes. The integration of plant-based synthesis and nanotechnology offers a promising avenue for developing nanoparticles with enhanced bioavailability and targeted functionalities. The review further delves into the in vitro antidiabetic assays, elucidating the impact of silver nanoparticles on key molecular targets associated with diabetes pathogenesis. The exploration of in vivo antidiabetic assays in animal models provides valuable insights into the bioavailability, pharmacokinetics, and safety profiles of these nanoparticles, paving the way for their potential translation into clinical applications. In essence, this review provides a comprehensive overview of the biosynthesis of silver nanoparticles from plant sources, their characterization, and their antidiabetic potential analyzed in both in vitro and in vivo assays. The convergence of nanotechnology and plant-based synthesis not only offers sustainable and scalable production methods but also holds tremendous promise for the development of innovative therapeutic strategies in the context of diabetes.

Keywords: Nanotechnology, silver nanoparticles, diabetes, bioavailability, antidiabetic assays

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Frontiers of Sustainable Research in Health Care, Food, Agriculture and Environmental Management
BOOK OF ABSTRACTS | FIRST EDITION | ISBN: 978-93-340-1117-3 | 22nd & 23rd FEBRUARY 2024

Preparation of polyherbal mixture form the plants collected form Kolli hills to study hepatoprotective activity

Dhevahi B., Karthih M.G., Pragathi S., Vaishnavi B., Sangeetha G., Joswa A., & Bharathram B.

Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

The purpose of this research is to examine the biological characteristics and phytochemical composition of *Ginkgo biloba, Glycyrrhiza glabra, Tinospora cordifolia, and Picrorhiza kurroa*. The phytochemical composition of the polyherbal mixture's ethanolic extract was analyzed qualitatively, and GC-MS was utilized to analyze the mixture's hepatoprotective benefits in Wister albino rats. Twelve active phytochemicals were found in an ethanolic extract of polyherbal mixture by GC-MS analysis, The constituents identified are Ginkgolide A, 9,12 - octadacatrinoic acid, octacosanoic acid, Rutin, 7-tetradacenal, phenol 2,4-bis(1,1-dimethulethyl), kutkin, wogonin, gallic acid, liquiritn, benzofuran, licochalcone. Significant hepatoprotective activity was studied by the ethanolic leaf extract, which reversed the hepatic damage in comparison to normal and significantly reduced serum blood biochemical markers (AST, ALT, ALP, total bilirubin, and total protein) at low and high doses (100 and 200 mg/kg), respectively in Wister albino rats.

Keywords: Polyherbal mixture, Phytochemicals, GC-MS, Hepatoprotective activity

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Frontiers of Sustainable Research in Health Care, Food, Agriculture and Environmental Management

BOOK OF ABSTRACTS | FIRST EDITION | ISBN: 978-93-340-1117-3 | 22nd & 23rd FEBRUARY 2024

ISBN No: 978-93-6126-277-7

PAPER ID NO: PT002

ISOLATION FROM POLYHYDROXYLATED NAPHTHOQUINONE FROM *Stomopneustes Variolaris*: PHARMACEUTICAL APPLICATIONS

Karthih M.G, Dhevahi.B, Pragathi S, Ganeshprabha M, Gokulkannan C*

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

Sea urchin *(S. variolaris)* gonads (roe) are the most prominent structures in the internal cavity and are a highly prized delicacy in parts of Asia (East Asia), Mediterranean and the Caribbean countries. Roe or Gonads have higher nutritional value than other seafood and consisting with mainly water, protein, lipid, carbohydrate, fatty acids, vitamins and minerals. The naphthoquinone pigments of *Family Stomopneustidae* sea urchin specifically echinochrome and spinochromes are well known for their effective anticancer activities and in developing. *In vitro* techniques for inducing pigment differentiation in cell culture. The proximate composition of gonads consist carbohydrate (8%), protein (6%), total lipid (7.58%) and moisture (81.9%), and with respect to the fatty acid profile in S.*variolaris*, the highest unsaturated *fatty acid* alpha linolenic acid (55%) was observed. Essential fatty acid C18:1, C18:3, C: 16 were predominant, C: 18, C18:2, C22:0 where lowest fatty acid profiles have been identified to gonads. The presence of a pigment compound (PHNQ) structure was confirmed using HPLC method. The results indicated that the HPLC method deployed in this study would be applicable for the separation and quantification of these major pigments in sea urchin shells. The antioxidant ability of the pigment (PHNQ) extract was determined by ABTS assay. The IC_{50} value of shell (0.9 mg/mL) and spine (0.7 Mg/mL) has high significant stronger ABTS free radical scavenging properties. The *in-vitro* cytotoxicity activity of samples on cervical cancer HeLa cell lines was determined by the MTT assay. IC_{50} value of shell (150µg/mL) and spine (75µg/mL) has significant inhibiting activity of cervical cancer HeLa cell lines. These results suggests that sea urchin shell and spines are a promising source of pharmaceutical active compounds.

