SOCIO-ECONOMIC IMPACTS OF SPIRITUAL TOURISM IN KANCHEEPURAM- A STUDY

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Abstract:

Tourism industry offers much scope for earning foreign exchange and it stimulates the rate of growth of the economy. Through interaction of natural, human and cultural factors, it functions as a major means of recreation. Spiritual tourism results from the recognition of a fundamental right of the human being to rest and leisure. This study analyses the economic impact of spiritual tourism in the study area. As the analysis has shown that the tourism industry does not create any negative impact in the study area the Government should come forward to develop religious tourism especially in the backward regions, which will directly help reduce the regional inequalities. Kancheepuram is one of the most important places for spiritual tourism among the state of Tamilnadu and it play a vital role in social and economical development of kancheepuram district.

Keywords: Tourism, spiritual tourism, Economic impact, Social Development.

Introduction:

Tourism is the movement of people to places away from their usual place of residence and work with a motive to relax their mind and refresh their body. In modern times, tourism is considered as one of the important industries, which contributes to the socio-economic development of a country. It also refers to the phenomenon and relationship arising out of travel and stay of non-residents. Tourism industry offers much scope for earning foreign exchange and it stimulates the rate of growth of the economy. It has become a factor contributing to individual betterment and mutual understanding among individuals and people. It has acquired cultural and moral dimensions, which must be fostered and protected against the harmful distortions. Tourism is made up of several industries, which offer myriad types of goods and services demanded by consumer-tourists. It is due to its size and scope, marked as one of the largest trades in the world. Despite its magnitude, tourism promotion, operation and foundation were not clearly understood by both public and private agencies. Tamil Nadu is absolutely unique as a tourism destination. Tamil Nadu flanked by a coastline on the east and the Ghats in the west, has topographical beauty, richness of resources, architectural, cultural and artistic glory. Besides there are numerous tourist spots like wild life parks, pilgrim centers etc. Foreign and domestic tourists' arrival in Tamil Nadu during 2016 was 34.85 crores, which included 34.38 crores domestic tourists and 47.20 lakhs of foreign tourists. The annual growth rate of the same has been quite considerable in the last 16 years, particularly up to 2014, while in the last two years, the annual growth rate has declined in both categories.

The tourism sector is an important social phenomenon in almost every society due to the basic human tendency to have new and memorable experiences concerning adventurous activities, learning, and amusement. Besides, there are several factors which motivate tourism such as socio-cultural, religious, and business activities. The basic human urge to know about unreached parts of the globe is an important factor which fosters tourism. In recent decades, improvement in knowledge domain, advances in technology, reductions in communication barriers, progress in transportation, and development in tourist-friendly facilities, have all contributed to growing tourism industry. Thus, it has been well understood that tourism can play a critical role in achieving inclusive and sustainable growth and development.

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Review Article

Polluting the Outer Space: Militarizing the Demilitarized Zone

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Abstract: The curiosity of humankind has made possible the exploration that accelerated a lot of discoveries and inventions. They are not only limited to the planet which we live on; they also step outside the limits of the earth; to the beyond called Space. This article aims to study the economics of space exploration; the benefits, advantages and contradictions it poses. During the cold war, both the superpowers escalated research in Space activities. By exploring Space, the human mind tends to think in different dimensions; space weaponization and space militarization just as on land and sea surfaces. The study aims to discuss how we contaminating the Outer Space through mustering.

Keywords: Space, Satellite, Research, Arms Race, Weaponization, Militarization, Exploration, Technology, Treaty.

INTRODUCTION

Since prehistoric times humans have had an enduring curiosity to understand what lies beyond something. What is over that next ridge, what is beyond that grove of trees, what is at the bottom of the waterfall, what land is on the opposite side of the ocean? This curiosity and the resulting exploration tested humanity in ways that required innovation. The invention of the wheel provided the means to build wagons to transport goods overland across large distances, which led to exploration beyond the sky. Let us discuss the boon and bane in the Space age which humans face.

Contradiction on Investing in Space

We are spending billions of dollars on sending things into Outer Space when we have some problems down here on the ground. Extreme drought, heat waves, and climate change. Over 3 billion people, nearly half of all humans on the planet are living in poverty. Millions of children are without access to education, important problems to focus on. Many viewpoints to question government and private company's policy to invest billions of dollars a year in Space exploration and research exist.

The reasons are Space exploration, and technology is an important and efficient way to understand how our planet is changing. It is the way we can bring our entire planet to the digital age. Moreover, it is our best strategy for ensuring the survival of the human species. So, Space exploration may not be the worst. It helps solve some of the most significant challenges humans have ever faced.

Origin of the Space-Age Era

When aerial technology gave birth to airplanes at the beginning of the 20th century, humans acquired the technical capabilities to reach the Space age. Today airplanes take up to 30,000 feet altitude, allowing us to fly above the clouds at nearly 600miles/hour. Halfway through the 20th century, we invented technology to go even further. Consequently, the satellite era began. The first artificial satellite had been launched at a low orbit area that extended 200 miles above the earth. Today, in the 21st century, over thousands of operating satellites orbit our planet, they service us daily with weather prediction, television programming, navigation, reconnaissance photography, radar imaging, and Space-based internet.

