INDIAN NATIONAL SCIENCE ACADEMY, NEW DELHI

CHHATTISGARH COUNCIL OF SCIENCE & TECHNOLOGY, RAIPUR (CCOST)

SPONSORED

INTERNATIONAL CONFERENCE-2022

ON

INNOVATION AND CHALLENGES IN NANOSCIENCE AND NANOTECHNOLOGY

PAST PRESENT & FUTURE

15-16 December 2022

IJPSR

INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH

ABSTRACT PROCEEDING IN INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH

(ABSTRACTING IN SCOPUS INDEX)

ORGANIZED BY

SANJAY RUNGTA GROUP OF INSTITUTIONS

Rungta Knowledge City, Kohka-Kurud Road, Bhilai (C.G.) - 490024

INTERNATIONAL CONFERENCE-2022

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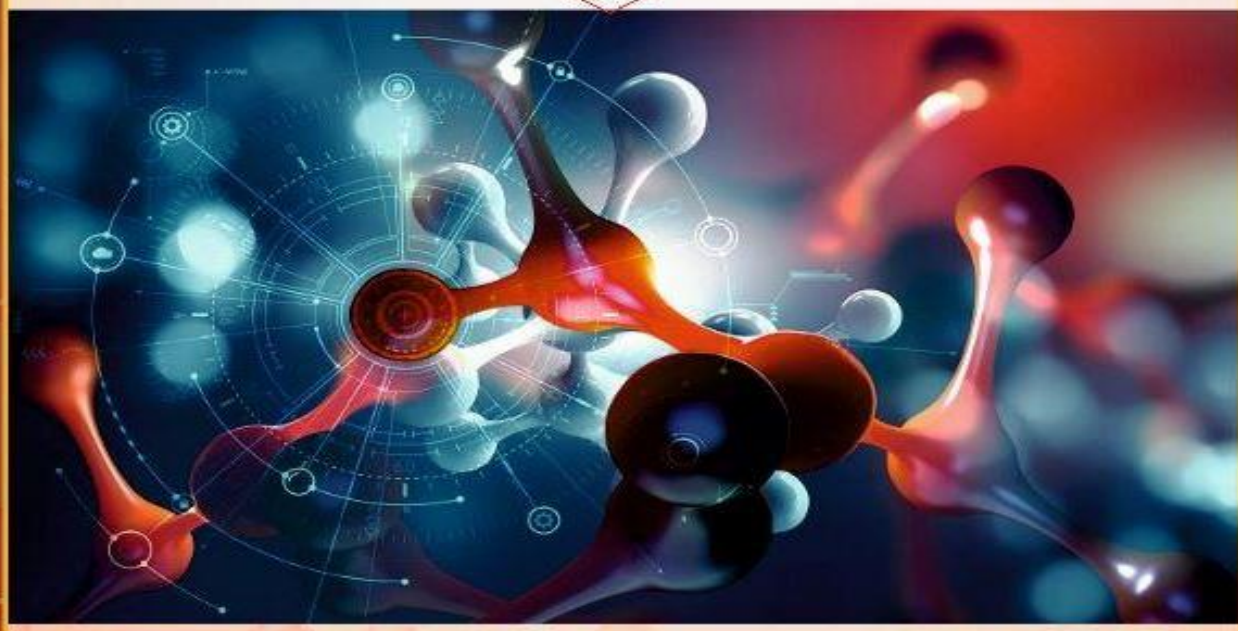

ORGANIZED BY

SANJAY RUNGTA GROUP OF INSTITUTIONS

Rungta Knowledge City, Kohka-Kurud Road, Bhilai (C.G.) - 490024

ABOUT SRGI :

Sanjay Rungta Group of Institutions has demonstrated how single minded dedication, focused perseverance, commitment and never-say-die attitude of the management together with the zeal and dedication of the faculty and the support of well-wishers can not only help build an institution, but also ensure that it consolidates, grows and sprouts into a dynamic power emerging as a leading and the most preferred destination for quality education by students from all over the country and abroad. Rungta colleges offers a plethora of choices to prospective students who wish to pursue professional courses and have a flourishing career making it the best college in Chhattisgarh

ABOUT INSA :

The Indian National Science Academy was established in January 1935 with the object of promoting science in India and harnessing scientific knowledge for the cause of humanity and national welfare. The foundation of the Academy, earlier known as the National Institute of Sciences of India (NISI), was the outcome of joint endeavours of several organizations and individuals and the Indian Science Congress Association (ISCA) playing a leading role in this regard.

ABOUT CCOST :

The Chhattisgarh Council of Science & Technology (CCOST) was established in January 2001 under the aegis of Department of Science and Technology, Government of Chhattisgarh (C.G.) for develop scientific temper, build capacity of intellectual inquiry and keen observation among people, especially targeting the younger generation. It is an autonomous body, which has been registered under the M.P. Societies Registration Act 1973.

OBJECTIVE OF CONFERENCE :

The main objective of this conference is to provide an interdisciplinary platform for interaction between industry, academia and research professionals and to discuss all the aspects of Nanotechnology.

THEMES AND SUB THEMES :

The presentation should be focussed on the following areas (but not limited to)

- Medicinal Science/Medicinal Devices
- Drug Delivery/Drug Design
- Pharmacological/Toxicology
- Pharmacy Practice
- Research In Nursing Services/ Practices/Administration
- Dental Practice
- Education/Profession
- Biotechnology
- Engineering
- Other Areas of Sciences

PAPER SUBMISSIONS:

Abstract are invited for Oral presentation/ Poster presentation/ E-Poster presentation.

ABSTRACT SUBMISSION:

Abstracts should be written in English, not exceeding 250 words. The abstract should include title (12pt. bold, uppercase, Times New Roman,), Author(s) and affiliation (12pt. sentence case, Times New Roman) and text (single spaced, 11pt., Times New Roman). Presenter's name should be followed by asterisk (*). Abstract should be sent to **icnn2022@rungtacolleges.com** by 10.12.2022.

POSTER :

Poster size should be 4x3 feet. E-Poster Presentation: Electronic poster/E-poster are similar to traditional paper poster but displayed electronically. Only one power point slide is to be prepared by author. Slides should be made according to the template (will be sent with acceptance letter or can be downloaded from our website).

ORAL PRESENTATION :

Participants would be allowed 10 minutes time for their presentation.

REGISTRATION DETAILS :

REGISTRATION FEES

Student/Research Scholar - ₹1000
Academicians / Industrialist / Clinicians - ₹1500
Foreign Participants - $50
Spot Registration - Additional ₹500 on above mentioned fees.

PAYMENT MODE

- **Demand Draft : should be made in favour of "Rungta Institute of Pharmaceutical Sciences & Research" payable at Bhilai.**
- **Online Payment**

Scan here for Online Registration & Payment

VENUE : Auditorium, SRGI Campus, Bhilai, Chhattisgarh, 490024.

ACCOMMODATION :

Accommodation in star category hotels will be provided to outstation delegates on the request made before 10th Dec. 2022.

IMPORTANT DATES :

Abstract Submission : 5th Dec. 2022
Acceptance notification : 10th Dec. 2022
Early Registration : 10th Dec. 2022

AWARDS AND PRIZES :

Best Paper
Best Poster / Best E-Poster

PUBLICATION : Selected papers from the conference will be considered for Publication in the reputed **SCI/SCOPUS** Journals.

REGISTER EARLIEST TO BOOK YOUR SEAT

CONFERENCE SECRETARIAT

CHIEF PATRON

Mr. SANJAY RUNGTA
CHAIRMAN (SRGI)

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Dr. SAKET RUNGTA
DIRECTOR (SRGI)

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DIRECTOR ACADEMIC (SRGI)

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ORGANIZING SECRETARY

Mr. GYANESH KUMAR
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CO-CONVENERS

Dr. LOKESH SINGH
ASSOCIATE PROFESSOR (RSR RCET)
DEAN ACADEMIC

Mr. ARPAN DEY
ASST. PROF. & HOD (RCST)

ORGANISING INSTITUTIONS

- Rungta Institute of Pharmaceutical Sciences & Research
- Rungta College of Science & Technology
- RSR Rungta College of Engineering & Technology
- Rungta College of Dental Sciences & Research
- Rungta Institute of Pharmaceutical Sciences
- Rungta Institute of Science & Management

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  Scientist Coral, Germany
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- **Mr. Ashish Giri**
  Assistant Professor, Nasser Vocational Training Centre, Kingdom of Bahrain

CONTACT DETAILS

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Mobile: +919907749963, +919691336735
Rungta Knowledge City, Kohka-Kurud Road,
Bhilai (C.G.) - 490024

SCAN TO NAVIGATE

From the desk of Chairman (Chief Patron)

I am extremely pleased to welcome you to the 1st International Conference 2022 on Innovation and Challenges in Nanoscience and Nanotechnology. This year's conference witnessed the participation of students along with the professionals and it was a pleasing experience. This completes the cycle as we will henceforth host the conference jointly for students and professionals who may be researchers, developers and practitioners in nanoscience and nanotechnology.

I strongly believe that education is a collaborative effort that involves professional administrators, committed teachers and motivated students. We dedicate ourselves as professional administrators in creating a dynamic education programme empowering the students in a global perspective. Open mindedness, a multicultural orientation, independence, a global outlook, multiple intelligences and abilities – these are the premium qualities needed today.

"It is not the will to win, but the will to prepare to win that makes the difference".

Once again, we want to thank the individuals and organizations who contributed to the success of this conference. We are grateful to CCOST and INSA New Delhi for shouldering the financial responsibility for this conference. Members of the steering and global organizing committees provided a laudable organizational support to advance the conference. The track chairs and various reviewers deserve our thanks for appraising the papers for their suitability.

A hearty thanks to all my college colleagues, who one way or the other influenced the completion of this project. In all, I am particularly thankful to all participants who graced this conference with their contributions, and wish at this juncture to invite everyone.

Shri. Sanjay Rungta, Chief Patron, SRGI

From the desk of Director

It gives me immense pleasure and privilege to welcome you all for the 1st International Conference 2022 on" Innovation and Challenges in nanoscience and nanotechnology " during 16 and 17 dec 2022.Sanjay Rungta group of Institutions takes the pride Of arrange this conference with the support of CCOST and INSA New Delhi . The main objective of the conference is to provide platform to researcher, scholars and technocrats, to share and exchange their views, knowledge and their achievements in the field of nanoscience and nanotechnology. It will help in identification and promotion of R&D activities at the individuals as well as at institutional level with world networking.

I congratulate all the delegates for having chosen this platform to present their research finding. We are sure this conference would offer numerous exciting talks on cutting edge innovation for the research community.

I wish all the delegates fruitful deliberations and happy stay at SRGI. May this event be an insightful and educational experience for all those who participate in this wonderful occassion.

I wish the conference a grand success!

09/12/22

Dr. Saket Rungta, Patron, SRGI

From the desk of Academics

It gives me an enormous pleasure in penning down this foreword for the Proceedings of International Conference on Innovation and Challenges in Nanoscience and Nanotechnology organized by Sanjay Rungta group of Institutions. In continuation of our policy to lead the flash Light of research, novel concepts, Ideas are spread through various technical events .This conference is one such event which aims to bring researchers, technocrats and scholars with innovative views under one roof in the field of nanotechnology.

Further, the incredible response from various researchers and academicians from India and Abroad in terms of the quality of the research paper shows that innovation is here to stay and will be a De-facto standard for industries and educational insttute. I am buoyant delegates and participants will relish moment of finery of novel concepts presented in this conference to strength their research work toward next best level. I convey my best wishes for this conference and hope this conference will lay new milestones in researches and novelthoughts and am sure this will be morals booster for future conference to come.

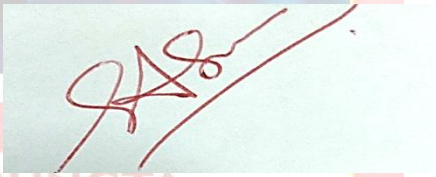
Dr. T.Rama Rao, Patron, SRGI

From the desk of Assistant Director

I am very pleased to know that Sanjay Rungta group of Institutions organizing its 1st International Conference on Innovation and Challenges in Nanoscience and Nanotechnology on 15 and 16 DEC 2022. This conference will provide an excellent platform to bring together researchers, industry persons, and policy makers around the world to discuss the applications of smart and sustainable Nano technologies for the benefits of the global society.

This conference is a significant one and provides a wonderful opportunity for the fellow educators and the research scholars to share and exchange their ideas in the recent advancements in computational models. I sincerely hope that the dialog generated at this conference will lead to the implementation of many new ideas in this direction and thus pave wave for further improvements. I am extremely happy that many international experts and delegates will be attending the conference to present their papers and also deliver keynote lectures and invited talks.

I congratulate the entire faculty, staff, and students of the SRGI for organizing such a timely conference and I wish this conference a great success.



MD. Shajid Ansari, Assistant Director, SRGI

From the desk of Chairperson

It is my privilege and honour to welcome you all to the International Conference on" Innovation and Challenges in Nanoscience and Nanotechnology "during 15 and 16 Dec 2022 sponsored by CCOST and INSA New Delhi.

The main goal of organizing this conference is to share and enhance the knowledge of each and every individual in this fast-moving Era. The Research and Development activity in this area is fast paced and developments are sudden and path breaking. Such conferences usefully act as fora to keep these new ideas in their proper perspective so that technology can move forward. We have given a good opportunity for those who have a thirst in knowing the present technological developments and also share their ideas. Additionally, this conference will also facilitate the participants to expose and share various novel ideas. The conference aims to bridge the researchers working in academia and other professionals through research presentations and keynote addresses in current technological trends .i.e. Nanotechnology. We hope that you will find the conference both enjoyable and valuable, and also enjoy the architectural and cultural beauty at SRGI.

I cordially invite all the enthusiasts to participate with full vigour in this celebrated event which can give immense exposure and global opportunities to all.

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Dr. Rajesh Kumar Nema,
Principal
Rungta Institute of Pharmaceutica Sciences

From the desk of Co-Chair Persons

On behalf of SRGI Family and Indian National Science Academy New Delhi, I warmly welcome you to international conference 2022 on innovation and challenges in nanoscience and nanotechnology.

The year 2020 was very special to world, Because of COVID Pandemic. Now, after almost two years of pandemic world is recovering back to its previous glory. The professional of Industry, Academia and Research Professional are again getting ready to give their best for welfare of mankind. Nano Science & Technology is a subject where a small amount of research work has been done and it has tremendous opportunity of research in every sphere of life on earth as well as space.

The objective of this conference by SRGI Family and Indian National Science Academy is to bring professionals on a platform where they can impart their knowledge and experience with younger generation and for NANO.

We will have exciting discussions on current past and future of NANO. I hope all the participants will have productive and fun filled time at this very special conference.

Lastly, I would like to thank SRGI family, resource persons and all of the conference participants for their contributions which are the foundation of this conference.

Dr. Tripti Agarwal,
Principal
Rungta College of Sciences and Technology

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From the desk of Co-Chair Persons

With overwhelming excitement, Sanjay Rungta Group of Institutions, Bhilai is pleased to welcome you all to International Conference-2022 on the theme- **"INNOVATION AND CHALLENGES IN NANO SCIENCE AND NANOTECHNOLOGY: PAST PRESENT & FUTURE"**, with the ultimate intention of bringing together world class professionals from academia and industry on a vibrant shared platform to debate achievements in the field of nanotechnology the like minds for giving a presentation that is knowledge-centric, and on a vast variety of subjects, for fostering, inspiring and provoking the change of focus towards the development of more sophisticated, better and cost-effective materials for the next generation of engineering applications in nano size.

Dr. Anurag Sharma, Principal
RSR-Rungta College of Engineering and Technology

Message from Convener

It gives me a great pleasure and truly delighted to welcome each and every one of you for International Conference on " Innovation and Challenges in Nanoscience and Nanotechnology " during 15 and 16 Dec 2022 sponsored by CCOST and INSA New Delhi.

I truly believe that this auspicious event is a great platform for all with the same vision and mission, get together to share, discuss and network in improving our delivery of high quality information on nanomedicine and nanotechnology.

It is an attempt to focus the attention of all concerned professionals to discuss at length concerned with the Emerging trends in Nanotechnology, to seek solutions wherever possible and identify areas where further are research are needed. Invited contributions from experts on various topics with separate divisions on Science, Medicine and pharmacy are presented in the proceedings. I take this opportunity to record my heartfelt appreciation and gratitude to all the authors, delegates, conference chairman and all others participating.

Dr. Harish Sharma
Convener

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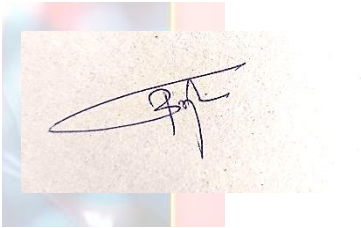
From the desk of Co-Convener

Its my pleasure to welcome all the delegates, resource person, researcher and dear students from all over the country. We had been working on the concept of Nanotechnology since few years now and realise that it is one of the keys factors linking to the quality of lives of people. This is a welcome change for the entire technology where we see clear opportunities and areas of larger networking between various players in this multi domain/ sectorial.

I thank each and every one of you who are contributing to the success of the conference and looking forward to seeing you all soon.



Dr. Lokesh Dewangan

Dean of Acedemic

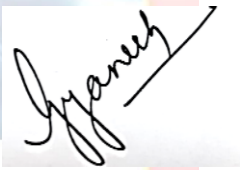
INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES AND RESEARCH
ISSN (ONLINE): 0975-8232, ISSN (PRINT): 2320-5148)

Message from Organizing Secretary

It gives me utmost pleasure to welcome you all to ICNN 2022 being held in this beautiful Steel city of Bhilai Chhattisgarh. SRGI is hosting Conference on" Innovation and Challenges in Nanoscience and Nanotechnology "during 15 and 16 Dec 2022 sponsored by CCOST and INSA New Delhi. For the first time.

The Organizing Committee has worked really hard with to make this conference a huge success. The Scientific programme covering a wide spectrum of topic along with orations, guest lectures and keynote addresses would provide right mix to enlighten you all with the latest development in medicine and keep you abreast of practical aspects.

Along with the enlightening Scientific Conference the delegates would have several other interesting sights to visit. We hope that you will return with sweet memories of this Conference and wish to visit this place again.
We the members of Organizing Committee of ICNN 2022 are eagerly waiting your arrival and wish you a Successful, enjoyable & memorable Conference.