***KEY WORDS**: PHNQ, anti-oxidant, anti-cancer, anti-inflammatory*

ISBN No: 978-93-6126-277-7

PAPER ID NO: PT003

FABRICATION OF BIOPOLYMER FILM FROM CISTOPUS INDICUS AND IT'S WOUND HEALING APPLICATIONS

Karthih M.G, Pragathi S, Sowmya R, Premkumar R, Kalaiselvan P.S, Silambarasan P*

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

ABSTRACT

Gelatin was extracted from the mantle of *Cistopus indicus* and their physico chemical properties such as water holding capacity (WHC), viscosity and color etc., were studied. Spectral properties were investigated using UV-vis, FT-IR and XRD spectroscopic tools. The mantle yielded 4% gelatin powder and identified as type B gelatin. Proximate analysis estimated good concentration of gelatin (90%) with good composition of amino acids. Absorbance peak at 210 nm identified presence of peptides, FT-IR spectrum recorded peaks presence of functional groups (3103 cm^{-1} - hydroxyl group, 1598 cm^{-1} –Amide I band) that was an evaluation of secondary structure of proteins and coiled structure of gelatin. XRD peaks showed diffraction at 20° and 21° that confirmed the triple helical crystalline characteristic of gelatin. Film prepared in different proportions of gelatin (0-1%) was evaluated and identified that addition of 0.75% gelatin has improved the texture through softening the film. From the present study, it is concluded that the gelatin extracted from the mantle could be used as good source of polymer for film preparation with improved in wound healing process.

KEY WORDS: *Gelatin, FT-IR, XRD, Biofilm and Physio-chemical Properties*

ISBN No: 978-93-6126-277-7

PAPER ID NO: PT001

EFFECT OF ULTRASOUND ON EXTRACTION OF PHYCOBILIPROTEINS FROM *ARTHROSPIRA PLATENSIS* (*SPIRULINA*)

S. Pragathi, M.G. Karthih, G. Sridhar, K. Gokulkannan, M. Vimalraj
Department of Pharmaceutical Technology
Paavai Engineering College (Autonomous), Pachal, Namakka

ABSTRACT

Phycobiliproteins (PBPs) is a light harvesting pigment commonly found in *Arthrospira platensis*(*Spirulina*). PBPs is classified into three categories namely C-Phycocyanin (C-PC), Allophycocyanin (APC) and Phycoerythrin (PE). Since PBPs is a water soluble membrane protein-pigment complex, conventional methods like homogenization, ultrasonication, etc., were used to extract PBPs. This present study is focussed on selective extraction of PBPs from *Spirulina* by using ultrasound assisted aqueous two phase extraction with deep eutectic solvents. This technique favors the enrichment of PBPs to the top phase along with DES. Different DES formulations were used in this study and it act as an extracting solvents. The concertation and purity of extracted phycobiliproteins in the both phases were determined by Bennet and Bogorad equation. Further increase in purity was enhanced by gel filtration chromatography followed by ion exchange chromatography. The concentration and purity of purified fractions were determined and also they were evaluated for antioxidant activity, anticoagulant activity and antibacterial activity against *Escherichia coli* and *Pseudomonas aeruginosa*. Therefore, this study proves itself as a feasible method for yielding highly pure phycobiliproteins compared to other conventional methods.