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Research Article

Antimicrobial Activity and Characterization of Pomegranate Peel-Based Carbon Dots

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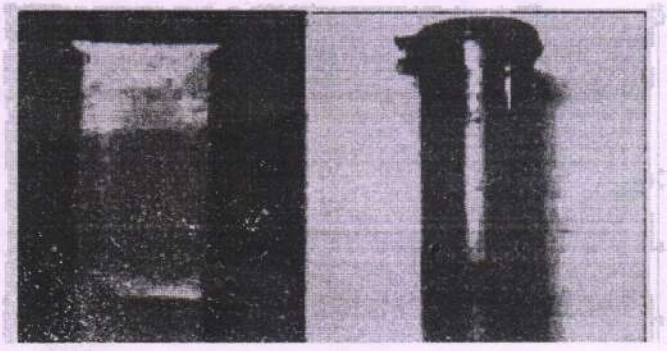
This investigation reports the use of agro-waste pomegranate peels as an economical source for the production of fluorescent carbon dots (C-dots) and their potential application as an antimicrobial agent. The carbon dots were prepared through low temperature carbonization at 200°C for 120 min. The obtained C-dots were found to be small in size and exhibited blue luminescence at 365 nm. Further, the synthesized C-dots were characterized with the help of analytical instruments such as DLS, UV-visible, FT-IR, TEM, and fluorescence spectrophotometer. Antimicrobial activity of the C-dot PP was estimated by the agar diffusion method and MIC. *S. aureus* and *S. pneumoniae* are showing susceptibility towards C-dot PP when compared to the standard and showing a moderate activity against *P. aeruginosa* and resistance towards *E. coli*. The obtained C-dot PPs were found to be around 5.9 nm in size confirmed from DLS analysis and supported by TEM. The synthesized C-dots were investigated to understand their microbial efficiency against pathogens and found to have antimicrobial efficiency. These results suggest that pomegranate peels are a potential source of carbon dots with antimicrobial efficiency.

1. Introduction

Nanoparticles (NPs) have become indispensable in biological research due to long-term fluorescence imaging and identification of their properties. Photobleaching resistance, improved signal brightness, larger absorption coefficients, light emission, and simultaneous stimulation of multiple fluorescence colours are just a few of the unique properties of QDs that make them indispensable [1]. Guan et al. created bright C-dots by using folic acid molecules as both nitrogen and carbon donors [2].

Carbon dots are promising oxygenous carbon nanoparticles that exhibit photoluminescence properties. These dots can replace quantum dots in semiconductor devices and some future nanodevices because of their high water solubility, tiny size (< 10 nm), intense brightness, high photostability, lesser cytotoxicity, and biocompatibility [3, 4]. The applications of carbon dots are diverse and found to be prolific in nature starting from pollutant detection to battery electrodes and markers [5–8]. However, the production of carbon dots involves tedious processes that are detrimental to the environment and ecosystems. The previously reported methods have many drawbacks such as the use of chemicals, high temperature, and low product yield. Researchers are always in search of new and better ways of producing C-dots [9]. In a growing number of publications, plant by-products such as exotic fruit by-products as a source of food additives, fruit by-product extracts as antioxidants



வைரமுத்துவின் கவிதைகளில் தொன்மப் பதிவுகள்

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பகுதி நேர முனைவர் பட்ட ஆய்வாளர்
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மேல்விஷாரம்

முன்னுரை

எழுதுபவரின் எண்ணம் படிப்பவரின் மனதில் உதிக்கும் வகையில் வரையப்படுவதே கவிதையாகும். கவிதைகள் மனதிற்கு மகிழ்ச்சியைத் தருவதோடு சிறந்த கருத்தை விதைக்கும் வகையிலும் அமையவேண்டும். வாழ்வைப் பிரதிபலிக்கும்போதுதான் கவிதைகள் சிறந்ததாகப் போற்றப்படுகிறது. மனச்சுமையிலிருந்து மனிதனை விடுதலை செய்வதாகவும் கவிதை இருக்கவேண்டும். இவ்வாறு பல கோணங்களில் கவிதைகளின் அமைப்பைப் பார்த்தாலும் கவிதைகளுக்கென்ற சில உத்திகள் கையாளப்படுகின்றன. அவ்வுத்திகளுள் ஒன்றே குறியீடுகளாகும். கவிதைகளில் கையாளப்படும் குறியீடுகளில் தொன்மக் குறியீடும் ஒன்று. தொன்மக் குறியீட்டின் வாயிலாக புதுக் கவிதையாளர்கள் கவிதைகளை சமுதாய நடப்பியலை தெரிவித்துள்ளனர். அவற்றில் கவிப்பேரரசு வைரமுத்துவின் கவிதைகளில் காணப்படும் தொன்மக் குறியீடுகளை இக்கட்டுரையில் காண்போம்.