Dr. Gyanesh Kumar Sahu,
Organizing Secretary

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Date: 15.12.2022

Time	Activity	Speaker with Designation		Lecture Venue
9:30am - 10:30 am	Registration and Welcome			
10:30am – 12:00 am	**Inaugural Function** **Chief Guest: Dr. M.K. Verma ,Vice Chancellor**, CSVTU, Bhilai,Chhattisgarh **Guest of Honor**: **Dr. Alok Shrivastava, Deputy Director,** U R Rao Satellite Centre (URSC), Bengaluru			**Auditorium**
12:00pm - 12:30 pm	Scientific Session- I	**Dr. Alok Shrivastava** Deputy Director, Mechanical Systems Area, Former Group Director & Former Project Director	U R Rao Satellite Centre (URSC), Bengaluru, Karnataka	**Auditorium**
12:30pm - 01:00 pm	Scientific Session- II	**Mr. Samuel Goodwin** CEO	Functionless: Machine Learning, US	**Auditorium**
01:00pm - 02:00 pm	Scientific Session- II	**Mrs. Swati Adhikarla** Product & Business Strategy Manager	Functionless: Machine Learning, US	**Auditorium**
02:00pm - 02:45 pm	**Lunch Break**			
02:45pm - 03:30 pm	Scientific Session- III	**Dr. Sanyog Jain** Professor & Head	National Institute of Pharmaceutical Education and Research, Mohali, Punjab	**Auditorium**
	Scientific Session- III	**Dr. Vikas Dubey** Associate Professor	Bhilai Institute of Technology, Raipur, Chhattisgarh	**RSR FA- 04 (First Floor)**
	Scientific Session- III	**Dr. Ashish Asatkar** Assistant Professor	Govt. Science College, Tilda, Chhattisgarh	**RCST Seminar Hall (Ground Floor)**
	Scientific Session- III	**Dr. N. K. Swamy** Dean Academic	ISBM University,Gariyaband, Chhattisgarh	
03:30pm– 03:40 pm	**Tea Break**			
03:40pm – 04:00 pm	**Cultural Program**			**Auditorium**
04:00pm – 05:30 pm	**Oral Presentation**			**-Auditorium** **- RSR FA- 04(FirstFloor)** **- RCST SeminarHall (Ground Floor)**

Date: 16.12.2022

Time	Activity	Speaker with Designation		Lecture Venue
10:00am - 11:00 am	Scientific Session- IV	**Dr. Gaurav Pathak** Manager- Regulatory Affairs & Compliance	H & H Healthcare And Cosmetics Pvt. Ltd, Pithampur, Madhya Pradesh	**Auditorium**
	Scientific Session- IV	**Dr. R. N. Patel** Professor	University of Techanical Department, CSVTU, Bhilai, Chhattisgarh	**RSR FA- 04 (FirstFloor)**
	Scientific Session- IV	**Dr. Arunendra Tiwari** Assistant Professor	Govt. Arts Science and Commerce College, Jamgaon, Chhattisgarh	**RCST SeminarHall (Ground Floor)**
11:00am - 02:00 pm	**Oral Presention** **E-poster presentation** **Poster Presentation**			**-Auditorium** **- RSR FA- 04 (First Floor)** **- RCST SeminarHall (Ground Floor)**
11:30am - 12:30pm	Scientific Session- V	**Dr. Sushant Singh** Associate Professor	AIMTY University, Raipur, Chhattishgarh	**RCST SeminarHall (Ground Floor)**
02:00pm- 03:00pm	**Lunch Break**			
03:00pm- 04:00 pm	**Validictory Function & Prize Distribution** **Chief Guest: Mr. Mohanlal Sahu,** Director, India Meteorological Department Nagpur			**Auditorium**
04:00pm- 04:15pm	**Photography Session**			

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INNOVATION AND CHALLENGES IN NANOSCIENCE AND NANOTECHNOLOGY
PAST PRESENT & FUTURE

1. A REVIEW OF LIPOSOMES AS A DRUG DELIVERY SYSTEM

Smriti Jain*, Sameer Bansod, Vaibhavi Pandey, Swapnil Gupta, Suraj Vishwas

Sanskarcity College of Pharmacy, Rajnandgaon

Abstract

Liposomes is considered promising and versatile drug vesicles. Liposomes offer several advantages including biocompatibility, capacity, for self-assembly, ability to carry large drug payloads and, and a wide range of physicochemical and biophysical properties that can be modified to control their biological characteristics. Liposomes are most placed acquiring in pharma industries and very useful in the various drug delivery system used to target the drug to particular tissue. Liposomes mediated drug or gene delivery to selected tissues or cells is highly promising approach for improved or controlled or targeted delivery. Liposomes can also encapsulate in both hydrophilic and hydrophobic materials and are utilized as a drug carry in drug delivery. This technology of drug delivery system of liposomes is very useful for the treatment of certain diseases. On the assumption, the goal of providing cellular delivery represent the final challenge to drug delivery requiring drug persistence, crossing endothelial barriers to the target tissues, and finally fusing with the errant cell responsible for the pathological condition. The delivery of liposomes could be advantageous for the drug that are rapidly excreted or metabolized. Liposomes are highly biocompatible with application ranging from delivering enzymes, antibacterial, antiviral drugs, fungicides, etc. Liposomes can be administered through most routes of administration including ocular, pulmonary, nasal, oral, intramuscular, subcutaneous, topical and intravenous. Like other colloidal carrier systems liposomes can provide relatively constant and sustained bloodstream levels of certain types of drugs.

Keywords: - Encapsulate, intravenous route, biocompatible, intravenous, drug delivery, liposomes

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2. Evaluation of Hepatoprotective potential of Barleria Species by using different chemical Models

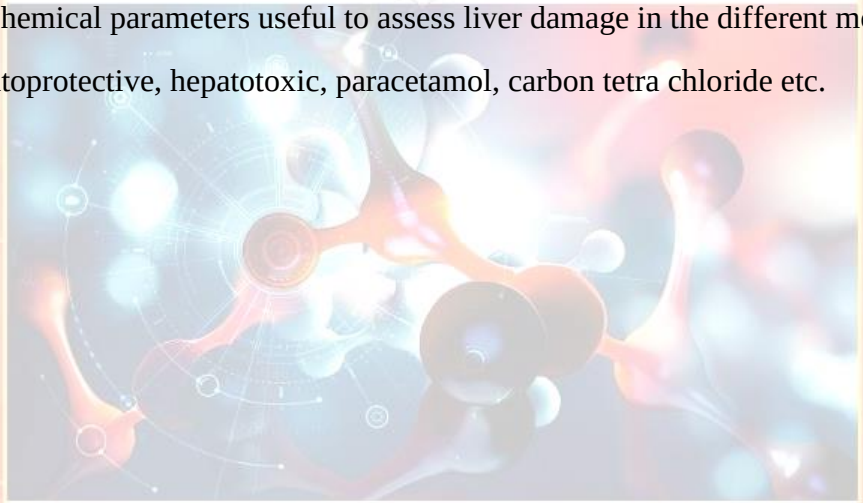
Revendra Parganiha[1]*, Deenanath Jhade[1], Neeraj Sharma[1].

Patel college of Pharmacy, Madhyanchal Professional University, Ratibad Bhopal

Abstracts-

The liver regulates most chemical levels in the blood and excretes a product called bile. This helps carry away waste products from the liver. All the blood leaving the stomach and intestine passes through the liver. The liver processes this blood and break down, balances, and creates the nutrients and also metabolizes drugs into forms that are easier to use for the rest of the body or that are nontoxic. Different models for assessment of the hepatoprotective activity in vitro, in vivo and ex vivo can be found in literature survey. The purpose of this research is to show the features, main advantages and disadvantages of each of the models, the hepatotoxic agents most commonly used carbon tetra chloride, paracetamol, ethanol, d-galactosamine, thioacetamide as well as the biochemical parameters useful to assess liver damage in the different models.

Key word- hepatoprotective, hepatotoxic, paracetamol, carbon tetra chloride etc.



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3. Molecular docking, dynamics simulation and pharmacokinetic studies of *Pandanousfascicularis* as potent inhibitors of hepatitis A virus

Maheswata Moharana[1], Subrat Kumar Pattanayak[1*], Fahmida Khan[1*]

[1]Department of Chemistry, National Institute of Technology Raipur-492010, India

Abstract:

Due to extensive pharmacological research, medicinal plants the underpinning of indigenous herbal serve as a possible source of key compounds for the development of new drugs. Hepatitis A, one of the most widespread infectious diseases caused by Hepatitis A virus (HAV) is associated with global public health issues. The HAV 3C cysteine protease is a non-structural protein, plays pivotal role in proliferation and viral replication. Through ADMET profiling, we have screened fifteen phytochemicals for this study. Significant phytochemicals of *Pandanous fascicularis* include phytosterol, kobusin, epipinoresinol, and ceroptene, which have a wide variety of biological functions. Additionally, using molecular docking, these phytochemicals were docked with the HAV 3C protease which indicates the phytochemicals phytosterol, kobusin, and epipinoresinol, have a significant capability to bind with hepatitis A virus protein.The docking study was further accompanied by analyzing RMSD, RMSF, Rg, SASA, H-bond number, and principal component analysis through 100 ns MD simulations. Based on our computational study and binding free energy calculation, phytosterol, kobusin and epipinoresinol phytochemicals could be a potential drug candidate for inhibition of hepatitis A. The potential therapeutic characteristics of the phytochemicals against hepatitis A inhibition offer additional support for the *in vitro* and *in vivo* studies in future.

Keywords: Hepatitis A, *Pandanous fascicularis,* phytochemicals, binding affinity, MD simulation

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4. Ilmenite nanoparticle based concrete composite for beta backscattering and gamma radiation absorption

B. Gopal Krishna[1,2*] , Dhriti Sundar Ghosh[3], Sanjay Tiwari[1], M Jagannadha Rao[4]

[1]Photonics Research Laboratory, School of Studies in Electronics & Photonics Pt. Ravishankar Shukla University, Raipur, India

[2]Department of Physics,Rungta College of Science and Technology

[3]Department of Physics Indian Institute of Technology, Bhilai, India

[4]Department of Geology Andhra University, Visakhapatnam, Andhra Pradesh, India

Abstract

Concrete is a crucial component of various building designs designed to absorb various radiation doses. Concrete is used in the construction of nuclear power plants, nuclear research reactors, particle accelerators, and linear accelerators in medical facilities. Compared to their bulk counterparts, nanoparticles and nanocrystals exhibit unique features. Nanoparticles differ from their counterparts in terms of beta back scattering and gamma radiation absorption characteristics. In this study, the concrete composite is prepared with the addition of ilmenite nanoparticles. The mixing of ilmenite nanoparticles was examined to offer radiation protection. By using a GM counter, it was possible to analyze the gamma radiation absorption characteristics and beta back scattering in ordinary concrete and concrete that contains ilmenite nanoparticles.

The results demonstrate that such approach for gamma ray shielding and beta back scattering is to incorporate ilmenite nanoparticles into the concrete as an additive. Ilmenite nanoparticles are therefore beneficial for adding to concrete composites to increase beta and gamma radiation scattering and absorption, respectively.

Keywords: Ilmenite, Biological method, Microwave absorption, Radar Absorbing Materials.

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5. REVIEW PROSOPIS CINERARIA: A SIGNIFICANT PLANT WITH HIGH MEDICINAL VALUE IN INDIA'S DESERT REGION AS A REMEDY FOR TREATMENT OF EYE DISORDER

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ABSTRACT

Herbal medicinal plants are thought to provide a plentiful source of therapeutic components. Prosopis-cinerariais is commonly called as khejri is a member of the globally distributed Prosopis genus, subfamily Mimosaceae, and tribe leguminous multipurpose tree. The Prosopis tree, commonly referred to as the "Golden Tree" or "Wonder Tree" of the Indian desert is a species that thrives in dry, arid climates.The plant khejri is also called “kalpataru”which means “King of desert”. Prosopis cinerariasis stem bark traditionally used for the treatment of common cold, muscles tremors, cough, rheumatism, bronchitis, anthelmintic disease, dysentery, asthma, leucoderma, piles. Prosopis flowers are used to treat as blood purifier, skin diseases and produce a cooling effect and gives security throughout pregnancy by reducing the risk of abortion. Different plant extracts have been shown to have pharmacological properties like, antihypercholesterolemic, nootropic, anticancer, antipyretic, antioxidants. The Prosopis Leaf extract is used for mouth ulcers and eye problems, cataract and it has antibacterial, antihyperglycemic, antihyperlipidemic, and antioxidant properties. One of the most delicate human body parts, the eye is constantly exposed to many environmental irritants. Ocular inflammation, glaucoma, bacterial, viral and fungal infections of eye, cataracts, ocular allergies, conjunctivitis etc. are some of the prevalent eye conditions. Today, a sizable number of herbal medications are used to treat ocular illnesses because allopathic medications have so many undesirable side effects. This review describes the herbal medications used to treat eye conditions and offers a framework for researchers to create new, more effective herbal compositions.

Key words: King of desert, Medicinal plant, Khejri

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6. Future Prospect of Nanobiotechnology and its Scope

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Abstract:

Nanotechnology is a multidisciplinary field that currently recruits approaches, technology and facilities available in conventional as well as advanced avenues of engineering, physics, chemistry and biology. Nanobiotechnology, bionanotechnology, and nanobiology are terms that refer to the intersection of nanotechnology and biology. The discovery of nanomaterials has flagged off crucial research and innovations in science and engineering. Its unique properties and diverse applications present it as the material for the future. Most of the scientific concepts in bionanotechnology are derived from other fields. Biochemical principles that are used to understand the material properties of biological systems are central in bionanotechnology because those same principles are to be used to create new technologies. Bionanotechnology, on the other hand, promises to recreate biological mechanisms and pathways in a form that is useful in other ways. Further, nanotechnology provides excellent solutions for an increasing number of environmental challenges. For example, the development of nanosensors has extensive prospects for the observation of environmental stress and enhancing the combating potentials of plants against diseases. Nanobiotechnology has a multitude of potentials for advancing medical science thereby improving health care practices around the world. Keeping these advancement and challenges in mind, this perspective article mainly highlights the contribution and possibilities of bio-nanotechnology to manage the COVID-19 pandemic, even in a personalized manner. Authors also pinpoint barriers to the utilization of current bio-nanotechnology to facilitate a more accurate understanding of COVID-19 and to lead the way toward personalized health and wellness. The scope of Nanobiotechnology is very applicable in various areas with our life in future.

Keywords: Nanobiotechnology, nanomaterial, Medical, Prospects, Covid-19 and, Scope.

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7. An Updated Review: Application and Future Prospects of Hydrogels

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Hydrogels are three-dimensional, hydrophilic, polymeric networks capable of absorbing large amounts of water or biological fluids. Due to their high water content, porosity and soft consistency, they closely simulate natural living tissue, more so than any other class of synthetic biomaterials. This route of drug administration is used for local as well as systemic delivery of drug. These biomaterials can integrate large quantum of biological fluids and swell. When swelled, they are soft & rubbery and resemble the living tissue, exhibit in excellent biocompatibility. A hydrogel is a network of polymer chains that are hydrophilic, sometimes found as a hydrogel in which water is the dispersion medium. Hydrogels are highly absorbent (they can contain over 90% water) natural or synthetic polymeric networks. Hydrogels also possess a degree of flexibility very similar to natural tissue, due to their significant water content.

Hence the preparation techniques of hydrogel biomaterial and the evaluation of the properties are of almost significance. Literature reveals that this three dimensional architecture could be homo-polymeric, co-polymeric, semi- interpenetrating and interpenetrating polymer networks (IPN) based on preparation methods. Polymeric blends like semi-IPN have also been investigated to satisfy the specific needs of biomedical field. Such blends have shown superior performances over individual polymers. Hence, the evaluation of swelling, mechanical and biocompatible properties consider more attention before the hydrogels are applied. In this review article, an attempt has been made to describe the available methods of hydrogel synthesis, its applications along with future prospects.

Keywords: Hydrogels, Method of Preparation, Advantages, Evaluations, Applications, Future Prospects.

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8. A REVIEW ON WASTE HEAT RECOVERY SYSTEM

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Abstract:
It is known from the second law of thermodynamics that work can be converted into 100% heat but converting heat to 100% work is not possible. However, minimizing the heat lost in the process of producing the work is not out of the question. The advancement in technologies led to the idea of harnessing the previously unused available energy of the lost heat. This in turn led to the birth of waste heat recovery system. After the completion of a process if there is unused heat left and if it is lost to the surroundings, it is called as waste heat. Many different processes produce waste heat and many different technologies are developed to utilize this wasted heat. This paper deals with reviewing the most promising waste heat sources for power production. This paper also analyzes the most promising technologies that are used for waste heat recovery. The goal of this paper is to understand among many different waste heat sources which one is the most profitable to use and among many different waste heat recovery systems, which one is the most effective one to use.

Keywords: Waste Heat Recovery sources, Waste Heat Recovery systems, power production

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9. DIACEREIN NANOGEL: FORMULATION, QbD OPTIMIZATION AND EVALUATION

Disha Kesharwani*, Dr. Swarnali Das Paul[1], Dr. Rishi Paliwal[2], Dr. Trilochan Satapathy[3]
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[1]Shri Shankracharya College of Pharmaceutical Sciences, Bhilai, C.G, India
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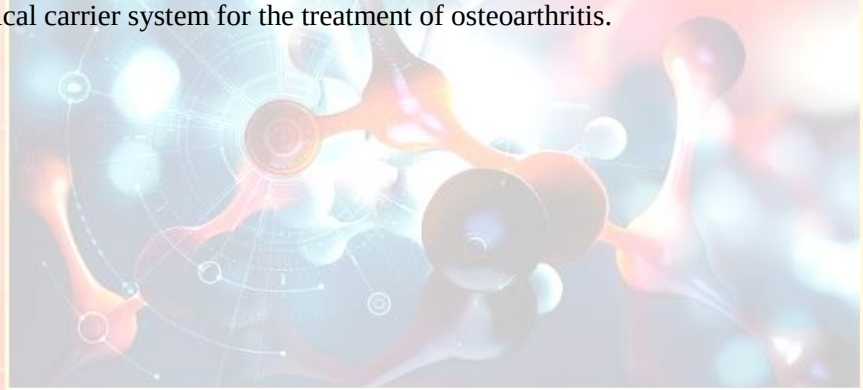
[3]Chhattisgarh, Pt. Deendayal Upadhyay Memorial Health Science and India Ayush University of Chhattisgarh.