SBIIS 2024 -036

Treatment of Insomnia using Herbal Beverages

Karthih M G*., Pragathi S., Adaikala selvan G., Priyadharshini K., Santhosh S., Dharani M., Akash R.
Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal
Corresponding Author Email.id: mgkarthih@gmail.com

ABSTRACT

Insomnia, a prevalent sleep disorder characterized by difficulty initiating or maintaining sleep, poses a significant challenge with widespread impact across age groups. Rooted in factors like mental illness, anxiety, and bipolar disorder, lifestyle changes also contribute to its emergence. Addressing this issue, herbal formulations from Nelumbo nucifera, Opium poppy, Anisomeles malabarica, Mucuna pruriens, Cycas circinalis, Myristica fragrans, Glycyrrhiza glabra, and Coriandrum sativum present a promising avenue with minimal side effects. Screening the extracts for bioactive compounds revealed their richness in antidepressants and antianxiety agents, stimulating melatonin secretion to alleviate stress and depression, ultimately improving sleep quality. Formulation optimization using Design Expert Software's linear programming method identified effective blends through 18 runs, assessed via sensory analysis. The Qualitative analysis of phytochemical constituents, including Glycosides, Phlobatannins, Saponins, Flavonoids, Terpenoids, Phenolic, and Alkaloids, further supported the potential efficacy of these herbal blends. Sensory evaluation, employing a 7-point hedonic scale, highlighted the tea's acceptability based on color, appearance, flavour, taste, aroma, and texture. The herbal tea formulations exhibit promises in treating insomnia, offering a holistic approach with encouraging results from both bioactive compound screenings and sensory assessments.

Keywords: Insomnia, Herbal Beverage, Bioactive Compounds, Antidepressant, Antioxidant, Antianxiety, Sensory Analysis, Design Expert Software, Sedative.

SBIIS 2024 -038

Fabrication of Gelatin Based Bio Film From Cistopus Indicus And It's Pharmaceutical Applications

Karthih M.G*, Pragathi S, Sowmya R, Premkumar R, Kalaiselvan P.S, Silambarasan P

Department of Pharmaceutical Technology, Paavai Engineering College, Namakkal

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ABSTRACT

Gelatin is a cheap, water-soluble polymer which has been used over many generations for multiple applications across a wide variety of industries. Gelatin is a natural polymer which is made of hydrolytic degradation of protein from collagen and its distinctive structure of amino acids gives it several medical benefits. Gelatins from marine species presented the best gelling ability and the gels were more thermostable. Gelatin is an important functional biopolymer widely used to improve elasticity, consistency, and stability. Gelatin was extracted from the mantle of Cistopus indicus and their physico chemical properties such as water holding capacity (WHC), viscosity and color etc., were studied. . The mantle yielded 4% gelatin powder and identified as type B gelatin. Proximate analysis estimated good concentration of gelatin (90%) with good composition of amino acids. Absorbance peak at 210 nm identified presence of peptides, FT-IR spectrum recorded peaks presence of functional groups hydroxyl group, Amide I band that was an evaluation of secondary structure of proteins and coiled structure of gelatin. XRD peaks showed diffraction at 20° and 21° that confirmed the triple helical crystalline characteristic of gelatin. Further, formulate the Film from the Extracted gelatin for wound healing Application. From the present study, it is concluded that the gelatin extracted from the mantle could be used as good source of polymer for film preparation with improved in wound healing process.

Keywords : Gelatin, FT-IR, XRD, Biofilm and Physio-chemical Properties

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Incorporated With Manganese Oxide Nanoparticles From Citrus Hystrix : Treating Skin Rashes

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ABSTRACT

Skin rash is characterized by an area of irritated or swollen skin. They also form blisters, itchiness, redness and patches in the raw skin resulting due to bacterial, fungal, viral, or parasitic infections. The purpose of the study was to formulate the stabilize MnO Nano-gels to treat the skin rashes from manganese metal oxide nanoparticle were biosynthesized from the peel extract of Citrus hystrix. The synthesized nanoparticles were characterized by using UV-Visible spectrophotometer and FTIR techniques. Scanning electron microscopy and electron dispersive x-ray analysis was done to evaluate the morphological and structural properties, crystal structure of the MnO nanoparticles. The MnO nano-suspension was formulated using high pressure homogenization technique. Nano-gels can be made up synthetic or natural polymers. HPMC and Carbopol with the desired viscosity utilized to prepare the nano-gels. The nano-gel is further investigated for in-vitro skin permeation, drug release, stability studies. However, the skin provides a natural barrier against particle penetration for topical delivery it easily improvement in the dermal localization of bioactive into the affected skin region, so the nano-gel are potential as drug carrier for topical therapy, reducing the dosing frequency and fastens the healing poparticles, Biosynthesis, Nano-gel, in-vitro skin permeation, drug release, stability studies, process of skin rashes.