தொன்மம் விளக்கம்

தொன்மமானது இலக்கியங்களை புதிய நோக்கில் ஆராய்வதற்குத் துணை செய்கிறது. இத்தொன்மமானது புதியதாக உதித்த எண்ணங்கள் அல்லது கதைகளை விமர்சனத்திற்கு அப்பாற்பட்டு ஏற்றுக்கொள்ளப்பட்ட நிரூபனமற்ற நம்பிக்கையாகவும் உள்ளது. ஒரு புதிய நிகழ்வினை விவரிக்கின்ற முயற்சியாகவே அமைகின்றது. மூல இலக்கியமானது வாசகனுக்குக் கற்பனையான உணர்வினையும் அனுபவத்தினையும் நல்கக்கூடியது. இவ்வனுபவத்தினைத் தரும் பொருட்டு ஓர் இலக்கியப் படைப்பானது மூலப்படிவங்களையும் தொன்மக்கூறுகளையும் தன்னிடத்தே கொள்ள வேண்டியது அவசியமாகின்றது. தொன்மங்கள் வெறும் பழங்கதைகள் மட்டுமல்ல அது சமூகம், சமயம், பண்பாடு போன்றவைகளை உள்ளடக்கியதாகும். இத்தென்மங்கள் தற்கால புதுக்கவிதைகளில் உத்திகளாகவே பயன்படுத்தப்படுகின்றது.

தொன்மம் சொல்

தொன்மம் என்ற சொல் 'மித்' (Myth) என்ற ஆங்கிலச் சொல்லிற்கு இணையாகத் தமிழில் மொழிபெயர்க்கப்பட்டுள்ளது. இச்சொல் கிரேக்க மூலச்சொல்லான 'மீத்தோஸ்' (mythos) என்ற இச்சொல் தமிழ் அறிஞர்களிடையே தொல்கதை, நாட்டுப்புறக்கதை, பழமரபுக்கதை, புராணக்கதை, தேவதைக்கதை என்று பலவாறு விளக்கப்படுகின்றது.

பண்பாட்டுப்பதிவே தொன்மம்

தொன்மங்கள் என்பவை பழங்காலத்திய புனைவுகள், தவறான புரிதல்களினால் உருவாக்கப்பட்ட கற்பனைகள் என்கிற கற்பிதங்களையும், வரையறைகளையும் ஒதுக்கவேண்டும். தொன்மத்தினை அறியாமைகளுடனும் மூடநம்பிக்கைகளுடனும் ஒப்பிடுவதைப் புறந்தள்ள வேண்டும். தொன்மங்கள் வெறும் கட்டுக்கதைகள் அல்ல அவைகள் மனித குலத்திற்கான கதைகள். பொழுது போக்கிற்காகக் கூறப்பட்டதல்ல. தொன்மங்கள் சமூகப்பண்பாட்டுப் பதிவாகவே அமைந்திருக்கின்றது. படைப்பாளிகளும் விமர்சனர்களும் அவரவர் கருத்துக்களை வெளியிட தொன்மங்களை மூலப்பொருளாகவே பயன்படுத்தியுள்ளனர்.

தொன்மம் இலக்கண விளக்கம்

தொன்மம் என்பது தொல்காப்பியர் காலத்தில் வாய்மொழியாகவே வளர்ந்த புராண இதிகாசக் கதைகளாகும் இக்கதைகள் பின்னர் மொழிக் கூறுகளாக மாறின.

"தொன்மைதானே
உரையொடு புணர்ந்த பழைமை மேற்றே"[1] என்று தொல்காப்பியர் எண்வகை வனப்புகளுள் ஒன்றாகத் தொன்மையைக் குறிப்பிடுகிறார். இதற்கு இளம்பூரணர், 'தொன்மையானது உரையொடு பொரந்திப் போந்து பழைமைத்தாகிய பொருள் மேல் வருவன. இவை இராம சரிதம், பாண்டவ சரிதம், முதலியவற்றின் மேல் வரும் செய்யுள்'[2] என்று இளம்பூரணர் விளக்கம் தருகின்றார். பேராசிரியர், 'தொன்மையென்பது உரைவிராஅய்ப் பழைமைவாகிய கதைப்பொருளாகச் செய்யப்படுவது என்றவாறு அவை பெருந்தேவனாரால் பாடப்பட்ட பாரதமும், தகடூர் யாத்திரையும் போல்வன'3 என்று உரைவிரவிய பழைமைக் கதைப்பொருள் என்கிறார். நச்சினார்க்கினியரும் பேராசிரியரைப் போலவே கூறிவிட்டுச் சிலப்பதிகாரமும் அதன்பாற்படும் என்கிறார். இவற்றிலிருந்து தொன்மம் என்பது உரைநடையில் அமைந்த பழங்கதை என்பதை அறியமுடிகின்றது. இப்பழங்கதைகளே காலப்போக்கில் தொன்மங்கள் என்ற வடிவில் கவிதைகளுக்கு உத்திகளாக அமைந்தன.

மேலை இலக்கியச் சொல்லகராதியில் 'மித்' எனும் சொல்லுக்குப் 'புராணக்கதை இந்திய மொழிகளில் குறிப்பாகத் தமிழிலும் வடமொழியிலும் உள்ள சமய நூல்களிலும் சமயக் கொள்கை விளக்கங்களிலும் நிறைந்திருக்கின்றது.' கடவுளர்கள், தேவர்கள், மக்கள், விலங்குகள் ஆகிய பலவகை உயிரினங்களையும் புனைந்து இப்போது படித்தால் நம்ப முடியாதது போல் தோன்றுகின்ற செய்திகளையும் நிகழ்ச்சிகளையும் கொண்டு இயங்குகின்ற பழைமையான கதைகளையே இது குறிக்கும்.'[4] என்று வை.சச்சிதானந்தன் விளக்கம் தருகின்றார்.