Abstract

Nanogels are the hydrogel containing nanoparticles. This is a unique combination that possesses the properties of both hydrogel and nanoparticles. This system is an advantageous carrier system for the drugs with poor bioavailability. Diacerein is a chondroprotective agent that belongs to BCS class II. It possesses poor oral bioavailability. Diacerein nanogel was prepared by emulsion solvent diffusion method and optimized by response surface methodology. Two factor three level design was chosen for the analysis. The particle size, zeta potential and poly dispersibility index was found under the limit. The drug release kinetic study was followed for the optimized formulation to understand the mechanism. The final formulation followed diffusion mechanism as the primary mechanism of drug release. The optimized diacerein nanogel was also evaluated by DSC, XRD, FTIR and TEM analysis. It was found that the drug was amorphous in nature and completely soluble with the polymers used. The formulation possesses regular spherical shape without agglomeration. All these evaluation parameter have proved DCN nanogel as a promise topical carrier system for the treatment of osteoarthritis.



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10. Mouth Dissolving Tablets – An Update Prospects For Oral Drug Delivery System

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Abstracts

Fast dissolving drug delivery system is the process to deliver a drug in a case of severe pain, attack gives the rapid action and this type of tablets rapidly dissolve in saliva within a 15 sec to 3 min without need of water. It's regarded as the safest economical and most convenient method of drug delivery system in its having the higher patient compliance. In this article, Different methods are described for the preparation of fast dissolving tablets such as a methods are- freeze drying, direct compression, Durasolv technology etc. and analytical parameters are a size, shape, thickness, weight uniformity, friability, dissolution test, disintegration etc. This review article are a focused on mainly advantages, disadvantages, synonym, methodology, ideal characteristics and analytical parameters of fast dissolving tablets at laboratory level.

Keywords: Mouth dissolving tablet, fast dissolving drug delivery system, methodology and analytical parameters.

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11. EVALUATION OF DUMPED FOODS LEACHATES IN ADJACENT POND WATER THROUGH PHYSICO-CHEMICAL ANALYSIS

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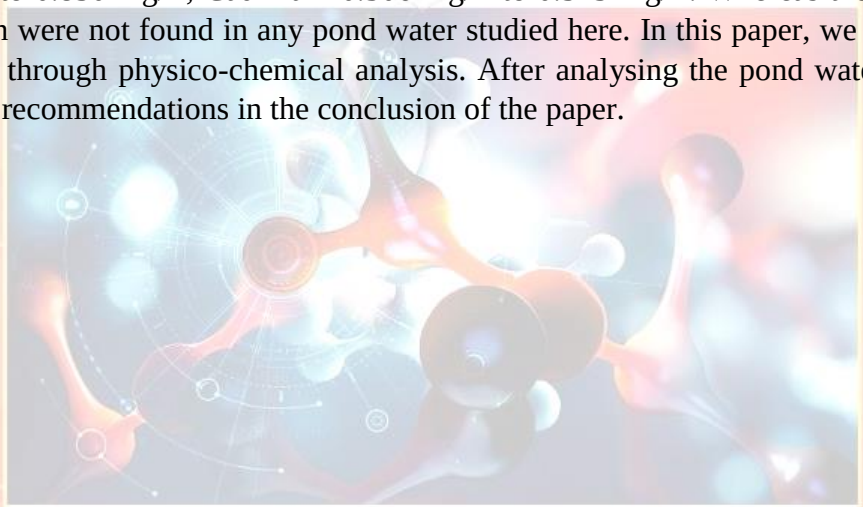
Abstract: These days the wasted food or expired packaged foods are dumped in to the soil at any spot that is away from the city. These materials are decomposed by the microbes, which result in a formation contaminated water that is called as leachate. This can permeate through the soil, and may pollute the surface and ground water present in the vicinity. In this paper, two ponds were selected for physico-chemical analysis of water adjacent to the common waste food dumping site. One pond was 8 km and another was 10 km away from the city. In this study the temperature ranged from 290C to 300C, pH 6.25 to 6.58, TDS 220 mg/L to 360 mg/L, turbidity 251.25 to 286.85 NTU, conductivity 305 µs cm to 286 µs cm, alkalinity 154 mg/L to 186 mg/L, D.O. 4.6 mg/L to 6.4 mg/L. The quantity of different element such as Chloride was 38.65 to 32.54 mg/L, total hardness 305-380 mg/L, calcium hardness 45 mg/L to 58 mg/L, Magnesium hardness 92 mg/L to 125 mg/L respectively. Along with these the heavy metals like Fe ranged between 0.640 to 0.850 mg/L, Cadmium 0.306 mg/L to 0.525 mg/L. Whereas the heavy metals like Pb, Cu, Mn were not found in any pond water studied here. In this paper, we have analysed the pond water through physico-chemical analysis. After analysing the pond water, the authors proposed some recommendations in the conclusion of the paper.



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12. APPLICATIONS OF NANOTECHNOLOGY – A SMALL SOLUTION TO BIG PROBLEMS

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Nanotechnology is the aptitude to perceive, measure, operate, and build materials at the nanometer scale, the size of atoms and molecules. Nanotechnology, is involved in many scientific and practical applications, including health, agriculture, electronic devices, computer science and many other fields. At the same time, computers play an essential role in simulating and analysing the features of nanoparticles. The shrinking of electronic devices in due course will come to end, when the laws of physics avoid us from further diminishing the size of circuits. At any given time, the researchers will not be able to carry on with the current silicon processors, binaries and sequential. One of the most practical ways is to construct computers operating with radical difference: the quantum mechanics.The appearance of quantum computers will include a radical change in the hardware and software that we now know but will permit one to perform calculations that are unconceivable nowadays. In this study, the researchers attempted to provide a systematic review of recent trends in the interaction between computer science and nanotechnology by highlighting two parallel axes, the first axis includes the use of nanotechnology in enhancing computer systems and devices, and the other one includes the role of computer science in promoting nanotechnology. Since the silicon technology is approaching its maximum capacity, which makes it essential to search for novel mechanisms that permit the production of nano-computers. Thus, this study confirms that computational nanotechnology is emerging as an essential engineering analysis tool for new device designs and modern computing challenges.

Keywords: Nanotechnology, Quantum mechanics, Quantum Computers, Quantum Cellular Automata,

13. **PREPARATION OF SOME COMPLEXES OF NICKEL(II) AND COPPER (II) METALS WITH MACROCYCLIC LIGAND, 1,7,9,15 TETRA-AZA-3,5,11,13 DIFURANO-CYCLO-1,6,9,14-HEXA-DECA TETRA ENE**

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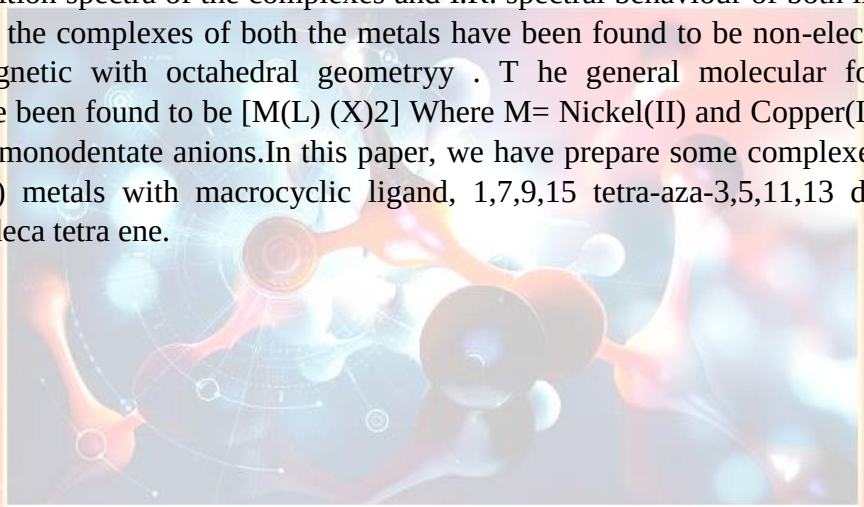
Abstract: The complexes of Nickel(II) and Copper(II) metals have been prepared with the macrocyclic ligand-1,7,9, 15-tetra-aza-3, 5,11,13- -difurano-cyclo-1,6,9,14-hexa deca tetra-ene. The complexes of both the metals have been characterised by usual physico-chemical methods such as elemental analysis, measurement of electrical conductance, magnetic moment and electronic transition spectra of the complexes and I.R. spectral behaviour of both ligands and the complexes. All the complexes of both the metals have been found to be non-electrolyte, mono-meric, paramagnetic with octahedral geometryy . T he general molecular formula of the complexes have been found to be [M(L) (X)2] Where M= Nickel(II) and Copper(II) Cations, L= ligand and X= monodentate anions.In this paper, we have prepare some complexes of nickel(ii) and copper (ii) metals with macrocyclic ligand, 1,7,9,15 tetra-aza-3,5,11,13 difurano-cyclo-1,6,9,14-hexa-deca tetra ene.



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14. EVOLUTION OF TRANSISTORS THROUGH NANOTECHNOLOGY: A REVIEW

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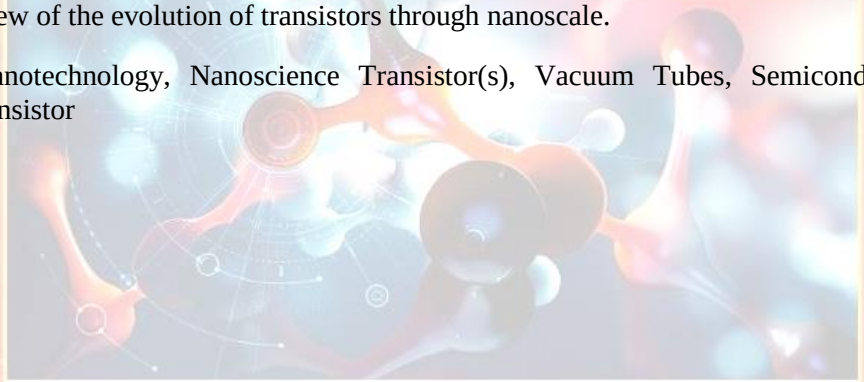
Abstract—Nanotechnology and Nanoscience have tremendously broaden their applications in various fields such as Electrical Technology, Electronics, Healthcare, Life Science, Home Science, Sensing materials and remote sensing applications etc. The greatest achievement of this technology involved in the evolution of transistors. Transistor is defined as a transfer of resistance. It uses itself as a switching device in computers. During 1950's vacuum tubes were rapidly replaced by semiconductor devices and in 1960's Transistors were replaced in place of semiconductor devices. Since there were many developments of the transistor, the first transistor was made after many failures. The discovery of the point-contact transistor is another remarkable account. It was found that when the contacts were more narrowly placed, the system or the set up became even more delicate. A gold coil was pasted at the end of a plastic wedge. It was then cut using a razor at the tip. It resulted in two closely placed gold pieces. It was found that current started to flow when voltage was applied on the other side of a crystal, after the plastic was pushed down on to the surface of that crystal. Thus the point contact transistor was invented. This paper traces the overview of the evolution of transistors through nanoscale.

Keywords— Nanotechnology, Nanoscience Transistor(s), Vacuum Tubes, Semiconductor Devices, Evolution of Transistor



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15. ADVANCES IN VSC - HVDC POWER TRANSMISSION SYSTEM

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Abstract: - Developments advance both the high-voltage direct-current (HVDC) power transmission and the flexible alternating current transmission system (FACTS) technologies. The recent advances in the area of voltage-source converter (VSC) HVDC technology is provided. Selected key multilevel converter topologies are presented. Control and modelling methods are discussed and a list of VSC-based HVDC installations. The continuous development of power electronics presents cost-effective opportunities for the utilities to exploit and HVDC. VSC-HVDC can address not only conventional network issues such as bulk power transmission, asynchronous network interconnections, back-to-back AC system linking and voltage stability support to mention a few, but also niche markets such as the integration of large scale renewable energy sources with the grid. The article shows an analysis of HVDC transmission innovation. The paper conclusions about HVDC framework and VSC-HVDC Technology.

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16. Glaucoma: Recent Advances in Treatment

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Abstract

Glaucoma is a slow progressive degeneration of the retinal ganglion cells and the optic nerve axons, leading to irreversible blindness if left undiagnosed and untreated. Although, increased intra ocular pressure is a major risk factor of glaucoma, other factors includes increased glutamate levels, alterations in nitric oxide, metabolism, vascular alterations and oxidative damage caused by reactive oxygen species. Prevention/control of raised intra ocular pressure is the primary goal in the management of glaucoma .Modern medicine focuses on three separate targets: IOP, out flow facility, and the retinal ganglion cell, to help us achieve the ultimate goal of therapy and to preserve the visual function in these patients. These include the development of a new class of IOP lowering medications (Rho-kinase inhibitors), newer and safer techniques for surgically reducing IOP and the development of non-IOP dependent therapies such as neuroprotection. Glaucoma is the second leading cause of blindness. Worldwide, it is estimated that about 66.8 million people have visual impairment from glaucoma, with 6.7 million suffering from blindness. Cholinergic drugs are the first class of agents which are used for treatment of glaucoma. Pilocarpine is available in concentrations ranging from 0.5 to 10% eye drops. Clonidine is the first available α-2 agonist, for the treatment of glaucoma.

Keywords: Glaucoma, Causes, Prevention and Treatment.

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17. SYNTHESIS SPECTRAL ANALYSIS AND ANTIMICROBIAL ACTIVITY OF METAL COMPLEXES DERIVED FROM A NEW MANNICH BASE N,N'-(PIPERAZINE-1,4 DIBIS-BENZYL) DIACETAMIDE

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Abstract: From a novel Mannich base, N,N-(piperazine-1,4 dibis-benzyl) diacetamide, neutral complexes of Co(II), Cu(II), Ni(II), and Zn(II) was synthesized, by ethanolic condensation of piperazine, benzaldehyde and acetamide. The ligand metal mole ratio of 1:1 type of complexes with Co(II), Cu(II), Ni(II) and Zn(II) metal salts was formed. The structural features of the metal complexes have been study from their microanalytical, UV-Vis., SEM, FTIR spectral data. All of the complexes were predicted to be paramagnetic by magnetic susceptibility measurements, with the exception of Ni and Zn, which were predicted to be diamagnetic. The magnitude of magnetic moment values allowed researchers to determine how many unpaired electrons were present in each complex, which helped them further support the geometry predicted by electronic spectral data. While cobalt and zinc complexes exhibit tetrahedral geometry, nickel complex was square-planar geometry, the magnetic susceptibility and electronic absorption spectra of copper complex reveal an octahedral geometry around the central metal ion. The antimicrobial activity of the ligand and its complexes was studied extensively on microorganisms such as *Escherichia coli, Bacillus subtilis, Staphylococcus aureus, and Pseudomonas aeruginosa* by method of well-diffusion technique using DMSO as solvent. The values of zone of inhibition were found out at 370C for a period of 24 h. It has been found that all the complexes have higher activity than the free ligand and the standard. Studies of Mannich base complexes have increased over time as a result of the ligands' selectivity and sensitivity to various metal ions.

Keywords: N,N-(piperazine-1,4 dibis-benzyl) diacetamide, Mannich base, Antimicrobial activity.

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18. AUTOMATED WASTE SEGREGATION SYSTEM

Ravendra Kumar[1], Jay Kumar Sethiya[2],* Samriddhi Sahu[3],* Chandraprakash Kaushik[4]

RSR Rungta College of Engineering And Technology Bhilai Chhattisgarh

ABSTRACT

In the new area of globalization, waste disposal has turned into an immense concern among the nation. Nowadays, almost every part of the world is confronting a huge issue of improper disposal, segregation and recycling solid waste. Due to rapid growth in economy, industrialization and urbanization, there is also a rapid increase of capacity and volume of solid waste. As a result, improper management of solid waste lead to disturbance to the environment and human health. This project proposes a prototype of waste segregator, which can segregate the different types of waste immediately. The various smart Bins are used to collect these garbage and used to send information about the collective, such that respective action can be taken various sensor, motors and are interfaced with PIC microcontroller in this processed system.

Key words: smart bins, PIC microcontroller, many types sensor, motor

19. ENHANCEMENT OF THE THERMAL CONDUCTIVITY IN ADDITION TO NANOPARTICLES

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Nanofluid is the suspension of nanoparticles in a base fluid. Nanofluids are a relatively new class of fluids which consist of a base fluid with nano-sized particles (1–100 nm) suspended within them. Nanofluid has more heat transfer surface between particles and fluids due to high specific surface area. Nanofluid also has high dispersion stability with predominant Brownian motion of particles. Nanofluid is a novel type of fluid. The current study aims at numerical investigations of heat transfer in pipe using nanofluids. The present study also aims increasing thermal conductivity by mixing nanoparticle with base fluid and thus increases the heat transfer rate. The study also proposed for more efficient heat transfer rate by varying material, particle size, and volume fraction. CFD is a computational technology that enables the engineer to study the dynamics of things that flow. Using CFD, one builds a computational model that represents a system or device to be studied. One method is to discretize the spatial domain into small cells to form a volume mesh or grid, and then apply a suitable algorithm to solve 17 the equations of motion (Euler equations for in viscid, and Navier-Stokes equations for viscous flow). At the end of work, Investigation of the effects of different nanoparticles, volume fraction and particle size on the heat transfer performance of pipe is required, using different working fluid and Experimental studies can be performed for the analysis of heat transfer in tube.

Keywords: nanofluids, thermal conductivity, CFD,

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20. A Review on Application of Phospholipids as Unique Carrier for Drug Delivery Systems

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Abstract

The aim of this review is to draw attention on potential applications of phospholipids in drug delivery system through different sources, structure, properties and as carrier. Phospholipids have the exceptional biocompatibility and remarkable amphiphilicity characteristics that make phospholipids the major and suitable agent or excipient for the formulation and to achieve better therapeutic applications in drug delivery system. The applications of phospholipids in the drug delivery systems are enhancement of bioavailability of drugs with low aqueous solubility or low membrane penetration, an improvement or alteration the uptake and release profile of drugs, protection of sensitive active agents from degradation in the GIT tract, reduced the side effects and masking of bitter taste of drugs. These properties offer various possibilities in formulation and potential applications.