Keywords : Skin rashes, Citrus hystrix, Manganese, NanoPrepartion, Gel

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Formulation of Wound Healing Patch From The Whole Plant Extract Of Tridax Procumbens

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ABSTRACT

Tridax procumbens is commonly referred as 'cotton buttons' is a plant that is widely used to treat a diarrhoea, inflammation, anaemia, skin infections and for healing wounds. It has been used as antimicrobial and antifungal agents among Traditional communities. The aim of the present study is to extract the bioactive components from the whole plant of Tridax procumbens and to develop transdermal patch for healing wounds. To extract the bioactive compounds, ethanol is used as an extracting solvent. This study focused on identification of different phytochemical present in it and to determine the pharmacological activities expressed by this whole plant extract. The phytochemical screening reveals the presence of flavonoids, Alkaloids, and phenols. For determining the antimicrobial activity, disk diffusion method was performed against Bacillus subtilis, Staphylococcus aureus, Pseudomonas aeruginosae, E. coli and Candida albicans. The ethanolic extract showed better zone of inhibition against various organisms at 60, 80 and 100 µg/ml concentration. This whole plant extract also showed a good antioxidant activity as compared to standard i.e., ascorbic acid, it exhibits IC50 value of 19.62 µg/ml for DPPH assay and 79.90 µg/ml for FRAP assay. The patch has been formulated by using the necessary elements such as polymer, plasticizer, and penetration enhancer in a desired ratio. The patch has been validated to check its stability. The study reveals that the patch from whole plant extract shows better pharmacological activity, and it can be used in transdermal drug delivery system.

Keywords: Antimicrobial activity, Antioxidant, Transdermal Patch,

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OPTIMIZATION OF HERBAL MIX FOR TREATING SLEEPLESSNESS

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A frequent sleeping disorder called insomnia is brought on by trouble falling asleep, staying asleep, or getting non-restorative sleep. Bipolar disorder, anxiety disorders, and mental illnesses are other causes of insomnia. It is a new issue that impacts individuals of all ages these days. One of the most frequent and essential causes of insomnia is changes in lifestyle. It is possible to treat insomnia with minimal side effects by creating different herbal formulations using different parts of medicinal herbs. Optimization of different herbs was carried out using Design Expert Software, a linear programming method. The maximum and minimum concentration values will be given in the software. Based on the runs generated, the formulations were developed. The formulations were subjected to phytochemical screening to check the presence of various bioactive compounds. The compounds responsible for antidepressants and antianxiety activities. This enhanced release of melatonin helped to reduce stress and depression and eventually improved the quality of sleep. The potential efficacy of these herbal blends was further substantiated by the qualitative examination of phytochemical elements, such as phenolic, alkaloids, flavonoids, terpenoids, glycosides, and saponins. Using a seven-point hedonic scale, the sensory evaluation brought to light the tea's acceptability in terms of colour, appearance, flavour, taste, and texture. The herbal tea formulations show potential in the treatment of insomnia, providing a comprehensive approach with positive findings from sensory evaluations as well as bioactive ingredient screens.

Keywords: Insomnia, Herbal Beverage, Bioactive Compounds, Antidepressant, Antioxidant, Antianxiety, Sensory Analysis, Design Expert Software, Sedative.