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Climate Change in Barbara Kingsolver's Homeland

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Abstract

Climate change is a vital topic explored throughout the world. Drastic change in the environment occurs from the deepest of the oceans to the exosphere, the end of the Earth's surface. Fictions including the environmental change or the disaster are categorized under Cli-fi or climate change fiction which reverberates through the fact of deforestation, encroachment of forest land, poaching and killing of the endangered species, using of pesticides and insecticide to food produced, increase in global temperature, and change in season. Homeland, a cli-fi novel is a collection of different stories focusing on human's ability to demolish, disintegrate and destroy the elements in nature.

Keywords: Cli-fi or Climate Change Fiction, Ecosystem, Seasonal Change, Transformation, Encroachment

1. Introduction

What will be Earth in another 10 years? What will be the future of our children? Will the animals be an artifact in the museum? What will happen to the trees and the forest? Will the snow of the Artic melt and engulf the land? These are anxious questions in the minds of the people when the topic climate change comes for an argument. Climate change is a pivotal theme of movies, television shows, social media, novels, fictions, plays, short stories and poems.

Climate change a burning topic dealt upon everywhere in the contemporary situation. Climate is the condition of the weather in measure of precipitation, temperature and intensity of wind recorded in a period of time. Change in these factors results in climate change, change in climate is an expression of a long-term processes. Reidy Chris, in his article talked about two categories of climate change "Natural Climate change" and "Anthropogenic Climate change". Natural climate change occurred due change in Earth's orbit, volcanic eruption, radiation and energy of the sun. Anthropogenic climate change happened due to the activity of people such as burning of fossil fuels, deforestation, and emission of greenhouse gases from the livestock farming. The greenhouse gases such as carbon dioxide, nitrous oxide, methane and fluorinated gases helps trapping the heat energy of the sun to create perfect livable condition it is defined as greenhouse effect. "The "greenhouse effect" because the principle is similar to a greenhouse, where the glass roof allows sunlight in but traps heat for growing plants."(Reidy 2016). The greenhouse gases were emitted beyond their average levels resulting in the global warming.

The global warming was responsible for the change in climate. Climate change and global warming went hand in hand together, the cause were drought, change in wind pattern, rainfall and snow, flood, heat waves, fire weather, change in season, migration of animals, thawing of the artic snow, change in plants life cycle, and increase in average temperature are the effects of global warming and climate change. Human activity such activity such as clearing the forest for agriculture and cities shrunk the forest lands and increased the emission of carbon dioxide in the atmosphere. The carbon dioxide emitted had less forest sink to absorb, and the emission of

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SHASHI DESHPANDE'S WOMEN WITH COURAGE, EMPOWERMENT & DETERMINATION

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Abstract

Shashi Deshpande is one of the famous Indian women novelists and a short story writer in English Literature, who raises her voice for women's sufferings and struggles, faced by the Middle-Class women in the Society. The purpose of this paper is to focus on how women in the modern society stands for their Courage, Empowerment and Determination. Basically women are strong in taking decision and their firmness of mind depends on the difficulties faced by them. She narrates that the women to take her different role as a working woman, educated and uneducated women, home makers, mother, daughter, daughter-in-law and even successful politicians. Though she is a feminist, she respects the opposite gender and emphasis that the women should be treated equally. Most of her writings focus on the women who are timid, courageous, determined, dependent and independent and who also shows love, sacrifice, self-esteem. Her writings focus on the women who search for the self- identity, her problems in the patriarchal society are bound both between tradition and modernity.

Keywords: *empowerment, courage, determination*

Introduction

Shashi Deshpande is one of the prominent Indian novelist and a short story writer. Her works concentrate on the theme of woman's struggle against the cruel and callous patriarchy. This article focuses on the women protagonist in the three stories where life circumstances condition reveals the Courage, Determination and Encouragement.

Deshpande's aim is to bring out the women's potential through her short stories. Many of her short stories reflects that women Empowerment, Courage and Determination. She proves that women can stand like men through her writings under the patriarchal society.

Kamalakar observes that Deshpande's novels usually have women as protagonists, and this has led the reader to call her a 'feminists'. However, this label has been constantly emphasized by Deshpande herself. It is true that her appeal lies in the feminist themes. Her stories are nothing but emphatic pictures from feminist points of view. She feels, women must not be reduced only to the level of a breeding machine, she told in an interview: "I have a very strong feeling that until very recently women in our society have been looked upon a breeding animals. They have no other role in life. I have a strong objection to treating any human being in that manner." Kamalakar

Deshpande's portrayal and projection of strong intelligent, educated, working, urban, middle class Indian women who have the courage and confidence to speak out, who introspect and present condition of woman in India at large, and who emerge as a 'New' woman in the patriarchal set-up of Indian family and society, has been appealing the readers since