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21. Ethical issues in nanotechnology

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Abstract: The word nanotechnology is made from two words first is “nano” and second is “technology”. The word Nano is derived from Greek word “Nanos” that means “very small”. which is rangr between 1 to 100 nm nanotechnology that deals with making structures that are less than 100 nanometer long.The nanotechnology was discoverd by “Norio Taniguchi “ . A Japanese scientist was the first to use a define the term nanotechnology in 1974.The main purpose and use of nanotechnology is formulation development and lifecycle management by using this technique.Which can reduce toxicity and improve efficacy.Nanotechnology based delivery system can also protect drug from degradation. Ethical issues in nanotechnology**:**There are the different ethical issues in nanotechnology like public trust, potential issues of environmental impact, transparency of information & Responsible nanosciences.With such a way full potential dangers inherent in nanotechnology we must seriously examine in potential consequences .We must examine the ethics of developing nanotechnology and create policies that will aid in its development so as to eliminate or at least minimize its damaging effects on society. nanotechnology highest and best use should be to create a world of abundance where no one is lacking for their basic needs.Those needs includes adequate food ,safe water,a clean environment,housing ,medical care, education ,public safety. fair labour unrestricted travel, artistic expression and freedom from fear and oppression.All published research and discussion of nanotechnology should be accurate as possible, adhere to the scientific method and give due credit to sources labeling of products should be clear and accurate and promotion of services ,including consulting, should disclose any conflicts of interest . Ethical challenges faced by nanotechnology: We are reaching a critical point where nano will enable us to build complex molecular machine .molecular assemblers and disassemblers could be developed from this technology. which would have great potential for both good and bad .The two greatest threats from development of nanotechnology are catastrophic accident and misuses first professional issues, legal /policy issues, ethical issues and stake holders.

Key words: Nanotechnology,Nanos, Environment, Ethical, Oppression, Catastrophic & Nanoscience

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22. A Review on Application of Phospholipids as Unique Carrier for Drug Delivery Systems

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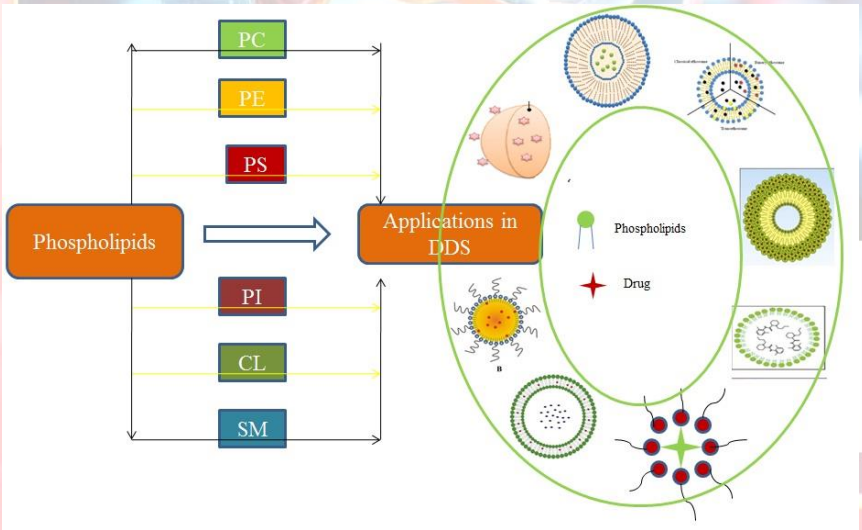
Abstract

The aim of this review is to draw attention on potential applications of phospholipids in drug delivery system through different sources, structure, properties and as carrier. Phospholipids have the exceptional biocompatibility and remarkable amphiphilicity characteristics that make phospholipids the major and suitable agent or excipient for the formulation and to achieve better therapeutic applications in drug delivery system. The applications of phospholipids in the drug delivery systems are enhancement of bioavailability of drugs with low aqueous solubility or low membrane penetration, an improvement or alteration the uptake and release profile of drugs, protection of sensitive active agents from degradation in the GIT tract, reduced the side effects and masking of bitter taste of drugs. These properties offer various possibilities in formulation and potential applications.



Keywords: Drug delivery system, Phospholipids, Bioavailability, Drug release, Applications.

23. Organogel As Transdermal Drug Delivery System

Chiranjeev Sahu*, Prashant Pandey, Preeti Sahu, Piyush Jain, Neha Mandle

Abstract: This abstract was focused on transdermic noval drug delivery system and their blessings and downsides. These systems square measure smart transporter for each deliquescent and oleophilic therapeutic agent. hydrophilic water-miscible co-solvents can be used to produce formulations called organogels. The variety of organogel systems is increasing because of straight forward preparation, thermoreversible setting, long period of time. excluding this, the variety of organogel will increase because of its ability to soak up numerous deliquescent and oleophilic medications. Since they are naturally thermodynamically stable, organogels are being researched as a matrix for the delivery of bioactive chemicals. This abstract examines a variety of fundamental organogel properties, several types of organogelators supported by organogels, manufacturing methods, characterizations, and various medicinal applications.

Key words: organogel, trandermal drug delivery system, Co-solvents, thermoreversible.

24. New treatment strategy for Glaucoma

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Glaucoma is a group of eye conditions that can damage the optic nerve. It is characterized by loss of nerve tissues that that results in vision loss. The optic nerve is a bundle of about 1 million individual nerve fibres that transmits the visual signals from the eye to the brain. Glaucoma is of two types Primary open angle glaucoma and acute angle closure glaucoma. Primary open angle glaucoma develops slowly and usually without any symptoms. Acute angle closure glaucoma usually occurs abruptly due to a rapid increase in the eye. Various treatment strategies are medication (eyedrops), surgery and drainage implants. Various types of surgery includes trabeculotomy, viscocanalaostomy, deep sclerectomy and trabecular stent bypass.

Keywords: Trabeculotomy, Viscocanalasotomy, Primary Open Angle Glaucoma

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25. Recommendations for Evenly Spaced Paragraphs in Research Papers

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Abstract

Plagiarism plays a significant part in all scientific fields, and it is always believed that it is illegal and that official documents or patents are being destroyed. But from a scientific perspective, the researcher has used previously collected data. If a researcher's intention was good and they were unaware of the plagiarism, then we should call this "Plagiarism" even if their intent was honourable. Numerous linguistic alterations, such as paraphrasing, summarising, comparing semantic similarity, and idea borrowing, may be found in research reports. Even if every text alteration required accurate citation. The goal of this article is to determine whether any paragraphs on any scientific study paper match any suspicious manuscripts' suspicious manuscripts' suspicious manuscripts' suspicious manuscripts. This essay also discusses appropriate standards and criteria for paraphrasing plagiarism.

Keywords: paraphrasing, plagiarism policies, idea plagiarism, text reuse.

26. ECONOMIC IMPACT OF NANOTECHNOLOGY IN INDIA

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ABSTRACT: Nanotechnology is a new and emerging field that has an impact on almost all sectors of the economy. Nanotechnology industry has an important role in economic development because of its strong connection channels with other industries. Scientists, researchers, investors and policy makers in the world are aware of the potential power of the nanotechnology industry as it has wide range applications in all sectors. From saving raw materials, energy and water, to decreasing greenhouse gasses and dangerous waste, nanotechnology's unique attributes can be utilized in various products, procedures and applications that could undoubtedly support the economy. Nanotechnology is helping to considerably improve technology in sectors like information technology, homeland security, medicine, transportation, energy, food safety, and environmental science.

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27. EXPERIMENTAL STUDY ON FLY ASH CONCRETE PAVEMENT

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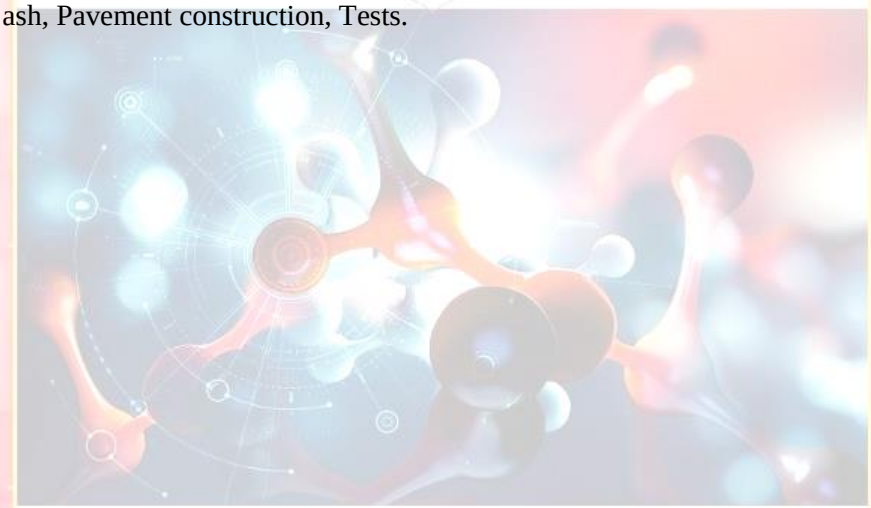
Department of Civil Engineering
Department of Civil Engineering

Abstract

Now a day's concrete pavements are achieving popularity for its own good paving properties, as consumption of cement is increasing day by day its demand and production both increases. Every ton of production of cement releases approximately 8% carbon dioxide to environment. On the other hand in India more than 65% of our electricity demand is fulfilled by coal based thermal power plants, in the process of generating electricity through coal based thermal power plants, a large amount of fly ash is generated as residue. If this fly ash residue is exposed to open air, it would be a big threat to our environment, but luckily we got an option to turn this harmful ash residue into useful construction material by using it in the construction of rigid pavements. This experiment study is aimed to investigate the various properties of flyash by partial replacement of cement when used in various percentages in concrete for the road construction.

Keywords - Fly ash, Pavement construction, Tests.



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28. DC POWER TRANSMISSION TECHNOLOGY

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Abstract;-
HVDC systems are playing an increasingly significant role in energy transmission due to their technical and economic superiority over HVAC systems for long distance transmission. HVDC is preferable beyond 300-800 km for overhead point to- point transmission projects and for the cable based interconnection or the grid integration of remote offshore wind.Farms beyond 50-100 km. Several HVDC review papers exist in literature but often focus on specific geographic locations or system components. In contrast, this paper presents a detailed, up-to-date, analysis and assessment of HVDC transmission systems on a global scale, modern treads, targeting expert and general audience alike. The paper covers the following aspects: technical and economic comparison of HVAC and HVDC systems; investigation of international HVDC market size, conditions, and high-level comparisons and analysis of HVDC system components such as Voltage Source Converters (VSCs) and Line Commutated Converters (LCCs), etc.

Keywords HVDC, VSCs

29. NOVEL HYDROXAMATES AS HISTONE DEACETYLASE INHIBITORS: SYNTHESIS AND ANTICANCER EVALUATION

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Abstract:

Thiadiazole is an active scaffold that has anticancer properties that are particularly notable against leukaemia, lymphoma, and myelofibrosis. SAHA and its synthetic analogues are proven to have strong anticancer efficacy against a variety of human cancer lines and HDACs. A series of thiadiazole-based hydroxamic acid was produced synthesized and characterized by spectroscopic methods. Sulforhodamine B (SRB) assay method, binding mode analysis using molecular docking studies, and human cancer cell lines i.e., leukaemia (K-562), lung (A-549), breast (MCF-7), and cervical (HeLa) were used to evaluate anticancer properties of these analogues. In order to pinpoint the precise binding mode and orientation of the test compounds, they were docked to various HDAC proteins. These analogues attach to the active pocket in a manner that is comparable to SAHA's. The novel SAHA analogues based on thiadiazole showed encouraging antitumor efficacy. The structure activity relationship among synthesized compounds was established.

Keywords: Histone deacetylase inhibitors, thiadiazole, synthesis, anticancer, SAHA.

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30. RESVERETROL GEL INHIBITS THE PROGRESSION OF CATARACT FORMATION IN GLUCOSE INDUCED IN VITRO CATARACT MODEL

Maya Patel*, Dr. Jaya Shree

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Kohka, Bhilai

Abstract

Cataract is the leading cause of reversible visual impairment and blindness globally. It affects the day to day life of person suffering from it. Resveratrol is a polyphenolic compound and possess antioxidant and antidiabetic property. Glucose induced toxicity plays a major role in glucose induced cataract model. We have used goat lenses in the present study. One lens is treated as normal lens. Three lenses were kept in 55mM glucose solution for 24 hr. one lens is considered as control without treatment. Another lens was treatment group, 5%w/v resveratrol gel solution and 10% w/v resveratrol gel was added to the 55mM glucose solution. We have checked the visibility test of all these lenses on the graph paper. Resveratrol at a dose of 10%w/v were found to be more effective in the prevention of cataract model. This was the preliminary study, further extensive research is needed to confirm this.

Keywords: Cataract, resveratrol, glucose, goat lens

31. IMPLEMENTING NANOTECHNOLOGY IN THE TREATMENT OF THYMIC CANCER

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ABSTRACT:-

The key challenge in the treatment of thymoma and thymic carcinoma is in improving our understanding of the molecular biology (nanoscience) of these relatively rare tumors. Nanotechnology which in turn plays an important/ crucial role in improving drug delivering system with enhanced control release. Here we discuss the results of large scale genomic analysis conducted to date and review the most active chemotherapies and targeted treatments. Thymic carcinoma and thymoma are diseases in which malignant (cancer) cells form in the thymus, both of these are called thymic epithelial tumers (TETs) are two types of rare cancers that can form in the cells that cover the outside surface of the thymus. Treatment for these cancers depends on the extent of disease, indicated by its stage as well as your overall health. Chemotherapy drugs are usually given intravenously (through a vien) in the form of combination of drugs. Paclitaxel is a drug which is mostly used in treatment of cancer, and by combining it with cisplatin or other drugs of this category enhance the efficacy. Here, for higher performance and mode of action these drugs are used.

KEYWORDS:-Nanoscience, Thymic carcinoma, Malignant cells, Paclitaxel, Cisplatin, Chemotherapies

32. Electronic Power Transformer for Distribution System

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Solid state transformer is also called as power transformer .It is also used in place of conventional power transformer. Most important functions are constant dc bus voltage , high unity power
factor, low harmonics distortion and regulated output voltage etc. It consists of 3 phase and 4 wire distribution power electronic transformer . In this proposed Electronic Power transformer (EPT) contains a three phase pulse width modulator convert 800Vrms AC to 2000V DC bus at input stage . It improves power system stability and faster response against disturbances. In this operating principle of Distribution-EPT is analyzed and its control scheme is designed. It has good steady state and dynamic load charecteritics under the proposed control scheme.

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33. IMPORANCE OF NANOTECHNOLOGY IN EDUCATION

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Rungta college of science and technology

ABSTRACT

Nanoscience and Nanotechnology (hereinafter NST) are contemporary state-of-the art fields that focus on the discovery of new materials at the nanoscale that exhibit novel properties. Nanotechnology topped the list of scientific and research interests in most countries of the world. Many countries during the past few years established programs and research units, academic and research institutes but the steady growth of nanotechnology is a challenge for the scientific community interested in universities and technical colleges to prepare the workforce to provide future career opportunities in this field. Many developed countries have embedded nanotechnology applications in the curriculum. Nanotechnology education is an urgent necessity in the 21st century, in the light of technical and scientific acceleration and great competition among nations. Many conferences and seminars have pointed to the need to introduce nanotechnology in the curriculum so that students do not feel the gap between the school and the reality they live in. Nanotechnology is considered as an integral part of "Science, Technology, Engineering, and Mathematics (STEM) education". Just as engineering practice is no longer limited to university students, so also nanotechnology. Everyone - including children, teachers, and graduate students - can benefit, enjoy and learn this technology. It is clear from the above that the importance of teaching nanotechnology in different stages of education and teacher training is the first step in order to achieve nanotechnology. This includes concepts and applications of nanotechnology in curricula, training of teachers and science teachers in particular, and training them on how to teach nanoscience and nanotechnology research.

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34. Nanoparticle Based Approach For Nanogel Drug Delivery System: Application and Future Prospects

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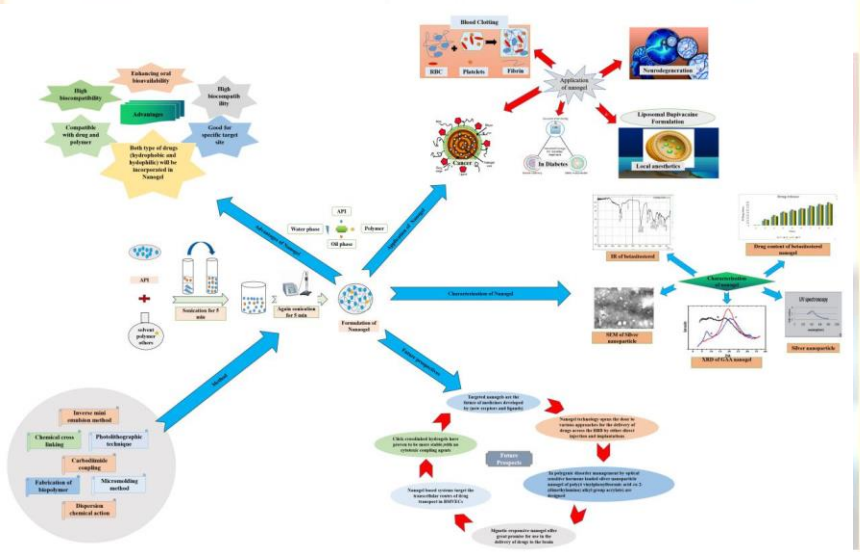
Abstract

Nanocomposite hydrogels or nanogels (a nanoparticles composed of a hydrogel) are nanomaterial filled, swollen nanosized networks of deliquescent or amphiphilic compound chains. It may be developed by drug - polymer interactions and to create 3D advanced networks. Nanogel may be ready by many strategies just like the particle gelation, Inverse mini emulsion, Dispersion, Chemical cross linking, fabrication of biopolymers and so on. It can be characterized by SEM, DSC, FTIR, Drug content, Particle size, Zeta potential and drug efficiency. Further, it can be evaluated by *in vitro* drug release and *in vivo* study in suitable animal modeling. In this review article, we have focused on basic methodology of nanogels, evaluation terms, and their application in industry with future prospects for the researchers.



Keywords: Nanogel, methods of nanogel preparation, evaluation parameters and their applications.