50 SYNERGIC TREATMENT OF HERBAL CREAM FOR SKIN INFECTIONS

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Abstract

The skin problems of the bacterial, fungal are primarily controlled by antibiotics, Medicinal plants and herbs which are seemed to be candidate for the replacement of the conventional antibiotics for skin infections and allergic reactions. Research for the ideal dressing material continues as skin care professionals are faced with several challenges. The herbal remedies show high therapeutic potential and efficacy against the skin allergy and skin infection by microorganism. Herbal plants such as *Acalypha indica*, *Piper betle*, *Calotropis procera* and *Psidium guajava* were selected. Selected plant parts are dried and extracted using various combination of solvents like methanol, petroleum ether, and chloroform. Qualitative phytochemical analysis was firstly carried out to determine the possible active compounds in the herbal samples. The phytochemical screening reveals the presence of flavonoids, saponin, tanins, terpenoids and phenols and by using GC-MS analysis the Presence of different bioactive compounds were identified. As for the antimicrobial activity, disk diffusion method using cultures of *Staphylococcus aureus*, *Candida albicans* and were carried out. Since there is no detailed research on pharmacological activities of the leaf extract shows better antibacterial and antifungal activity.

Keywords: Antibacterial and Antifungal agents, Phytochemical screening and Bioactive compounds.

51 STUDY OF VACUUM PRESERVATION METHOD ON SHELFLIFE OF TOMATO (SOLANUM LYCOPERSICUM)

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Abstract:

This study investigates the efficacy of vacuum preservation method on extending the shelf life of tomatoes stored in Low-Density Polyethylene (LDPE) bags. Over a period of time, quality parameters including color, firmness, pH level, titratable acidity, and microbial growth, lycopene, Total soluble solids were analyzed at five-day intervals over a period of 40 days. The experiment aims to assess how vacuum preservation affects the degradation rate of tomatoes and whether it can maintain their quality for a prolonged period in Refrigeration condition. Results indicate that vacuum preservation significantly slows down the deterioration process, enhancing the shelf life of tomatoes compared to normal sealing method.

A STUDY ON PROBLEM FACED BY DIFFERENT AREAS OF EXPORT IN JAYASHREE FOOD PRODUCTS IN SALEM

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ABSTRACT

To investigate problems faced by food product exporters of India and propose solutions with the help of a questionnaire Design/Methodology/Approach: The data obtained for this study were prepared from primary and secondary data. Primary data was collected through questionnaires with exporters of food products in Kabul province. Part of the interview part was conducted face-to-face, and some of the answers were collected from interviewees through the mail. The secondary data was obtained from reliable national and international organizations' websites

INTRODUCTION

Meaning of Export Management:

Management is a term commonly used in every activity. It means planning, organizing directing controlling and coordinating the specific activity so as to achieve its objective. Such activity may be related to purchase, production, and marketing and as well export. Export management means conducting the export activity in an orderly, efficient and profitable manner. Since the heart of each of each business is marketing, export management can be termed as export marketing management. Because if need to be managed efficiently so that the export should increase and export should get more profit and importer should get more satisfaction. Therefore, export management activity is growth oriented and dynamic in nature. Export marketing management and domestic marketing management are to aspects of the same coin total marketing management. However, export marketing management is more difficult and complicated as compared to domestic marketing due to several factor

A STUDY ON ANALYSIS OF CONSUMER DECISION MAKING VARIABLES ON ZOMATO IN SALEM CITY

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ABSTRACT

Web assumes bit by bit a more pivotal part to associate data and individuals, the Pressure has kept on ascending on business sectors which have effectively utilized on the web administrations, and particularly on business sectors to which selling item son line is novel. The pattern of the retailing store is changing as a developing number of retailers are moving their from general physical retailing to new organizations like electronic retailing or e-retailing. Electronic shopping offers the best worth, extraordinary things and absolutely basic shopping. The achievement of any e-tailor association in India is reliant upon its commonness. Online shopping has obtained importance in the high-level business environment. The headway of web shopping for food has opened the doorway of a chance to give a high ground over firms. Online shopping has filled in noticeable quality throughout the span of the years basically as people imagine that it's fitting for the comfort of their home or workplace. In the new past, the web keeps a significant spot inside Monetary activity. As of now-a- days individuals show their benefit on the web. So this study attempts to inspect

A STUDY ON ANALYSIS OF CONSUMER DECISION MAKING VARIABLES ON ZOMATO IN SALEM CITY

INTRODUCTION TO THE STUDY:

Customer satisfaction is a term frequently used in marketing. It is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is defined as 'the number of customers, or percentageof total customers, whose reported experience with a firm, its products, its services exceeds specified