Crowdsourcing a technique to Sustain in Educational Industry

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Abstract

Education, which plays an important and corrective role in balancing the country's socio-economic framework, is at the heart of Human Resource Development [1]. Education is the foundation of our wisdom, character, ethics and radical development in our personal development and in promoting our complete society. It is a vital source of information and aids in the improvement of learning quality. Today, the pandemic period has changed the delivery methods of teaching and learning. Sustainability of educational industry is a question mark starting from small tutoring institutes to larger universities in India. This paper attempts to review Crowdsourcing (CS) as a remedy for these institutes to sustain in this pandemic period and as well to adopting digital platforms to facilitate teaching and learning cost-effectively and efficiently [2] [3]. Like Indian Government, all institutes aim to make education accessible to everyone. However, we are still in the early phases of framing policies which involves a balance of academics and extracurricular activities. The initial steps toward adopting crowdsourcing as a formal learning and teaching method have been taken by many private institutes in India [4]. It is necessary to build a solid framework that incorporates ethical and legal factors. It has the potential to be a very useful and dependable educational paradigm if it is correctly conceived and implemented. It has the potential to have a significant impact on educational technology applications [5]. Over the next few years, it may become a new paradigm in educational technology development. Practitioners and researchers must continue to investigate the innovative use of crowdsourcing in education. The possibilities of crowdsourcing in both government and private institutes have to be examined. A proper taxonomy helps to identify the contribution of crowdsourcing to education and to improve educational performance [6]. Researchers can also utilize taxonomy to characterize and categorize current and prospective initiatives. Despite the urgency of it, empirical investigations and theoretical knowledge structures are lacking. The crowdsourcing concept can have a major effect on educational technology applications as it brings a novel method to the creation of educational systems through outsourcing to a great number of external system developers or persons. CS benefits education in four ways: educational content development, practical experiences, complementary knowledge exchange and feedback enhancement. This paper systematically reviews the available sustainability ways for educational institutes through CS, IT platforms and learner motivators. Conventional Institutions, Open Online Institutions and Individual Educators shall be able to identify their methodology to deliver the content to the learners. In order to take use of the opportunities presented by CS, educational institutions currently lack the information, skills, and understanding necessary to develop a crowdsourcing-enhanced learning and teaching strategy that is effective. Taxonomy assists them in determining which aspects of crowdsourcing can be beneficial to education. While this is happening, it also assists researchers in distinguishing between existing and future CS

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Smart Portable Cardiac Monitor using Lab view Application

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ABSTRACT:

In this generation, the ageing population seems to be on an upsurge which causes many ailments associated with adulthood, primarily Dementia and Alzheimer's disease, other than this, there is generally a prime need for overall elder care also for the elderly who are active and healthy at that moment due to their age factor. Due to this scenario, there is a major requirement for constant monitoring, support and assistance for them, which ultimately causes a substantial burden financially on individuals like their family and their caregivers. Lab VIEW is the software used since it is a platform which allows easy GUI interface for monitoring of various physiological parameters which is necessary for the wellness of the patient. The main objective behind this work is to design a continuous real time elderly patient monitoring and alert reminder System using Lab VIEW, which allows us to continuous monitor and remind a patient and also help the doctors to arrive at a clearer diagnosis. This paper presents software implementation of system for house automation using Lab VIEW.

Keywords. Lab VIEW, Alert, Reminder, Dementia, Monitoring, Temperature, DAQ, Gas sensor, Automation, Alarm, Calendar.

Introduction Dementia is not a disease or a disorder but rather it is a variety of conditions all together. It causes a person to lose their memory, causes disorientation, cognitive disability and affects the ability to perform daily activities and tasks. There are about 50 million dementia sufferers worldwide, with 9.9 million cases reported per year [6]. They find it challenging performing basic chores including their day-to-day activities including medication timings and appointments. Memory loss is the primary defect when a person is affected by dementia. It is a serious symptomatic condition where Alzheimer's disease is also

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Low-cost Portable Heart Rate Monitoring Module

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ABSTRACT

In this device we measure the pulse rate of the individual. Any wearable device or electronic gadgets work by using battery or external power supply but in temperature-powered, heart rate monitoring systemphysiological signal sensing device not required any external power source or batter forworkingof device. By using thermoelectric principle converting heat energy into electrical energy is enough to power the device and also using temperature sensor we can identify the pulse pressure variation.

INTRODUCTION

Normal pulse measuring device work by the absorption of infrared light by the oxygenated blood but the same infrared light is not absorbed by deoxygenating blood.so based on that we can tell the oxygen saturation level in the arterial by placing infrared light source and its light detector we can calculate the variation in the pulse level by using external power source or battery. But TEMPERATURE-POWERED PULSE SENCING DEVICE consist a dynamic change by altering the way of measuring pulse without using battery. By electric power is harvested from the body heat like placing sheet like material on the skin above the arterial blood flow region made up withceramic substrate beryllium oxide, alumina and aluminum nitride. Charge exchange between heat and cool layer. It consist altered p and n type semiconductor elements so

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Detection of Covid 19 by CT imaging using Artificial Intelligence application

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ABSTRACT

The pandemic-causing sickness began in the Hubei territory in Wuhan, China, in December of 2019. They were identified as SARS-CoV-2, a highly contagious, readily transmissible virus that has been responsible for an increasing number of fatalities throughout the globe. A testing approach termed as RT-PCR may be used to detect the 2019 new Covid-19 (SARS-CoV-2). For the time being, this method is widely used to detect infection. The imaging modalities are used for situations ranging in severity from asymptomatic to fundamental. A person infected with COVID-19 may have mild hacking, fever, chest pain, weakness, and other symptoms. A person suffering from a severe fundamental sickness requires basic attention. During the flare-up, imaging has become more important, with CT being a superior alternative than invert transcriptase-polymerase chain reaction tests. A multitude of gadgets and solutions have been proposed to enhance contactless service for people using artificial intelligence and robots. The display of AI technology might be a significant benefit for patients who need to be treated without having to come into touch with them. Without any human engagement, information technology and artificial intelligence may solve the testing and tracking system. CT imaging technologies allow radiologists and clinicians to examine the form, size, thickness, and surface of interior structures, which might aid in the early detection of asymptomatic patients. This extensive data may be used to determine if there is a clinical issue, determine the scope and precise region of the problem, and unearth other important factors that will aid the doctor in determining the best therapy.