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35. Modeling and Analysis of 2MW Photovoltaic PV power plant using PVSYST software

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Abstract— Electricity is an important portion to human race by which they fulfil their daily needs and development of race. Most part of the production of electricity is done from conventional thermal or hydro power stations. The power stations run by coal emit greenhouse gas. The greenhouse gases raise serious problems to degradation of environment, human race and problems to other species in the Earth. Therefore, it is necessary to move towards renewable energy technology such as solar technology. The solar power plants are greener and cleaner technologies for electricity generation. The findings of electric, optical and financial parameters of solar PV plant are necessary to know the performance of plant to make it commercially successful. These finding can be done by simulations using software like PVSYST or PVSOL. In this paper, the simulation of a grid-connected solar photovoltaic system was done by using PVSYST software to evaluate the performance of the PV plant. The efficiency, power loss(due to temperature, cables, weather and power electronics) and selection of various devices (solar module, inverter) were evaluated by PVSYST software. The simulation results would give the viability of installing 2 MW solar photovoltaic (PV) power plant and life cycle cost of its installation in Raipur, Chhattisgarh.

Keywords— Grid connected solar PV system, Poly crystalline Si-Solar Photovoltaic cell, PVsyst software, Raipur.

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36. Role of water coconut waste husk nanoparticle for adsorption of water pollutants in coastal area.

Ms. Latika Janghel, Dr. Tripti Agrawal Jain

Rungta College of Science and Technology, Bhilai (C.G)

Abstract:

Water pollution is a crucial challenge across the world. It is problem of serious environmental issue in coastal area in India also. Most of the oceans, rivers and surface water in our country are polluted due to industries, untreated sewage and solid wastes. Adsorption has been used for successful treatment of pollutants discharged from several source. Carbon nanoparticle prepared by water coconut waste husk is very appropriate method for waste water treatment as adsorbent.

Keyword-Water pollution, Adsorbent ,Water coconut waste, Nanoparticle

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37. NANOTECHNOLOGY IN DENTISTRY

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Nanotechnology deals with physical, chemical & biological properties of structures and their components at nanoscale dimensions. Nanotechnology is based on the concept of creating functional structures by controlling atoms and molecules. It provides newer alternatives and superior approaches, like imaging techniques, diagnostic tools, drug delivery systems, etc. With developments in materials science and biotechnology, nanotechnology is especially anticipated to provide advances and innovations in dentistry and oro-diagnostic health, therapeutic methods relating to patient's safety and occupational environment.

The growing interest in dental applications of nanotechnology is leading towards emergence of a new field called nanodentistry. It will allow nearly perfect oral health by using nanomaterials & biotechnologies which includes tissue engineering, nanorobotics, etc. Nanostructures are used in innovations and dental diagnostics like tissue engineering which includes treatment of bone augmentation, orofacial fracture, pulp repair, etc. Nanoparticles are used for oral disease preventive drugs, prostheses and for teeth implantation. Nanomaterials further deliver oral fluid/drugs, preventing, curing some oral disease (oral cancer) and maintaining oral healthcare up to a biodomain by manipulation to a high extent. Nanorobotics provides novel techniques for exploring the biodomain by manipulation and characterization of nanoscale objects such as cellular membranes, DNA, etc. All the teeth that undergo treatment such as fillings or crowns will be restored with natural biologic materials in a manner that is indistinguishable from natural dentition.

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38. NANOTECHNOLOGY IN DEVELOMENT OF DRUGS

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ABSTRACT

Nanotechnology is a new field of science that combines the use of nanoparticles, which are very small particles, with nanofabrication techniques. Nanotechnology has been a valuable tool in pharmaceutical research, and it is increasingly being used to improve drug design. Nanotechnology can be applied to multiple stages of the drug development process, from preclinical research through clinical trials. Preclinical research is often conducted using animal models, but animal models are not always ideal for understanding how drugs work in humans. There are many factors that differ between animals and humans, such as metabolism rates and tissue differences. A nanoscale approach can provide more information about how drugs will affect different parts of the human body than other methods. The ability to modify or manipulate molecules at the nanoscale level gives researchers greater control over how a drug behaves in different parts of the body, thereby allowing them to test more effectively and optimize the final product before it reaches market. Nanomaterials are tiny particles that are engineered to have specific characteristics and can be used to create new drugs. Nanoparticles can be used as delivery vehicles for drugs in the same way that other methods such as intramuscular injections and inhalation are used today. The advantage of nanoparticles is that they can target specific areas of the body and deliver the correct amount of medication directly where it is needed. The first step in designing a drug using nanotechnology is to determine what type of nanoparticle will work best for delivering the medication safely and effectively throughout the body without affecting other tissues or organs. This involves first testing how well different types of nanoparticles will be able to penetrate into different parts of the body and then determining which ones will be most effective at doing so. Once this has been determined, scientists must then develop ways to produce large quantities of these nanoparticles cheaply enough so they can be easily mass produced into finished products such as pills or injections.

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39. Applications of Nanotechnology in Farm Machinery: A Review

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Abstract

Agricultural engineering is one of the social, economic elements and indicators of sustainable development in any country, investigating the impact of the introduction of new technologies such as nanotechnology into this sector is of particular importance. Nanotechnology is the creation of devices and machines on an atomic level which will be a driving force for the next generation. In recent years, some research has appeared studying the effect of using nanomaterials as an alternative solution in the field of power and farm machinery on improving the performance of agricultural equipment. This review covers the current applications and challenges that are exploring by the researchers in the area of nanotechnology in improving the production of construction materials and agricultural equipment coatings, such as coatings that are resistant to sunlight and wear in machinery, sensors for increased precision and performance, machinery tires, microprocessors, lubricants, Coolants, and soil conditioners , ultimately, the impact of this technology on improving the performance of agricultural equipment. Finally, we can conclude that nanotechnology is an essential axis in the development of the power and farm machinery sector. Therefore, we recommend more research to study and suggest a solution for challenges facing the use of this technology and to work on transforming research results into productive projects to link research with investors.

Keynotes: Nanotechnology; Power and Farm Machinery.

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40. MAFIC AND ULTRAMAFIC ROCKS OF BETUL BELT AND ITS MINERAL POTENTIAL

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ABSTRACT

The Padhar, Bordehi and Mordongari Mafic-Ultramafic complexes are an integral part of the Meso-Proterozoic Betul Supracrustal Belt in CITZ, situated in the Western and Northwestern parts of the Betul covering about 160 sq. km area. Large intrusive bodies of unaltered olivine websterite, clinopyroxenite, hornblendite, gabbro, diorite and foliated ultramafic rocks, viz. serpentinite, talc-antigorite schist and chlorite schist are exposed around Padhar, Gajpur, Jhakli, Jharkund and several other places in the Betul Belt. They have been collectively designated as the Padhar Mafic-Ultramafic Complex. Apart from the main Padhar Complex, there are also smaller mappable units of gabbro, pyroxenite and hornblendite in association with bimodal volcanic in the Betul Belt. Padhar Mafic-Ultramafic Complex is a well differentiated complex and contains mainly mafic rocks in the Northern and Southern parts. The ultramafic rocks are mostly seen in the intrusion and some of them are lenticular in shape surrounded by mafic rocks.In the Central part of Betul belt, the few mafic-ultramafic suites of rocks around Bordehi are studied to understand the evolution and their potential for PGE mineralization. These mafic-ultramafic bodies occur as irregular discontinuous bodies and display disseminations of chromite, pyrite, chalcopyrite, pyrrhotite and pentlandite. Such oxide and sulphide bearing zones presumes that the phases may contain PGE associated with these zones.Thus the study encourage the findings with conforming presence of Cu-Ni sulphides, Base metals and PGE, opens avenues for further study on its genetic aspects.

KEY WORDS: Mafic-Ultramafic, Mineralization, Mineral Potential, PGE, Betul Belt.

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41. ANTICANCER ACTIVITIES OF SCHIFF BASE METAL COMPLEXES BASED ON GOLD, PLATINUM AND PALLADIUM

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ABSTRACT

Since the rapid progress of science and pharmaceutical development, Cancer is still considered as a deadly disease. According to the National center for health statistics in 2021, there are 18,98,160 emerging cancer cases and 6,08,570 cancer deaths occurred in the United States. Early detection and quick medical intervention are mostly essential for cancer treatment. The discovery of metal-based anticancer drugs such as Cisplatin plays an important role in the pharmaceutical science and cancer treatment. Nowadays in cancer treatment, both metal complexes and organic molecules are being widely used. In recent years, development in the bio-inorganic chemistry increased in the interest in Schiff base and its complexes due to its biological importance in various fields including anticancer activity, anticonvulsant and antioxidant etc. Thus, the present article deals with the systematic review on the synthesis of various Schiff base metal complexes based on gold platinum and palladium and their anticancer activities

Keywords: Schiff base, Anticancer activity, Metal complex, Cisplatin.

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42. ROLE OF NANOTECHNOLOGY IN TEXTILE INDUSTRY

Laxmi Sahu

Rungta College of Science And Technology

ABSTRACT

Nanotechnology is a field of study that focuses on the manipulation, control, and use of matter at the atomic or subatomic level. It is a rapidly developing field with many applications and implications in industrial, commercial, and consumer products. It is a new field of science that uses nanometers, or billionths of a meter, to design fibers and fabrics that are more sustainable and environmentally friendly. In recent years, there has been an explosion of research into the use of nanotechnology in textiles, with an aim to improve their performance while reducing their environmental impact. Nanotechnology has been used to create more sustainable textiles for both people and the environment. It is possible to create stronger, more durable materials using this technology, which can help reduce waste and greenhouse gas emissions from traditional manufacturing processes. Nanotechnology also allows for new types of textiles that can be made from renewable resources, such as cotton or bamboo fibers. The use of nanotechnology has been growing rapidly in the textile industry. This research project will investigate the impact that nanotechnology has had on textile production, as well as its future potential for improvement. The most obvious application for nanotechnology in textiles is in the production of carbon fiber composites. Carbon fiber composites are used in many forms of sports equipment, from golf clubs to skydiving suits; they also have applications in aircraft construction and automotive racing. These composite materials are lighter than steel but stronger than aluminum—they are also much more durable than either metal alone. The key ingredient in carbon fiber composites is carbon nanotubes (CNTs); these tiny cylinders are made up of graphite (a form of carbon) wrapped around each other in a hexagonal pattern that gives them their shape. In addition to being lightweight, CNTs have several other advantages over other materials used for composite fabrication: They can be easily molded into any shape; they do not deteriorate over time; they have a high melting point.

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43. SINGLE SOURCE MOLECULAR PRECURSORS ROUTE TO SYNTHESIZE CADMIUM CHALCOGENIDE NANOMATERIALS

Arunendera Kumar Tiwari

S.D.S.Govt. College, Jamgaon (R)-Bharar-, Durg (C.G.) India

arunendra.710@gmail.com,

Metal chalcogenide nanomaterials construct a significant class of efficient materials. Slight alter in shape, size and phase of these materials result in variations in physical properties (e.g. electronic and optical), which have potential for various technological applications. Several strategies have evolved recently for controlling shape, size and phase of these materials. This offers chemists the unique facility to alter the electronic and chemical properties of a semiconductor nanomaterial by simply controlling particle size and preparative conditions employed. There are a variety of synthetic route for the preparation of nanoparticles, however, not all methods work well for the preparation of semiconductor nanomaterial. This work discusses design and development of single-source molecular precursors for the preparation of metal chalcogenide in nano-size regime. Nanoparticles of CdSe and CdTe are synthesized using new and facile single molecular precursor (i.e. Cd(II) bis (aminopropane) selenide, Cd(II) bis(aminoethane) telluride)based noble route. Synthesized nanomaterials were well characterized by Powder X- ray diffraction, UV- Visible spectroscopy, SEM/TEM spectroscopy and Raman spectroscopy. Some recent applications of metal chalcogenide nanomaterials in the fields of solar cell, optical fiber, amplifiers, bio-sensing and bio-imaging are discussed.

Keywords: Metal chalcogenide, Single source molecular precursor, Nanoparticles, PXRD, SEM/TEM, Solar cell.

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44. STUDY OF EFFECT IN PROCESS PARAMETERS IN DIFFERENT MACHINING PROCESS

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Abstract

Machine tools are used for producing different surfaces. During machining, in machine tools, proper setting of the process parameters is of utmost importance. For any machined component, there are some requirements in respect of accuracy in size, shape and surface finish and surface integrity. There are many factors which may possibly influence accuracy, surface finish etc. of the machined surface. One of the factors may well be the machine tool itself or the type of machining (turning/milling/drilling). The process parameters like cutting speed, depth of cut and feed can be looked upon as very important factors which may influence the results of machining, in terms of achieved surface quality and accuracy.

Keywords: *Machining, Process Parameters, Surface Quality*

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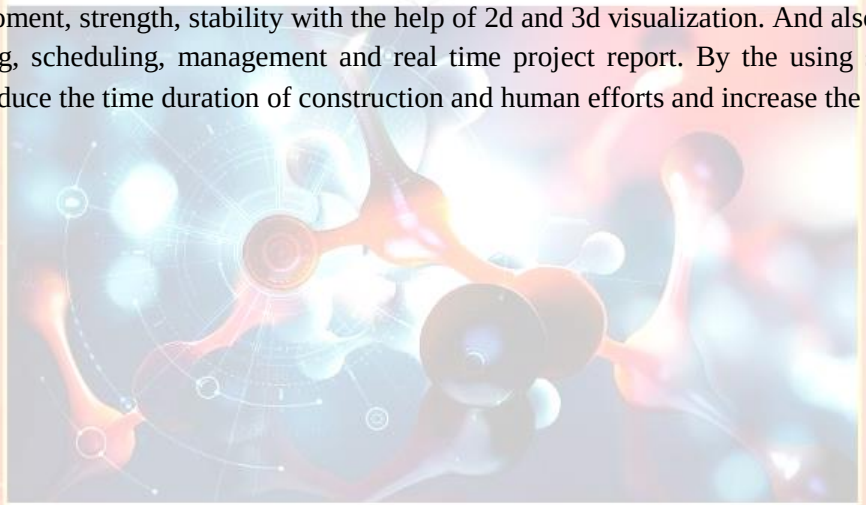
45. STUDY ON APPLICATION OF COMPUTER SOFTWARE IN CIVIL ENGINEERING INDUSTRIES

Manoj Kumar[1*], Kishor Farikar[1] , Umendra Janghel[1], Nikhil Kumar[1], Princess Chandrakar[1]

1. RSR RUNGTA COLLEGE OF ENGINEERING AND TECHNOLOGY BHILAI CHHATTISGARH

ABSTRACT

The computer technology is developed in all the field and it also promote the reforms of Civil Engineering Industry all over the world. The Civil Engineering is specially known for construction engineering. Civil Engineering department is the major part for the development and to build the Nation to next level. The experts have developed lot of softwares for the use of different field in Civil Engineering, therefore many problems in the field of Civil Engineering has been solved and these computer softwares are widely used in Civil Engineering Industries across the world. In this paper we mentioned the applications of many types of softwares currently used in Civil Engineering world for designing and analyzing the structures. Nawadays, Civil Engineers can use the software for different fields such as building, road, bridge, drainage line and railways construction etc. And can calculate the load, bending moment, strength, stability with the help of 2d and 3d visualization. And also, the softwares helps to planning, scheduling, management and real time project report. By the using softwares Civil Engineers can reduce the time duration of construction and human efforts and increase the speed of work.



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46. AN INSIGHT ON POLYMERIC COLLOIDAL NANOGELS IN TRANSDERMAL DRUG DELIVERY

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Abstract

Drug-loaded polymeric colloidal nanogels (DPCNs) are nanogel nanoparticles that contain active substances. Regarding transdermal drug delivery applications, these nanogels are proving to be suitable carriers. Much attention has been given to the appropriate utilization of DPCNs to deliver a huge variety of drugs either in sustained or controlled drug delivery systems. Transdermal drug delivery systems (TDDS) had exhibited a variety of advantageous characteristics, including improved patient compliance due to their ease of dosing as compared to intravenous and oral medication. The therapeutic value of DPCNs in TDDS is dependent on the drug formulation's ability to accumulate in appropriate concentration at the specified targeted locations. Nanogels high drug loading capability, biodegradability, and biocompatibility are important aspects in developing an effective TDDS. DPCN has undergone enormous development, resulting in stimulus sensitive drug delivery systems which release the drug when certain environmental incentives are present. The establishment of these drug delivery strategies has opened the door to more study into the physical and chemical characteristics of these nanogels, as well as their in vitro and in vivo behavior. As a conclusion, current study provides details on the fundamental manufacturing processes, advanced innovations, limits, and therapeutic importance of such DPCN in TDDS, as well as possible future applications. Despite these several promising scientific results, efficient TDDS remains a problem for pharmaceutical scientists, and considerable research is currently focused toward the establishment of improved TDDS.

Keywords: Nanogel, Transdermal drug delivery system, novel drug delivery system etc.

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47. OVERCOMING SKIN BARRIERS THROUGH ADVANCED TRANSDERMAL DRUG DELIVERY APPROACHES

Swayam Nakhat*, Falesh Chandrakar, Purnima Sinha, Hemprabha Dewangan, Suraj Vishwas
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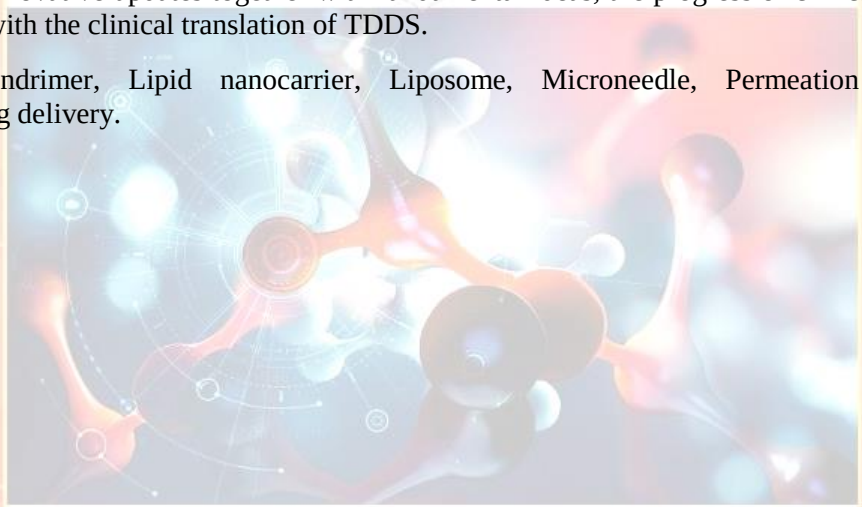
Abstract

Transdermal drug delivery system (TDDS) has established as a promising, well-accepted, and suitable approach to a novel drug delivery system upon comprehensive studies. However, inadequate skin permeability is the main problem. The principal defence mechanism against any foreign object entering the body is the skin, which acts as a complete barrier. The drawbacks can be eliminated by combining with other novel approaches, such as using nanocarriers, specialized transdermal delivery systems, penetration enhancers, etc. With the use of such tactics, several of the products are being investigated and others are undergoing clinical trials. The study begins with compiling the basic characteristics, elements, and design of TDDS. This is followed by primary aspects and a variety of techniques, such as in-vitro, ex-vivo, and in-vivo methods for determining skin permeability. The main goal of the study was to highlight current developments in innovative approaches for efficient transdermal drug administration using both active techniques like electroporation, microneedle, iontophoresis, sonophoresis, needleless jet injection, etc., and passive techniques like the usage of liposomes, transferosomes, micro/nanoemulsion, SLN, dendrimers, NLC, and numerous other nanocarriers. Overall, this presentation will offer a current perspective on innovative updates together with fundamental ideas, the progress of clinical development, and difficulties with the clinical translation of TDDS.

Keywords: Dendrimer, Lipid nanocarrier, Liposome, Microneedle, Permeation enhancement, Transdermal drug delivery.



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48. SYNTHESIS OF GERMANIUM NANOPARTICLES USING BIONANOTECHNOLOGY

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Abstract

The development of nanoscience and nanotechnology has examined many methods to discover numerous hidden dimensions of matter and altered preexisting rules and natural laws. Since ancient times, traditional physical and chemical methods have been used to synthesise nanodimensional materials. These techniques can create nanoparticles of many sizes, shapes, and morphologies, but they are costly, energy-intensive, dangerous, and they release harmful compounds and by-products. To stop and reduce the growing environmental pollution, it is imperative that cost-effective, environmentally friendly, and sustainable green techniques be developed and adopted. A new area of study known as nanobiotechnology and bionanotechnology a fusion of nanotechnology and biotechnology has emerged as a result of biosynthesis. GeO_2 germanium dioxide is a crucial component of the semiconductor industry. Different semiconductor materials can be created using a variety of techniques. In our study, a novel method was used to create Germanium dioxide nanoparticles in the lab. In order to manufacture the required material for this work, germanium dioxide (GeO_2) was synthesised in a laboratory settings using oxygen and germanium in a microbiological environment. The production of germanium dioxide is verified using the XRD method.

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49. DEVELOPMENT OF EUTECTIC MIXTURE TO IMPROVE ORAL BIOAVAILABILITY

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ABSTRACT

The present work investigated the permeation enhancing effect of fatty acids on poorly absorbed active pharmaceutical ingredients across the intestinal epithelium. Several synthetic compounds have been revealed to modify the epithelial barrier and although the research has broadened to cover a role natural permeation enhancer. To determine permeation effect of fatty acid on quetiapine used as model drug.A eutectic mixture was prepared with fatty acid (PA and MA). The formation of eutectic system was determined by the binary phase diagram and Tamman's triangle was constructed using differential scanning calorimetry (DSC) data of preparedmixture from 0.2to 0.8 molar ratios of quetiapine with myristic acid and palmitic acid respectively. The *in-vitro* permeation rate of quetiapine through cellophane membrane was determined in Franz diffusion cell at 37^0C using UV spectrophotometer. All the formulations were subjected to FTIR study to confirm compatibility of fatty acids with drug, and perform contact angle study to determine wettability of eutectic system.The permeation profile of prepared formulation was compared with a marketed drug.The*in - vitro*permeation studies indicate that formulation containing fatty acid was able to deliver more than90% drug within 24 hours, while marketed formulation delivered 71% only. Optimizedformulation quetiapine and PA ratio 6:4 was further evaluated for DSC study. The thermogram showed that a small change in melting isotherm of quetiapine was observed, indicating that there was no significant interaction between drugs and the fatty acid. The overall results suggest that fatty acidmight be used as a permeation enhancer for oral drug delivery system as well as hydrophilic drugs.

50. A REVIEW ON NANOSCIENCE AND NANOTECHNOLOGY

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Abstract- In this paper we present an preface to the principles and advances made in the fields of nanoscience and nanotechnology. Nanoscience is the study of systems(matters, patches & structures) in nanoscale & nanotechnology is the capability to totally organize and manipulate parcels and geste of matter in the infinitesimal and molecular situations. By nanoscience & nanotechnology it has come possible to produce bias, accoutrements & systems on the nanometer scale(one millionth of a millimeter, the scale of tittles and motes).

keywords- Nanoscience, Nanotechnology.

51. The Impact and Application of Nanotechnology in Management: with special reference to Human Resource and Banking Management

Suman Sahu, Dr. Ranjeeta Tiwari Mishra , Prabhuti Kshatriya
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Abstract: Nanotechnology is a modern science, and its applications are gradually appearing in different sciences. Though these applications are obvious in basic sciences, medicine, and engineering sciences, etc., it is difficult to explain the right usage of nanotechnology in abstract sciences as it depends on the foremost definition of discussing matter. One of the most prominent fields in which the definition of nanotechnology is most important is Management. This study tries to provide a point of view on definition and type of nanotechnology application in management. The purpose of this study is expanding, making more flexible, discovering various parts, levels, structures, and secrets of organizations and management knowledge by benchmarking from Nano science and surely, its findings show so many similarities between these which are visible and require thinking In this paper, we attempt to represent the Nano science and technology development in India by highlighting the various initiatives undertaken by the government to promote basic R&D in it and some of its applications in various fields like Human Resource Management and Banking management.

52. POTENTIAL ASSESSMENT OF SMALL SCALE HOTELS IN POST-PANDEMIC ERA: A STUDY WITH REFERENCE TO CHHATTISGARH TOURISM

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Abstract

Small scale hotels have significantly contributed to the success of hospitality and tourism industry. Off late, Chhattisgarh state has evolved as an industry hub in the eco-tourism cluster. It has attracted a large number of national and international tourists in the post pandemic era. Economic impact analysis of small businesses is sparse. Unless the potential of small hotels is assessed and the impact of government policies is measured, small scale hospitality industry will remain out of the development planning mainstream. The paper attempts to assess the potential of these hotels in the state in terms of their contribution in quality of service, cost, revenue and other parameters. The policies of the Central Government in the post pandemic scenario have also shown a positive trend in this direction. It foresees to tap regional tourism by opening doors for South Asian tourists. Analysis of views of owners and top officials of some small hotels has been presented. The findings revealed that there is a huge scope for small hotels to flourish if necessary focus is extended. Moreover, these hotels were found to provide comfortable stay, build relationship and support the traveller to enhance their experience thus building repeat customers.

Keywords:

Small Scale Hotels, hospitality and tourism industry, quality of service, post pandemic, Chhattisgarh tourism

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53. Effects of Adding Nanoparticles on Performance of hydrophobicity of outdoor heritage building materials

Vimal Kumar Jaiswal [1] Dr. Anubhuti Kosle [2]

Abstract: The protection of the outdoor heritage materials represents an ongoing challenge in the field of conservation of cultural heritage. Protective coatings are used to make the building material more resistant against pollutants, micro-biological growths, and especially against the action of rain water. Polysiloxanes, and their precursors, the silanes, have been frequently employed for stone protection. To avoid decay or any alteration of the treated surfaces, the effectiveness and harmlessness of the treatment need to be evaluated before direct application on heritage materials. In last decades, many nanoparticles were synthetized and tested to improve the performance of such coatings. In this research, two different hydrophobic coatings were tested on outdoor heritage materials having different porosity. The first ones have a very low adhesion, so dirty, pollutants and colonies of microorganisms can be easily "washed out" by the water. Photocatalytic coatings are able to oxidize organic matter on their surface, thanks to the combination of light and photocatalyst. The state-of-art of both technologies are discussed with advantages and drawbacks.

Keywords: Stone protection, nanostructured coatings, nanoparticles, cultural heritage conservation, superhydrophobic coatings, photocatalytic coating.

54. A Proposed Nine Multilevel Inverter Topology with Reduced Switches

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Abstract— This project presents a reduced switch diode clamped multilevel inverter topology which can be used for low-medium power drive applications. The high frequency switching in conventional adjustable speed drives gives rise to motor bearing failure & causes de rating of the switching devices & generates high switching & conduction losses. Of the various multilevel inverter topologies, the diode clamped multi-level inverter topology has been emerged as the most promising in AC drives considering reduction in harmonic contents & applications of high power. This thesis work underlines the principle of diode clamped multilevel inverter used in wide range in order to control the voltages per frequency because of its high efficiency operation to monitor & control the speed of 220-V, 1/3 Hp, 50 Hz single-phase induction motor.

In this thesis work, the diode clamped multilevel inverter topology has been used for performing various simulation work & carrying out results precisely. The operations are performed by serially connecting of 10 gate drives and using of four 220-V, DC voltage suppliers. The proposed multilevel inverter involves the proportional stepping harmonic elimination technique in order to control the operation of various semiconductor switching devices in an appropriate order for extracting an appropriate waveform thereby increasing its efficiency at high loading.When t1he 9-l`evel diode clamped multilevel inverter is controlled by an appropriate modulation technique, it resulted in the output waveform approaching very similar to the sinusoidal wave comparing to its typical waveform, results in driving the load in an efficient manner. Operational principles and switching functions have been analyzed. Simulation & experimentation results have been carried out in discussion in order to conclude the proposed multilevel inverter.

Keywords — Diode clamp, capacitor clamp and generalized multilevel inverter.

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55. COMPARISON OF DRY SLIDING WEAR BEHAVIOUR OF ALUMINIUM 7075 ALLOY COMPOSITE REINFORCED BY $MoSi_2$ AND $ZrSiO_4$ PARTICLES

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[2] Department of Metallurgical Engineering, NIT Raipur, 492010, India.

Abstract

In this paper, compression of Aluminium Metal Matrix Composites (AMMCs) wear behaviour of different reinforcement particles like zirconium silicate ($ZrSiO_4$) and Molybdenum disilicide ($MoSi_2$) have been investigated. AMMCs were fabricated using stir casting techniques with different wt. % of reinforcement i.e. 2.5, 5, 10 and 15 wt%. To investigate wear behaviour, dry sliding wear test was carried out using pin-on-disc wear test machine. Wear testing parameters were taken as sliding speed of 1m/s for 50 minute at different loading conditions of 10, 30 and 60 and 90 N. Wear rate was calculated using weight loss techniques and it has been found that better wear rate $MoSi_2$ reinforced AMMC as compare to zirconium silicate ($ZrSiO_4$) reinforced AMMC. In addition, Scanning electron microscope (SEM) was used to analyse worn-out surfaces and debris. SEM results shows that wear debris is produced by the ploughing, grooving of material and deformation during contact surfaces sliding. The shape of the debris was found in form of fine crush particles and flacks types at lower load which shows abrasive wear behaviour in the composite.

Key words: Wear and Aluminium Metal Matrix Composites.

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56. ROBUST CONTROLLER STRUCTURE FOR COORDINATED VOLTAGE REGULATION AND DAMPING IMPROVEMENT FOR SYNCHRONOUS GENERATOR

Deba Prasad Patra
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***Abstract*— The effect of a robust controller proposed to coordinate the achievement of the Automatic Voltage Regulator (AVR) and Power System Stabilizer (PSS) in a single machine connected to infinite bus is studied in this paper. A technique of modern robust control is used in a systematic manner to explore the concepts and the constraints on AVR & PSS design.**

Addition of a dual input stabilizer in the coordinated approach makes the system more flexible and stable. The simulation results have been substantiated with established results of other researches and found to be correct.

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57. COMPARATIVE ANALYSIS OF BLOCK CHAIN AND NON BLOCK CHAIN FOR ELECTRIC VEHICLES.

Geetanjali Sinha
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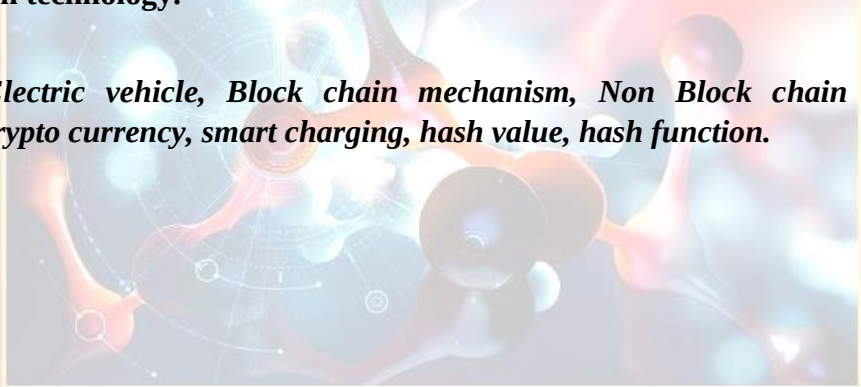
***Abstract*— In this paper, we introduce a block chain technology for payment mechanism for electric vehicles. A comparative analysis of block chain and non-block chain technology is done. Here we can perceive that which method is advantageous for Electric vehicles. By taking several scenarios, opportunity and obstacles, future prospects, we compare the above mentioned two mechanisms. Block chain payment mechanisms are introduced for Electric vehicle to overcome the technical challenges and all the barriers in the path of payment for charging as well as enhance the adoption of Block chain technology.**

***Keywords*—Electric vehicle, Block chain mechanism, Non Block chain mechanism, immutable, crypto currency, smart charging, hash value, hash function.**



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58. NANOEMULSION: THE BOON FOR MEDICAL WORLD

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Rungta Institute of Pharmaceutical Sciences and Research

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Abstract:

Conventionally, Emulsions are the mixture of two immiscible liquids which are held stable by surfactants and emulsifiers. Keeping them stable and comfortable is something that cannot be achieved easily. The new nanoemulsion based on nanotechnology has made the emulsion thermodynamically stable and has increased rate of absorption. Their size varies from 20nm-1000nm and the particles are colloidal in nature, with amorphous and lipophilic surface having negative charge. As a drug delivery systems, they have advance therapeutic action, with very few or no adverse reactions. The nanoemulsion may contain the magnetic nanoparticles which help in specifically targeting the site of action. The formulation of nanoemulsion includes the persuasion and brute method. The characterization of nanoemulsion includes the determination through the differential scanning calorimetry, determination of Zeta potential and polydispersity index. The evaluation of nanoemulsion is done through various techniques such as in-vitro drug release, in-vitro permeation, firccohesity, percent transmittance and osmolarity. The major application includes the treatment of various cancer, infection of reticuloendothelial system (RES), enzyme replacement therapy, immunosuppressant. The marketed available nanoemulsion are: Palmitatealprostadil, Propofol, Dexamethason, Flurbiprofenaxtil, Cyclosporin.

Keywords: nano-based drug delivery system, nanoemulsion, nanoparticles, formulation.

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59. Review on: Immunity boosting plants

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Abstract

Recent research has rejuvenated centuries-old traditional herbs to cure various ailments by using modern tools like diet-based therapy and other regimens. In the domain of nutrition, exploring the diet-health linkages is a major area of research. Indeed, the immune system is an incredible arrangement of specific organs and cells that enables humans to carry out defense against undesired responses. Its proper functionality is essential to maintain the body homeostasis. Arrays of plants and their components hold immuno-modulating properties. Their possible inclusion in diets could explore new therapeutic avenues to enhance immunity against diseases. The review intended to highlight the importance of Clove (Syzygium aromaticum),Cinnamon (Cinnamomum verum),Black pepper (Piper nigrum),Ginger (Zingiber officinale),Tulsi (Ocimum tenuiflorum) jaggery as natural immune boosters. These plants are bestowed with functional ingredients that may provide protection against various menaces. Modes of their actions include boosting and functioning of the immune system, activation and suppression of immune specialized cells, interfering in several pathways that eventually led to improvement in immune responses and defense system. In addition, some of these plants carry free radical scavenging and anti-inflammatory activities that are helpful against cancer insurgence. Nevertheless, interaction between drugs and herbs/botanicals should be well investigated before recommended for their safe use, and such information must be disseminated to the allied stakeholders.

Keywords: Homeostasis ,anti-inflammatory ,immuno-modulating, immunity ,immune boosters, HB enhancer

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60. Review on Replacement of fine aggregate with glass fiber waste in effect of concrete

***Deepali Gupta, *Manish Sahu**

Civil Engineering Department, R.S.R.C.E.T, Bhilai

Abstract- Concrete has the qualities of strength, durability, versatility, and economy, and can be placed or molded into virtually any shape and reproduce any surface texture. It is the most widely used construction material in the world. Due to increase in construction particles, there is very high demand in consumption of raw materials that are to be used in concrete. One of the major construction materials is sand that is consumed adequately. Its presence will be vanished due to excessive digging. To reduce digging practices the fine aggregate was partially replaced with waste crushed glass. The crushed glass is non-biodegradable and cannot be disposed of, also causes several environmental effects. By utilizing this waste as a useful material in the form as replacing material of fine aggregate, we can reduce the waste content and in the same way it can be used as a resource. In order to check the concrete strength and durability tests like Compressive strength test, split tensile strength test, Flexural strength test for 7,14,28 days curing and acid attack test, rapid chloride permeability test, Abrasion tests were conducted.

61. FUTURE OPPORTUNITIES AND CHALLENGES OF NANOTECHNOLOGY IN E-COMMERCE SECTOR IN INDIAN CONTEXT

Dr. Ranjeeta Tiwari Mishra, Suman Sahu, Pranjali Singh
Department of Management, SRGI

Abstract: Nanotechnology has emerged as one of the promising technological advancement in various sectors including healthcare, e-commerce, and others. Nanotechnology can be used to identify and detect counterfeiting in the field of E-Commerce. Adaptation of Nanotechnology in India created a way for development and growth. There are various applications of nanotechnology used in the E-Commerce sector. With the growth of the e-commerce sector, the fake products have grown enormously. From shoes to vacuum cleaners, the marketplace is full of pirated products. Moreover, the e-commerce sites have not taken good measures to avoid them. Consumers are buying those products unknowingly and a huge amount of counterfeiting has been allowed across the globe. Certified QR codes and tracking devices supported by nanotechnology can be utilized for product packaging. Nanotech offers insights on the Marketing evaluations, location of the package and enables customers purchasing decisions towards an original product. The utilization of nanotechnology should be taken seriously by companies to monitor their products and avoid counterfeiting. India is growing at a very rapid speed and government's policies are also reformative and progressive that can safely presume that Future of Nanotech is going to be bright in India. In this paper researcher aims to highlights the future opportunities and challenges of nanotechnology especially in E-commerce sector.