Keypoint:Coronavirus,Contagious,ArtificialIntelligence, CTimaging,RT-PCR.

INTRODUCTION

In 2019, the SARS-CoV-2 outbreak began in Wuhan, China. Before the WHO reclassified it to COVID-19, it was referred to as the 2019 new coronavirus. It has spread all across the globe, resulting in pandemics. It's classified as a respiratory infection. People in their eighties

The Preamble of Indian Constitution; A Conglomerate of Ideologies and Principles

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Abstract

The Preamble of Indian Constitution is an exemplary of its kind. It depicts the summary or essence of the entire Constitution. It is not only representing our Constitution but also serves as the identity card for India.The Preamble of Indian Constitution can be rightly described as a conglomerate of ideologies and principles because of its lofty composition. It reveals three ingredients of exemplary nature; source of authority of the Constitution, nature of Indian state and objectives of the Constitution. Perspectives of various ideologies and principles in the Preamble are analyzed with a broad perception.

Keywords: Preamble, Constitution, Objectives, Equality, Justice, Liberty, Fraternity, Socialist, Secular, Democratic, Republic, Rights, and etc.

Introduction

The Constitution of USA is the first of its kind to begin with a Preamble which literally means preface or introductory part. It depicts the summary or essence of the entire Constitution. Preamble plays a significant role in the Constitution of India which is the longest written one in the world. It was based on the *Objective Resolutions* drafted and placedby Jawaharlal Nehru, the first Prime Minister of Independent India, which was unanimously passed and adopted by the Constituent Assembly. It has been amended only once since its

Magnetohydrodynamic and Heat Transfer Impacts on Ferrofluid Over a Rotating Disk: An Application to Hard Disk Drives

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The motivation behind this article is to explore the impacts of heat transfer, magnetohydrodynamic, and hall current on two-dimensional incompressible nanofluid flow over a rotating disk. The nanofluid model utilized in the present investigation comprises the nanoparticle fraction model. Two sorts of nanoparticles to be specific Hematite (Fe_2O_3) is the principal source of iron and Cobalt alloy (Co64 Cr30 W6) is generally used metal alloy that is primarily Cobalt and Chromium with base fluid Motor Oil 10W30 is taken into consideration. The Prandtl number identifying with motor oil is ($Pr = 1531.92$). The governing equations are reduced to a system of ordinary differential equations by using Von-Karman transformation and then solved numerically utilizing MATLAB *bvp4c. Impacts of the magnetic field, hall current, and nanoparticle volume fraction on tangential, radial velocities, and temperature profiles have been examined. Numerical outcomes have been acquired for various physical parameters through graphical representation. We have demonstrated that a remarkable reconciliation exists among the current outcomes and those in the literature for various values of magnetic parameter and velocity slip parameters, in the absence of other parameters. It is also found that radial and tangential velocities increase more in the case of Fe_2O_3 nanoparticles when compared with Co64 Cr30 W6 because of density variations. It is discovered that enhancement in a nanoparticle volume fraction reduces the heat transfer rate. It can moreover be clarified such a way that as the nanoparticle volume fraction raise, the density of nanoparticles increases, temperature also increases subsequently heat transfer rate decreases. This result keeps more cooling for the hard disk drives and might be intrigued for engineers.* [DOI: 10.1115/1.4047007]

Keywords: ferrofluid, heat transfer, hall parameter, magnetohydrodynamic (MHD), thermal systems, thermophysical properties

1 Introduction

Ferrofluid is a remarkable material that exhibits like a magnetic solid and like a liquid. Ferrofluid is composed of microscopic, nanometer-sized particles of coated magnetite suspended in a liquid. Ferrofluid acts like a liquid when there is no magnet around. But when there is a magnet close by, the particles are temporarily magnetized. In ferrofluid, the size of the nanoparticle is less than 10 nm. Ferrofluids have high thermal conductivities and their heat transfer properties are used in industries. Ferrofluids are used in electronic devices, loudspeaker, spacecraft, lamps, clocks, and household devices. It also used to form liquid seals around the spinning drive with a rotating shaft in hard disks.

The ferrofluid flow owed to a rotating disk within the presence of an external magnetic field is accompanied by the interlacing of magnetic and hydrodynamic interactions. The fluid is exposed to a magnetic force and torque in the presence of an applied magnetic field. The examination of external magnetic field impacts has noteworthy applications in material science, science, and engineering. The flow dynamics because of a rotating disk is a widely identified research region, which has its source long back. The significance of the rate of heat transfer from a rotating body can be learned in instances of different types of equipment, for example, computer disk drives Herrero et al. [1] and gas turbine rotors Owen and Rogers [2].