Keywords: **Opportunities, Challenges, Nanotechnology, E-Commerce**

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62. SECURING DATA USING IMAGE STEGANOGRAPHY AND DOUBLE ENCRYPTION

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Abstract: The art of hiding information has been on for centuries and improvement and advancement have always accompanied information security to ensure the message gets to the intended recipient without compromise. Over the years, cryptography and steganography are the two major methods for securing, hiding and transmission of messages separately. The methods used information in order to cipher or cover their existence respectively. Cryptography is an art and science of hiding messages to introduce secrecy in data and/or information security while steganography is simply the art of secret writing, Crypto-steganographic method is aimed at amalgamating both the cryptography and steganography methods for a better information security. The primary purpose of this paper is to build up a new method of hiding secret text messages in an image, by combining cryptography and steganography. A new algorithm is proposed and implemented to achieve this. In this paper double encryption which are AES and Honey encryption have been used to provide better security to the secret data after that image steganography will be used to hide the presence of data, so that there would be no chance of brute force attack. The secret data is taken as input and encrypt it using AES algorithm. The output of AES encryption will be input for Honey encryption. Then that double encrypted data will be embedded on cover image using image steganography to hide the presence of secret data. LSB method is used to hide the encrypted message into images and LZW technique is used to compress the encrypted data, while MSE and PSNR are used to acquire the quality of images.

Keywords: Image Steganography, Honey Encryption, AES, LWZ.

63. SECURING MESSAGING USING HONEY ENCRYPTION AND HOMOMORPHIC ENCRYPTION METHOD

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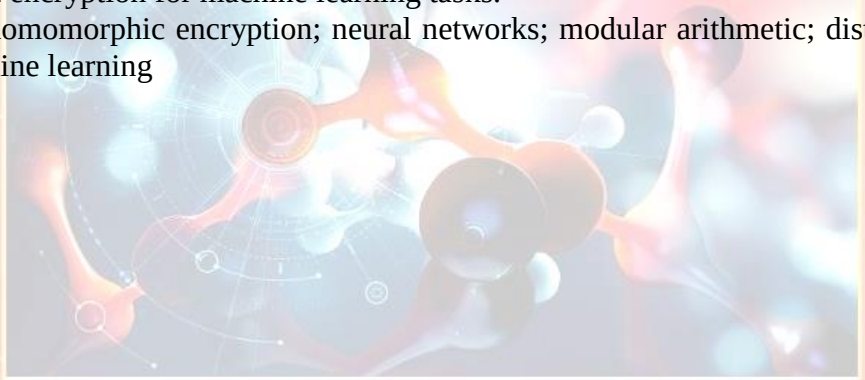
Abstract— Today, cloud technology continues to evolve. Using cloud services allows you to get financial benefit so Still, many companies and users are in no hurry to transfer their infrastructure to the cloud due to incompletely resolved problems related to the security of data storage and processing. In the case of storing and processing open data, a cloud provider gets access to the data, and an attacker can also gain by hacking an account. In the case of encrypted data transmission to the cloud, confidentiality will be preserved only in data storage tasks, since data processing will require a decryption task. The use of homomorphic ciphers allows the processing of encrypted data without violating their privacy. Homomorphic encryption is actively beginning to be used in machine learning tasks to transfer and ensure the confidentiality of resource-intensive operations for training a neural network in the cloud. The article offers a review and comparison of existing methods of homomorphic encryption for machine learning tasks.

Keywords—homomorphic encryption; neural networks; modular arithmetic; distributed data storage; machine learning



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64. An Overview On Diabetic Nephropathy

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Diabetic nephropathy (*Nephropatia diabetica*) also known as Kimmelstiel-Wilson syndrome or nodular diabetic glomerulosclerosis. The intercapillary glomerulonephritis, is a progressive kidney disease caused by angiopathy of capillaries in the kidney glomeruli. It is characterized by nephrotic syndrome and diffuse glomerulosclerosis. It is due to longstanding diabetes mellitus, and is a prime indication for dialysis in many Western countries.

Stage I – Hyperfiltration, Hypertrophy Stage I is found in thepatients with newly diagnosed diabetes and it is characterized by 20 – 40% increase in glomerular filtration (GF) and increase in capillary permeability leading to microalbuminuria (MAU) and development of renal hypertrophy. Therapy with insulin leads to decline in MAU and GF.

Stage II – Latent Diabetic Nephropathy It is a clinically silent phase with persistent hyperfiltration and hypertrophy. The GF remains elevated or returns to normal, but glomerular damage starts to manifest

Stage III – Incipient Diabetic Nephropathy Albuminuria 30-300 mg/day (20-200µg/min), glomerular basement membrane (GBM) thickening and almost unaffected GF are typical signs of this phase. About 20% of patients with microalbuminuria develop incipient nephropathy within 6-12 years on standard diabetic care, although up to 50% of diabetic patients may not develop microalbuminuria et all. Hypertension typically develops duringstage 3.

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65. INNOVATIVE BIOMARKERS AND NANOMEDICINE-BASED TECHNOLOGIES FOR THE IDENTIFICATION AND TREATMENT OF DEMENTIA

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Abstract

An ageing population brought on by longer life expectancies has led to an increase in dementia prevalence. Dementia is a term that refers to a combination of clinical symptoms that impact memory, judgment, and social abilities, and is defined by progressive memory and cognitive dysfunction. Old age, Brain Ischemia, Toxin Exposure, and Oxidative Stress are all factors that have an influence on the development and progression of dementia. Although dementia is typically associated with the elderly, the number of instances among those aged 40 to 60 is rapidly increasing. The results of the meta-analysis indicated the number of elderly that suffer from dementia amounts to 20 per 1000 population (95% confidence interval: 0.02–0.03). The prevalence was higher in older age groups (75 years and above) as compared to those below 75 years of age. However, the prevalence rates were similar for males and females and rural and urban population. Additionally, a significant barrier to efficient disease care is the late diagnosis of dementia. Therefore, there is an urgent need for newer treatments for dementia and improved diagnostic techniques. We examine and discuss dementia biomarkers in this article that may be used to identify dementia at early stages and allow the monitoring of disease progression. CSF Aβ40, Aβ42, Total tau, and Phosphorylated tau are the most sensitive biomarkers for diagnosis of Dementia because of their successful use as diagnostic tools. Additionally, we explore at the most innovative molecular approaches for treating dementia and nanomedicine-based technologies, which are exploited to both target medication to the brain and act as tools for diagnosing disease progression.

Recent nanoparticles made of polymeric, lipid, and metal-based materials are presently being widely investigated for their potential to increase the efficacy of both conventional medicines and innovative compounds for treating Dementia. In this review, the most recent investigations on these nanotechnologies are explained in depth and discussed.

Keywords: Nano-medicine Based Technologies, Dementia, Nanotechnology, Nanoparticles, Biomarkers and diagnosis techniques.

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66. SIGNIFICANCE OF NANOTECHNOLOGY BASED BIOSENSORS

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Abstract

In this modern era of science and technology, Nanotechnology plays a vital role in the field of Industries and Healthcare. In which nanotechnology based biosensor are in widely used in this present senarios. Biosensor is an analytical device which is used for the detection of specific biological analyst and obtains information regarding biomolecular profile of several diseases. Biosensors are generally consisting of an analyst, Bio-receptors (antibody, enzymes, and cells microorganisms), Transducer, and a Signal amplifier. Thereare few types of biosensor which are Optical Biosensor, Electrical biosensor, Electrochemical biosensor, Nanotube biosensor, nanowire biosensor, viral Biosensor, Nanoshell biosensor. Various types of Nanomaterial such as Nanowires, Nanoparticle's, Carbon nanotubes, Nano rods and Quantum dots etc are applied in biosensor for their unique physical, chemical, magnetic and optical properties which spot specificity and sensitivity detection of a biomolecules. It represents the unification of molecular sciences, molecular engineering, chemistry and biotechnology which hold in determining the magnitude of atom and molecules. Having great capability in application such as biological (DNA sensor, Immunosensor, Cell-based Sensors, Point of care sensors, bacterial sensors, and enzyme sensors) biomolecule recognition, pathogenic diagnosis and in environmental monitoring (detection of environmental pollution and toxicity, Agriculture monitoring, Ground waterscreening and ocean monitoring) further in monitorization of Cancer.

Keywords: Nanotechnology, Biotechnology, Biosensors, Bio receptors, Nanoparticle's, Nanowires, Nano shell, Transducer.

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67. Design of cost-effective hybrid GSM operated and Finger print password-based switchgear system using Zero crossing current for linemen safety

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ABSTRACT:

The line man safety during the maintenance work in electrical power system, transmission line, distribution line, transformer and also the commercial electrical line maintenance, the team of maintenance including line man has the responsibility to get power off the network during maintenance. But due to the communication failure, life of line man will be in risk on some circumstances. Hence Finger print password-based circuit breaker has been introduced for switching purpose of power system and also saving the life of lineman but huge current will be passing on to the circuit breakers when switched ON the switchgear. After completing line repairing work, line man has to be come back to substation for switch ON the switchgear by his own hands make use of finger print password-based manually. Hence travel time consumes a lot. To overcome this problem, the proposed hybrid system gives solution to GSM password-based switching operating system through remote control as well as to ensure less sparking on switchgear terminals by taking account of ZCC positions of the load. It saves time, reduce the loss off current at the time off ON and OFF of switchgear, as well as the safety of linemen and electrical maintenance workers during the work in electrical power system.

KEYWORDS: Switchgear, Zero crossing current, system security, circuit breaker, efficient communication finger print sensor.

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68. REVOLUTIONIZE OF CHEMICAL NATURE OF NATURAL POLYMER BY POLYMER GRAFTING

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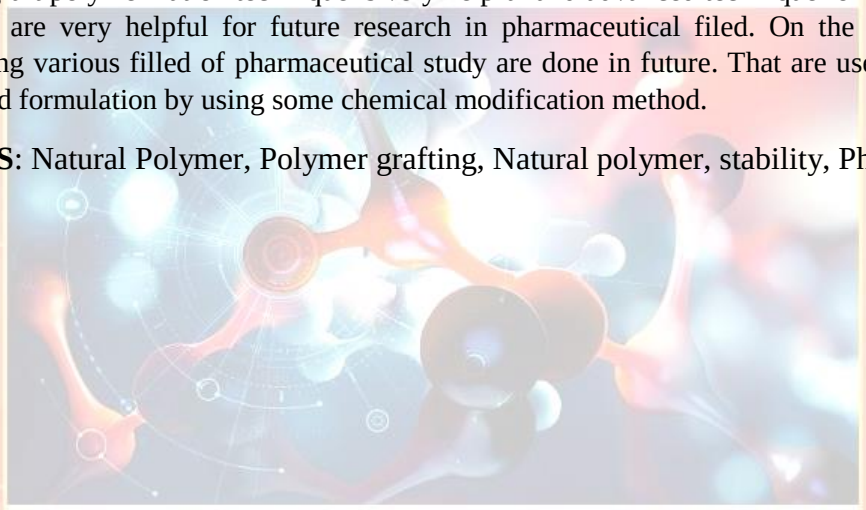
ABSTRACT

Polymer grafting technique introduced in basically chemistry field but now the other than chemistry various field are using this technique are develop the natural polymer properties. This research are based on the study of polymer grafting have the various application in numerous field for such as thermal stability, waste water treatment, controlled release drug delivery system and sustained drug release system, agriculture area, textile industry and pharmaceutical field. Among the selected works, we select the some natural polymer such as gum acacia and xanthan gum, gelatine, starch with cross linking polymer. which improves there disintegration time and thermal capacity. Natural polymer are economic and easy resource but they have some disadvantage and not used in pure form in this condition the graft polymerization technique is very helpful and advanced technique for research field .this overview are very helpful for future research in pharmaceutical filed. On the basis idea of polymer grafting various filled of pharmaceutical study are done in future. That are used in advance drug design and formulation by using some chemical modification method.

KEYWORDS: Natural Polymer, Polymer grafting, Natural polymer, stability, Physical nature.



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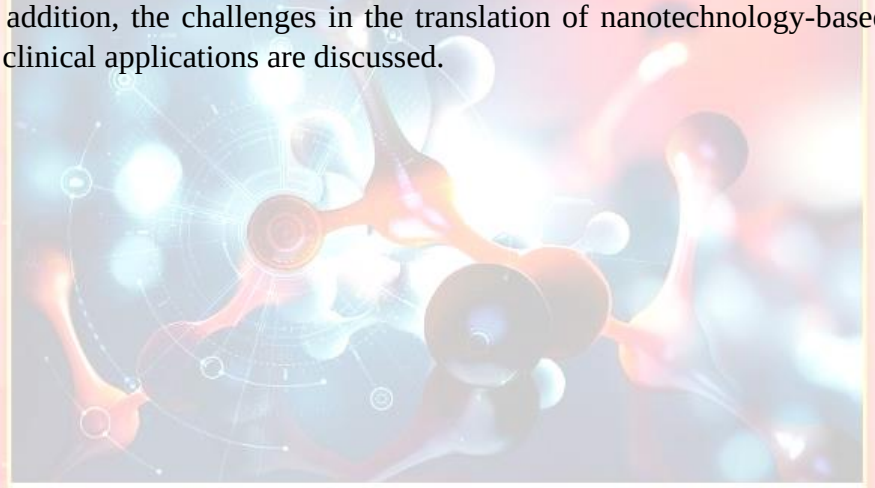
69. NANOTECHNOLOGY

Chitransh Tiwari

Abstract

Nanotechnology offers the means to target chemotherapies directly and selectively to cancerous cells and neoplasms, guide in surgical resection of tumors, and enhance the therapeutic efficacy of radiation-based and other current treatment modalities.

In the fight against cancer, early detection is a key factor for successful treatment. However, the detection of cancer in the early stage has been hindered by the intrinsic limits of conventional cancer diagnostic methods. Nanotechnology provides high sensitivity, specificity, and multiplexed measurement capacity and has therefore been investigated for the detection of extracellular cancer biomarkers and cancer cells, as well as for in vivo imaging. This review summarizes the latest developments in nanotechnology applications for cancer diagnosis. In addition, the challenges in the translation of nanotechnology-based diagnostic methods into clinical applications are discussed.



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70. ELECTROMAGNETC BRAKING SYSTEM AND AUTOMATIC POWER GENERATOR

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(Students of B.tech 7th semester mechanical engineering)

Guided by

Mr. Rupendre Marre

(Ass. Pro. Mechanical department)

RSR RUNGTA COLLEGE OF ENGINEERING AND TECHNOLOGY BHILAI CHHATTISGARH

ABSTRACT

The electromagnetic braking system is such that the magnetic force is used to apply the brakes, but the power required for braking is transmitted manually. When electricity is applied to the coil, a magnetic field develops in the plunger because current flows in the coil and attracts the plunger to the coil. As a result, this forces the brake shoe against the rotating drum and eventually the vehicle comes to a stop. In this project the advantage of using electromagnetic braking system in automobiles has been studied. These brakes may be incorporated as auxiliary brakes in heavy vehicles.

In Automatic Power Generator System we are using two batteries or two motors. In which one battery will power the vehicle and the other will charge, similarly one motor will drive the vehicle and second motor charge the second battery. A second motor will be installed behind the motor that drives the vehicle, which will be able to run in the reverse direction and charge the battery. The battery charges quickly and doesn't get very hot. Also lasts for a long time. Motor should be put in its right place and produce. Will get more energy and at the same time its weight will not be much.

Key words: brake, electromagnet, battery, motors.

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71. Literature Review On Security In Cloud Hosted Service And Self Hosted Services

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2 (Associate Prof., Department of CSE, MATS School of Engineering, India & IT MATS University, Raipur, India)

ABSTRACT

As more and more organizations consider moving their applications and data from dedicated hosting infrastructure, which they own and operate, to shared infrastructure leased from `the cloud, security remains a key sticking point. Tenants of cloud hosting providers have substantially less control over the construction, operation, and auditing of infrastructure they lease than infrastructure they own. Because cloud hosted infrastructure is shared, attackers can exploit the proximity that comes from becoming a tenant of the same cloud hosting provider. As a result, some have argued that that cloud hosted infrastructure is inherently less secure than the self hosted infrastructure, and that it will never be appropriate for high stakes applications such as health care or financial transaction processing. We strive to present a more balanced treatment of the potential security impacts of transitioning to cloud hosted infrastructure, surveying both the security costs and security benefits of doing so. The costs include exposure to new threats, some of which are technological, but many others of which are contractual, jurisdictional, and organizational. We also survey potential countermeasures to address these threats, which are also as likely to be contractual or procedural as technological. Transitioning to a cloud hosted infrastructure may also have security benefits some security measures have high up front costs, may become affordable when amortized at cloud scale, and impact threats common to both cloud and self hosted infrastructures.

Keyword : Cloud services, Cloud computing, networking.

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72. ROCKER BOGIE SUSPENSION VEHICLE FOR ROUGH TERRAIN

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ABSTRACT

Rocker bogie suspension vehicle for rough terrain. This vehicle can be used for defence. It can be transported to inaccessible places by connecting any type of goods carrying device. (ex.artillery etc). The suspension mechanism of this vehicle enables it to drive on rough roads. A series of mobility experiment in the agriculture land, rough roads, inclined, stairs and obstacles surface conclude that Rocker bogie can achieve some distance traverses on field. The Rocker-bogie suspension is a mechanism that enables a six-wheeled vehicle to passively keep all six wheels in contact with a surface even when driving on severely uneven terrain. IMU data to avoid the vehicle from flip. Each motor must have an encoder to determine it speed and torque. Rocker bogie can be used for surveillance purpose. By using HD camera in it. Rocker bogie is one of the stairs climbing robots. It can easily climb the stairs also. Rocker bogie suspension mechanism is applicable in different types of field. Rocker bogie mechanism can be used for surveillance in Army's and Battalion's. By the development of a bigger model it can be used for transporting man and material through a rough terrain or obstacles containing regions like stairs.

Key words: Suspension mechanism, Rocker bogie, IMU data

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73. FORMULATION OF SUGARLESS MEDICATED LOGENGES FOR DIABETIC PATIENTS

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ABSTRACT

The main objective of the present study is to develop sugar-free medicated lozenges for a diabetic patients to treat the dryness of the mouth and control glucose levels by using different herbal drugs. Mouth dryness is a very common symptom of diabetes. A dry mouth, or xerostomia, is caused when a person's salivary glands do not produce sufficient saliva to keep the mouth moist. Mouth dryness can be a symptom of diabetes and also a side effect of the medication that treats diabetes. Mouth dryness is the most common problem that people living with diabetes experience. The formulations of medicated lozenges contain xylitol natural sweetener and different therapeutically active compounds like Gymnamic acid, cinnamon oil, and licorice Giloy extract which are effective in controlling dryness of the mouth as well as controlling the glucose level in diabetic patients. This formulation contains flavoring agents such as menthol, acacia, and guar gum as a gum base. Preservatives are used to prevent the unconditional growth of bacteria. Sugar-free lozenges have a bright future as a novel method of delivering drugs for local action and systemic effect.