An enormous number of the assessments gave a record on disk-shaped bodies without or with heat transfer considering various flow conditions as they encountered in numerous applications, for instance, such as rotating heat exchangers, rotating disk reactors for bio-fuels production, computer disk drives, gas or marine turbine. Karman [3] first depicts similarity transformations that enable the Navier–Stokes equations for an isothermal impermeable rotating disk to be reduced to a system of coupled ordinary differential equations. Andrews and Anjali Devi [4] studied the effects of nanofluid flow over a rotating disk with prescribed heat flux. They determined that the Prandtl number reduces the temperature for increasing the values of Cu–water nanofluid. Ram and Sharma [5] considered the impacts of rotation and magnetic field-dependent (MFD) viscosity on ferrofluid flow with a rotating disk. They found that expansion in magnetic field intensity enhances the boundary layer thickness. Bhandari and Kumar [6] analyzed the effects of the magnetic force on ferrofluid flow due to a rotating disk in the presence of an external magnetic field. They noticed that raise in magnetic field intensity influences the velocity profile. Mustafa [7] contemplated the impacts of magnetohydrodynamic (MHD) nanofluid flow over a rotating disk with partial slip effects. His studies concluded that radial, axial, and azimuthal velocities are diminishing functions of both magnetic field strength and velocity slip parameters.

Imtiaz et al. [8] examined the effect of slip flow by a variable thickness rotating disk subject to magnetohydrodynamics. Their results show that higher velocity slip parameters, transport of momentum is less which decays the radial and tangential velocities. Some examinations about the Ferrofluid flow over a rotating disk are reported by Turkyilmazoglu [9], Sheikholeslami et al. [10], and Bachok et al. [11]. MHD forced convection flow of a nanofluid adjacent to a non-isothermal wedge was studied by Chamkha and Rashad [12].

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Research Article

Antimicrobial Activity and Characterization of Pomegranate Peel-Based Carbon Dots

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This investigation reports the use of agrowaste pomegranate peels as an economical source for the production of fluorescent carbon dots (C-dots) and their potential application as an antimicrobial agent. The carbon dots were prepared through low-temperature carbonization at 200°C for 120 min. The obtained C-dots were found to be small in size and exhibited blue luminescence at 350 nm. Further, the synthesized C-dots were characterized with the help of analytical instruments such as DLS, UV-visible, FT-IR, TEM, and fluorescence spectrophotometer. Antimicrobial activity of the C-dot PP was estimated by the agar diffusion method and MIC. *S. aureus* and *K. pneumoniae* are showing susceptibility towards C-dot PP when compared to the standard and showing a moderate activity against *P. aeruginosa* and resistance towards *E. coli*. The obtained C dot PPs were found to be around 5-9 nm in size confirmed from DLS analysis and supported by TEM. The synthesized C-dots were investigated to understand their microbial efficiency against pathogens and found to have antimicrobial efficiency. These results suggest that pomegranate peels are a potential source of carbon dots with antimicrobial efficiency.

1. Introduction

Nanoparticles (NPs) have become indispensable in biological research due to long-term fluorescence imaging and identification of their properties. Photobleaching resistance, improved signal brightness, larger absorption coefficients, light emission, and simultaneous stimulation of multiple fluorescence colours are just a few of the unique properties of QDs that make them indispensable [1]. Guan et al. created bright C-dots by using folic acid molecules as both nitrogen and carbon donors [2].

Carbon dots are promising oxygenous carbon nanoparticles that exhibit photoluminescence properties. These dots can replace quantum dots in semiconductor devices and some future nanodevices because of their high water solubility, tiny size (<10 nm), intense brightness, high photostability, lesser cytotoxicity, and biocompatibility [3, 4]. The applications of carbon dots are diverse and found to be prolific in nature starting from pollutant detection to battery electrodes and markers [5–8]. However, the production of carbon dots involves tedious processes that are detrimental to the environment and ecosystems. The previously reported methods have many drawbacks such as the use of chemicals, high temperature, and low product yield. Researchers are always in search of new and better ways of producing C-dots [9]. In a growing number of publications, plant by-products such as exotic fruit by-products as a source of food additives, fruit by-product extracts as antioxidants

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Structural and Optical Properties of Dy^{3+} Doped with an Eulytite Type $NaBaBi_2(PO_4)_3$ Phosphor for White Light Emitting Diodes

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A series of $NaBaBi_{(2-x)}(PO_4)_3:xDy^{3+}$ eulytite type phosphors with varying doping concentrations were synthesized using a conventional solid-state reaction. The crystalline nature and phase formation of the phosphor were confirmed by the PXRD technique. FESEM was used to examine the surface morphology. UV-DRS measurements were used to quantify the band gap of the host and Dy^{3+} ion doped phosphors. The phosphors' photoluminescence properties were thoroughly investigated. According to the excitation spectra, these phosphors show a strong absorption band in the near-ultraviolet (NUV) region, extending from 250 to 450 nm. Under the excitation of 352 nm, the peaks of the emission spectra of Dy^{3+} ions are located at 485 nm (blue), 575 nm (yellow) and 666 nm (red), corresponding to the magnetic dipole $^4F_{9/2}\rightarrow{}^6H_{15/2}$ transition, the electric dipole $^4F_{9/2}\rightarrow{}^6H_{13/2}$ transition and the $^4F_{9/2}\rightarrow{}^6H_{11/2}$ transition. The optimal concentration of Dy^{3+} doped phosphor is $x = 0.075$ and the major concentration quenching mechanism is accomplished by energy transfer between the nearest-neighbour ions. The critical transfer distance (R_c) is estimated to be about 19.01. The Commission International del' Eclairage (CIE) of $NaBaBi_{1.925}(PO_4)_3:0.075Dy^{3+}$ phosphor was calculated to be ($x = 0.341$ and $y = 0.374$), which was very close to the "ideal white" ($x = 0.33$, $y = 0.33$). Present findings suggest that the phosphor might be a viable option for producing a white-light-emitting phosphor under NUV activation.

Keywords: Phosphor, Eulytite, Chromaticity coordinates, Activators, Phase formation.

INTRODUCTION

In present solid state lighting research domain, the need for phosphor converted white light emitting diodes (WLEDs) has driven researchers to design revolutionary phosphors with adequate host matrix doped with suitable activators [1]. Light-emitting diodes (LEDs) have received significant attention as illuminating light sources and components in display systems since the introduction of WLEDs in the 1960s [2]. The lighting industry is actively focusing on WLEDs, also regarded as the next generation of solid-state lighting (SSL) [3]. In recent years, WLEDs have gotten a lot of attention in comparison to traditional light sources like incandescent and fluorescent lamps because of their benefits like low energy consumption, higher rendering index (CRI), reliability, higher luminosity efficiency, longer lifetime, energy-saving qualities and environmental friendliness [4,5].

According to solid state lighting research, low cost and ease of preparation are essential criteria in phosphor synthesis. As a consequence, choosing the most excellent host from a plethora of options such as silicates, sulphates, phosphates, nitrates and vanadates is critical. Phosphors based on phosphate host matrices have become a major research area due to their wide variety of applications in lighting and displays. Phosphate based phosphors have a number of benefits, including a low cost, a high luminous efficiency, a low sintering temperature, a big band gap, greater thermal and chemical stability over a wide range of temperatures and a straightforward synthesis procedure. On a variety of phosphate based hosts, a number of phosphate based compounds with the generic formula $A^{I\text{-}IV}{}_4[XO_4]_3$

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Removal of Copper(II) Ion using Nanochitosan/Carboxymethyl Cellulose/Grapheme Oxide Composite Biosorbent

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The present study aimed to prepare a novel biosorbent of nanochitosan (NCS)/carboxymethyl cellulose (CMC)/graphene oxide (GO) and used to remove Cu(II) ion from wastewater system. The prepared nanocomposite was characterized using FTIR, XRD and SEM analysis. The FTIR and XRD results revealed the formation of novel NCS/CMC/GO nanocomposite. Rough surface morphology of nanocomposite was confirmed from the SEM analysis results. The removal efficiency of Cu(II) ion was evaluated through batch mode by varying pH, adsorbent dose, contact time and initial metal ion concentration. The maximum removal of Cu(II) ion was 80.1% at pH 4, 92.4% at 360 min contact time and about 89.2% for 3 g adsorbent dose. Theoretical models such as Langmuir isotherm, Freundlich isotherm, and kinetics models were used to evaluate the experimental results. After examining, the results revealed that the adsorption follows Freundlich isotherm and pseudo-second-order models. The adsorption capacity of the prepared nanocomposite was 145.22 mg/g.

Keywords: Ternary composite, carboxymethyl cellulose, Graphene oxide, Nanochitosan, Batch adsorption.

INTRODUCTION

Toxic heavy metal ion pollution had become today's one of the most severe environmental problems issue. Owing to the augmented urbanization and substantial industrialization activity, huge amounts of toxic organic or inorganic pollutants are released regularly into water resources [1]. Being non-biodegradable, especially the toxic heavy metal ions are most biologically dangerous. They will aggregate in living tissues, thereby undermining human well-being and marine biological systems; hence, its discharge as effluent should be controlled [2,3]. An assortment of the advanced treatment process and procedures were proposed and used to dispose of heavy metals from contaminated water. Many treatment technologies were introduced by several researchers and among them, the adsorption method was found to be the most efficient one [4,5]. When the biomaterials are used for the adsorption process, adsorption can be termed biosorption. For biosorption, numerous agro- and marine wastes were used. Activated carbon [6], biopolymer [7-9] and fly ash [10,11] were used as good adsorbents.

Among the various biopolymers, chitosan with $-NH_2$ and -OH functional groups have high binding potential towards metal ions, thereby widespread use as a good biosorbent for treating wastewater [12,13]. According to the literature, it was reported that biosorption using chitosan was through chelate formation, which mainly depends on the pH of the metal ion solution. This excessive sensitivity of chitosan to pH can make it gel or dissolvable [14]. Hence, to overcome such challenges, the modification of chitosan is required. It can be done chemically or physically through blending and cross-linking using glyoxal, formaldehyde, glutaraldehyde, isocyanates [15-17], and sodium tripolyphosphate as cross-linking agents to develop the properties of chitosan.

Chitosan nanoparticles are generally prepared by the simple cross-linking method and widely used in fields including pharmaceutical, water treatment, sensors, packaging materials and catalyst due to its nano-size, large surface area and biocompatibility [18,19]. Hence, based on the literature survey in the research work, it aimed to prepare nanochitosan by ionotropic gelation technique and is considered one of the components