KEYWORDS: Sugarless, Xerostomia, Diabetes, Lozenges

74. NANOPARTICLES THERAPEUTIC APPLICATIONS AND LIMITATIONS

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Nanomedicine technologies are being developed to provide continuous and linked molecular diagnostics and therapeutics. Many diseases orignate from alterations in biologic processes at the molecular or nanoscale level. Nanomedicine can easily target difficult to reach sites with improved solubility and bioavailability and reduced adverse effects . The fundamental concept of Nanomedicine is not to just kill all aberrant cells by surgery, radiation therapy , or chemotherapy. Rather it is to fix cells , when appropriate, one cell-at-a time, to preserve and re-build organ systems . Hence, Nanomedicine can be used to achieve the same therapeutic effect at smaller does than their conventional counterparts and can offer impressive resolutions for various life-threatening diseases. The field of Nanomedicine aims to use the properties and physical characteristics of nanomaterials for the diagnosis and treatment of diseased at the molecular level.

Keywords: Nanomedicine,therapeutic,nanomaterials.

75. NANOTECHNOLOGY AND COMPUTER SCIENCE: TRENDS AND ADVANCE

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Nanotechnology is the aptitude to perceive, measure, operate, and build materials at the nanometer scale, the size of atoms and molecules. Nano technology in computer science is named as Nano computing .which is divided into categories- Electronic Nano computing, Mechanical Nano computing, Chemical Nano computing, Quantum Nano computing etc.Nanotechnology is a new emerging technology having endless applications in the real world. It is a technology whose future is a completely uncharted; taking both science and technology to levels we never imagined. It is an interdisciplinary field having its application and development in various fields such as applied science, mechanical, electrical and many others. The application and use of nano materials in electronic devices, in optical and magnetic components are the economically most important parts of the nanotechnology permeate the design of artefacts at nowadays and likely in the near future . Advances in technology repeatedly allow software to lower and lower levels.

Keywords: Nanotechnology,Quantum Nano computing,magnetic components.

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76. Herbal Vino : May a replacement of wine

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Wine is an alcoholic beverage that is created from grapes (Vitis vinifera). The sugars in grape juice are converted into alcohol during fermentation.The alcohol (ethanol) in wine blocks various nerve pathways in the brain. Wine also contains antioxidants that might benefit the heart and blood circulation.according to more than 100 epidemiologic studies. Researchers found that for every 10 grams of alcohol consumed per day (about one drink), there was a corresponding 7% increase in the risk of breast cancer.Alcohol interacts in potentially dangerous ways with many medications, including acetaminophen, antidepressants, anticonvulsants, painkillers, and sedatives, according to the National Institute on Alcohol Abuse and Alcoholism. It can also render antibiotics useless. Be sure to read warnings on all medication before drinking.This one's really scary! Frequently drinking alcohol, even in small amounts, can up your risk of an abnormally fast heartbeat. Researchers found that those who drank every day had the highest risk, compared to those who drank alcohol once or twice a week. Herbal wine has many health benefits like reduction in ovarian cancer, strengthening the bones and overall skeleton, cancer cells deteoriation, prevention of heart strokes by keeping the coronary arteries clean, elevating the lung functionality. Different types and cosmopolitan variety of herbs play a vital role in flavour enhancement and wine production. The herbs used in herbal wine are having more tannins, polyphenols and lower titratable acidity. Herbal extracts have surplus esters and aldehydes making it nutritional and medicinal. Tannins found in the herbs are astringent in nature; they have aroma enhancing and antioxidant properties. They contain hydroxyl groups and carboxyl groups to form strong complexes with proteins. These are diverged to have polygamous roles like enhancers, preservatives and antioxidants. **Keywords:** Wine; Herbal wine; Herbs; Health benefits; Extraction

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77. NANOMATERIAL BASED SENSOR FOR REDUCTION OF RADIATION

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Abstract In the modern era of technology we are all surrounded by some electronic device which are connected to network and makes our daily life easy and simple. These electronic devices are capable of communication, data sharing and getting information. Being connect to the network these electronic devices consume some dangerous electromagnetic radiation which is harmful for human beings. Nanotechnology tools and techniques will contribute in the creation of integrated chips. These integrated chips will inside the electronic device and reduce the electromagnetic radiation. Therefore, the proposed scheme is divided into two phases. First one is to made an integrated chip through nanotechnology and in the second phase fitting integrated chips into any electronic devices. So that Human beings will be less affected by radiation and they will be less likely to get sick from radiation.

Keywords ;- Nanotechnology, Radiation and Networking hardware.

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78. Determine the blood type using image processing

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Abstract

This paper represents an electronic system and an interface_application, able to perform all pre-transfusion tests quickly, in safe conditions, and with high reliability, even in remote positions. The system is based on the plate test method and is of small dimensions being easy to carry. Moreover, the data gaining is based on image processing techniques to obtain results, and it was developed using the VB.Net programming language. The user interface was developed with Xaml programming language as requirements of usability impose being compatible with a variety of platforms. This paper presents a methodology to determine human blood types in an emergency as well as a reliability study of the methodology proposed. The reliability study based on statistical tests determines the level of confidence in the approach. The equipment developed can automatically perform the plate test and determine blood types. This paper presents the development of a cost-effective image-processing system that allows the determination of human blood types. The approach allows for improving public health efficiency as there is not yet available low-cost commercial equipment to determine blood types in an emergency. This paper is concerned with the development of entropy-based registration criteria for automated 3D multi-modality medical image alignment.

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79. IOT and Nano Technology Techniques In The Development In IONT

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Abstract

Nearly every aspect of daily life is anticipated to be impacted by the Internet of Things (IoT), the next phase in the evolution of the Internet. Smart ecosystems and smart houses fall under this category. Studies in several allied fields, such as information technology and computer science, continue to focus heavily on the Internet of Things (IoT). We consider the adoption status and prospective advantages of the Internet of Everything (IoE), the Internet of Nano Things (IoNT), and the Internet of Things (IoT).

The study evaluates recent developments in the IoT, IoE, and IoNT fields before examining opportunities for the future growth of their applications. The development of intelligent environments is a sign of Internet usage and application compatibility.The "Internet of Things" resulted from this (IoT). The growing IoT idea enables access to the Internet of Nano Things (IoNT). networks based on the Internet of Things and nanotechnology, or networks that can connect objects as small as a nanometer over existing ones. Due to these nanomachines' Internet connectedness, the concept of the "Internet of Nano Things" was developed (IoNT). A network of nano-connected objects, organisms, or devices known as the Internet of Nano-Things (IoNT), which may wirelessly send data to the cloud and have individual identities on both computer networks and mobile networks.

Keywords: Internet of Things , Internet of Nano Things , Internet of Everything , Nano Machines , Nano sensors , Nano communication.

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80. APPLICATION AND METHODS OF NANOCARRIERS IN PHARMACEUTICALS

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ABSTRACT

The method or process of providing a pharmaceutical ingredient to achieve a therapeutic effect in people or animals is known as drug delivery. Drug distribution formulation technologies are patent-protected technologies that can alter the profile of medication release, absorption, and distribution and elimination with the goal of increasing product efficacy, safety and patient convenience and compliance. Efforts in the domain of medicine delivery are now underway the creation of a targeted delivery system in which the drug is delivered to the right people at the right time only active in the body's target location (for example, in the malignant tumours or other sick tissues) and kept them alive for a long time. Formulations in which the medicine is released over a period of time a controlled span of time derived from a formulation. Since the last three decades, nanocarrier delivery systems have been intensively studied as a medication delivery approach in pharmaceutical research. Improvement in bioavailability, increased (or changed) pharmacokinetics of hydrophobic active pharmaceutical ingredients (APIs), and protection of API from physical, chemical, or biological degradation are all advantages of nanoparticulate technologies in general. Because nanocarriers can have toxicological consequences, nanotoxicology has arisen as a new discipline of toxicology dedicated to the study of nanocarriers' negative impacts. As a result, the development of innovative nanocarriers for treatments and diagnostics must be coordinated with the evaluation of any potential toxicological and environmental consequences of these carriers.

Keyword: Nanocarrier, Nanoparticulate, Technique, Tumour

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81. Role of Water Coconut Waste Husk Nanoparticle for Adsorption of Water Pollutants in Coastal Area

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Abstract

Water pollution is a crucial challenge across the world. It is problem of serious environmental issue in coastal area in India also. Most of the oceans, rivers and surface water in our country are polluted due to industries, untreated sewage and solid wastes. Adsorption has been used for successful treatment of pollutants discharged from several source. Carbon nanoparticle prepared by water coconut waste husk is very appropriate method for waste water treatment as adsorbent. The coconut tree, or Cocos nucifera L., is the most significant and widely cultivated palm tree in the country. Composites with a high specific surface area and high pore interconnectivity can be employed for further applications, such as nano-filtration systems, as nanotechnology advances. In order to design and create a nano-filtration system, the study used a nanocomposite made of unique clay reinforced with cellulose acetate produced from coconut husk. Results from all the water samples before coconut water analysis revealed a significant difference at the 0.05 probability level, indicating that the stage of filtration affects the quality of water by reducing the colony forming of microorganisms, extending the shelf life, and improving the quality of water comparable to water filtration systems passing through sieve mesh and pasteurisation.

Keyword-Water pollution, Adsorbent, Water Coconut Waste, Nanoparticle

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82. A REVIEW ON NANOTECHNOLOGY IN ENERGY STOREHOUSE

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Abstract – The application of nanotechnologies for the improvement of electrical energy stores like batteries and super-capacitors turns out to be straight promising. Due to the high cell voltage and the remaining energy and power viscosity, the lithium-ion technology is related as the reassuring kind of electrical energy storehouse. Nanotechnologies can enhance capacity and safety of lithium-ion batteries firmly, as for illustration through new ceramic, heat-resistant and still flexible partitions and high-performance electrode materials. Several nanomaterials, in addition to other points based on nanoporous metalorganic composites, give development capabilities which appear to be economically recievable at least with regard to the operation of energy cells in movable electronic bias. Another important field is thermal energy storehouse. The energy demand in structures, for illustration, may be significantly reduced by using phase change appliances similar as idle heat storehouse. Fascinating, from an cost effective point of view, are also adsorption storehouses based on nanoporous materials like zeolites, which grids could be applied as heat stores in quarter heating grids or in production. The adsorption of water in zeolite allows the reversible storehouse and release of heat.

Keywords- Nanotechnology, Manomaterials, Nanoporous, Storehouse.

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83. Nanotechnology and Computer Science: Trends and advances

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ABSTRACT

Nanotechnology is the aptitude to perceive, measure, operate, and build materials at the nanometre scale, the size of atoms and molecules. Nanotechnology, is involved in many scientific and practical applications, including health, agriculture, electronic devices, computer science and many other fields. One of the most practical ways is to construct computers operating with radical difference. The appearance of quantum computers will include a radical change in the hardware and software that we now know but will permit one to perform calculations that are unconceivable nowadays.
Memory is employed as one of the main fragments in diverse circuits design, therefore the design and optimization of random-access memory (RAM) have become one of the greatest remarkable investigation regions in Quantum-dot Cellular Automata (QCA) equipment. It shows interaction between computer science and nanotechnology by highlighting two parallel axes, the first axis includes the use of nanotechnology in enhancing computer systems and devices, and the other one includes the role of computer science in promoting nanotechnology. It is emerging as an essential engineering analysis tool for new device designs and modern applications.

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84. Nanotechnology and Computer Science: Trends and advances

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ABSTRACT

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85. Unmanned Aerial System Based Tomato Yield Estimation Using Machine Learning

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ABSTRACT

Recent years have witnessed enormous growth in Unmanned Aircraft System (UAS) and sensor technology which made it possible to collect high spatial and temporal resolutions data over the crops throughout the growing season. The objective of this research is to develop a novel machine learning framework for marketable tomato yield estimation using multi-source and spatio-temporal remote sensing data collected from UAS. The proposed machine learning model is based on Artificial Neural Network (ANN) and it takes UAS based multi-temporal features such as canopy cover, canopy height, canopy volume, Excessive Greenness Index along with weather information such as humidity, precipitation, temperature, solar radiations and crop evapotranspiration (ETc) as input and predicts the corresponding marketable yield. The predicted yield is validated using the actual harvested yield. Breeders may be able to use the predicted yield as a parameter for genotype selection so that they can not only increase their experiment size for faster genotype selection but also to make efficient and informed decision on best performing genotypes. Moreover, yield prediction maps can be used to develop within-field management zones to optimize field management practices.

Keywords: UAS, ANN, tomato yield estimation.

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86. NANOSCIENCE AND NANOTECHNOLOGY IN FOOD SECTOR

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Nanoscience and nanotechnology have gained importance in various fields of science, engineering, medicine, colloid technologies, diagnostics, drug delivery, personal care applications and others due to their small size and unique physicochemical properties. In addition to the area mentioned above, it is also widely used in the food sector, specifically in preservation and packaging. Future applications in food may also be extended to improve shelf life, food quality, safety, fortification, and biosensors for contaminated or spoiled food or food packaging. Depending on the need and nature of the food, different types and shapes of nanomaterials are used. Characterization of these nanomaterials is essential to understand the interaction with the food matrix as well as the biological compartment. This overview is focused on the application of nanotechnology in the food industry. It also provides an insight into commercial products in the market using nanomaterials, current research and future aspects in these areas. They are currently being incorporated into commercial products faster than the development of knowledge and regulations to mitigate the potential health and environmental impacts associated with their production, application and disposal. As nanomaterials find new applications every day, attention must be paid to their potential toxic effects.

Keywords: Nanomaterial, physiochemical, biosensors, contaminated.

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87. Nanotechnology : A Wonderful confluence of Arts and culture

Bhavana Soni

Nano technology : It is a branch of technology that deals with making structures that are less than 100 nanometers long. The word Nano came from Greek language which means small those which cannot be seen by nakked eyes. Art is a language that can transcend geographical cultural, and chronological boundaries and help us to explore humanity and creativity by -: Thomas P. Campbell. Nanotechnology is vast field in science which is common and important topic in our day to day life. It has a big in art & culture. For art conservation work oil- in -water nanodroplets called micelles and microemulsions, which have been used to remove dirt and grine from wall and easel paintings. They provides an alternative to hydrocarbon -containing organic solvents like petroleum ether and white spirit, which are less environmentally friendly. This nanodroplets cleaning process was first used for the restoration of painting in Brancaui Chapel in Florence, Italy. The restorers used hydrocarbon droplets stabilized in water by substances called Surfactants. Nanocontainers for flaky paints: Another application of nanotechnology in arts conservation has to do with repairing flaky paint. Flaking can happen in old paint due to degradation of binders within the paint. Synthetic polymers have been widely applied to artifacts since the 1960s to consolidate flaking and detaching paints because they are good adhesives, easy to use and leave the original intensity of the colours unaffected. Synthetic polymers are harmful and gives stress to walls and damage the surface. To repair damage caused by the problematic synthetic polymers, restorers used a water- based microemulsion system containing water and chemical called esters along with surfactants. The nanosized containers of the organic esters are very effective interacting with the flaking polymer coating. This was used in removing a commercial polymer coating that had been applied in the 1970s, to preserve the paintings of the Annunciation Basilicam Nazareth depicting the Garden of Eden. Nanoparticles to restore artifacts and bones:- Hand, inorganic nanoparticles are also being used in various art restorations alongside the nanodroplet emulsion – When applied to on porous artifacts and paintings, calcium hydroxide (Ca(OH)2) nanoparticles can penetrate the surface because of their small size and high interactions. Ca(OH)2 particles can react with atmosphenic CO2 inside the pores of an object and transform into a new CaCO3 network to reinstate the mechanical properties of the original artifacts. This method was used in the consolidation of Mayan wall paintings in Calakmul Mexico. It can also be used in restoration to recover bones of archeology Palenthology research. Decay of ancient bones based on a mechanism similar osteoporosis a condition that typically affects older adults causing brittleness of bones due to loss of calcium. Nanotechnology as an art restoration solution is clearly a promising field, and it will be exciting to watch how it develops in the future.

88. Role of Nanobiotechnology in Drug Discovery, Development and Molecular Diagnostic

Harsh gokhle

Abstract

Nano-biotechnology has already tested its magnitude in a number of sections of existence science and biotechnology field. It is no longer hyperbole to say that in future, nano-scale method would in reality take the associated science area to the subsequent level. Since, there are technical hurdles present; despite the fact that scientists are giving their great to overcome such problems. Applications of nano-biotechnology have already been discussed in this chapter. Future potential are really associated with innovative amendment of such applications. Despite of some impedance, this technology presents giant hope in the future. It performs most important position in distinct sorts of biomedical application such as shipping of drug, gene therapy, biosensors, biomarkers and molecular imaging. It additionally leads to innovations in this field. The fundamental lookup goal of this discipline would be the innovation of early analysis approach and cure with target-specific remedy therapy. Although there would possibly be some safety worries with admire to the in vivo use of nanoparticles, research are in region to decide the nature and extent of adverse events.

89. TRASH IS CASH – IOT BASED SMART WASTE COLLECTION SYSTEM FOR SMART CITY

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ABSTRACT:

In the present day scenario, many times we see that the garbage bins or dust bin are placed at public places in the cities are overflowing due to increase in the waste everyday. It creates un hygienic condition for the people and creates bad smell around the surroundings this leads in spreading some deadly diseases & human illness, to avoid such a situation we are planning to design "IOT BASED SMART WASTE COLLECTION SYSTEM FOR SMART CITY". There is a lot of waste in our homes. The waste may be the electronic devices like metal, tabs, batteries electronic gadgets, home appliances. Through this system the municipal authorities can collect the waste from the common public and reward them accordingly. To collect the waste there is a Smart Bin which is having a display. When the person comes for waste disposal he can press the button on the display and get the QR code by scanning that QR code in the Mobile App he will be getting one form which he needs to fill and after filling he may dispose his waste. The bin is connected with level sensors and whenever a person disposes the waste the bin level changes and the same data is stored in the cloud. From the device the Authorities can reward the public who has disposed the waste.

KEYWORD:
Rpi+Touch screen display+Sensors

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