IJARSCT
Impact Factor: 6.252
Scientific Journal Impact Factor
www.sjifactor.com

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

ISSN No. : 2581-9429

Souvenir of International E-Conference on Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology (ICRTCPLCT–2022) 29th March 2022

Organized By

Anjuman Islam Janjira Degree College of Science
Murud-Janjira, Raigad,(MS) India

Souvenir of

International E-Conference

on

"Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology"

(ICRTCPLCT–2022)

29th March 2022

Volume 3, Issue 4, March 2022

Lambert Publication's

First Impression 2022

Proceeding of International E-Conference on Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology (ICRTCPLCT–2022)

29th March 2022

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Anjuman Islam Janjira Degree College of Science

Murud-Janjira, Raigad, (MS) India

ISBN: 978-93-91265-55-7

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Murud-Janjira, District-Raigad,(MS) India, 402401.

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INTERNATIONAL-E-CONFERENCE

ON

RECENT TRENDS IN CHEMICAL SCIENCE PHYSICAL SCIENCE LIFE SCIENCE AND COMPUTER TECHNOLOGY

(*ICRTCPLCT–2022)*

29th March 2022

Organized by

Anjuman Islam Janjira Degree College of Science

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Contents

Conference Schedule

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5	Invited Talk2	12:15pm(IST)	Hon. Dr. RajaniPanchang
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7	Invited Talk4	01:15pm(IST)	Hon. Dr. Balasaheb M. Gaykar
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About the College

Anjuman Islam Janjira is one of the oldest education trust established in the year 1907. This trust especially focus on upliftment of Muslim community students to cater valuable education in Urdu medium.

Trust not only stop by catering school education also started technical education.

Then in 2009, Anjuman started Degree College of science in murudJanjira.

Earlier the strength of the college was poor. Now day by day college is going to develop qualitatively.

It's one of the non-grant college which is accredited by NAAC with B-grade. It's again one of the milestone.

The college offers B.Sc., and B.Sc. in computer Science at UG level and M.Sc. Organic Chemistry & Botany Programmes at PG level.

Every year this college organizes different activities and workshops which are useful for students and society.

From last five years result of this college for final year is 100%. Apart from online in offline examination students of this college secure above 90%.

College not Stop here, work hard to have post graduate education in this college so from academic year 2021-22, M.Sc. chemistry and botany started.

Also looking for research centre in near future.

The students of this college not only academically strong but also proven quality in extra-curricular activities.

Students of this college take part in cultural, sports, social work, different workshops, conferences and research activities.

This year this college got best college award along with chairman, teacher and nonteaching staff from PROTAN, Maharashtra.

This college also felicitated by Tahsildar Murud and District collector for taking active part in voters awareness campaign.

About Conference

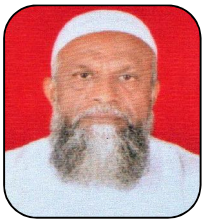
International-E-Conference on recent trends in chemical science, physical, life sciences and Computer technology (ICRT CPLCT-2022) is a brain storming to furnish on opportunity to academics aspiring scientist and research scholars from various discipline of science to interact and present their research execution in their respective field. This conference will be platform to highlight research achievement in the field of chemical science, physical science, life science and Computer Technology. Recent research trends of stated topics will be discussed in ICRTCPLCT-2022.

- **Subthemes for ICRTCPLCT–2022**

1. Green Chemistry
2. Material for electronic devises
3. Synthetic Chemistry
4. Smart Computers
5. Cyber Security
6. Plant Diversity
7. Bioorganic Chemistry
8. Agro-tourism
9. Nanomaterial for future
10. Bio fertilizers & organic farming
11. Mixed Metal Oxides
12. Polymer Chemistry
13. Scope of Computer technology
14. Artificial intelligence
15. Ethical Hacking
16. Medicinal Plants
17. Sensor
18. Biodiversity
19. Semiconductors
20. Environmental Sustainability Electronic & Magnetic Property

MESSAGE BY
EXECUTIVE COUNCIL COMMITTEE
Anjuman Islam Janjira

President



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JANJIRA MURUD, DIST. RAIGAD

Phone: 02144 - 274058

E-mail: aijheadoffice1907@gmail.com

Regd. No. B 57(K)

انجمن اسلام جنجیرہ

جنجیرہ مروڈ، ضلع رائے گڈھ

अंजुमन इस्लाम जंजिरा

जंजिरा मुरुड, जि. रायगड

Ref. No. AIJ/2748/2022 مراسلہ نمبر

Date: 25/03/2022 تاریخ

Massage by Executive Committee

It is indeed pleasure to know that Anjuman Islam Janjira Degree College of Science, Murud-Janjira, Raigad, Maharashtra India has taken lead to organize first International e-conference on 'Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology' (ICRTCPLCT–2022) on 29th March 2022 and brings out a souvenir to mark the occasion.

We hope this conference will encourage the young scientist, aspirant & research scholars to archive their goal in near future.

We congratulate Chairman & College Development Committee team members, Principal, Convener, Co- convener, Secretary for organizing this International E-Conference.

We wish best of success for the Conference.

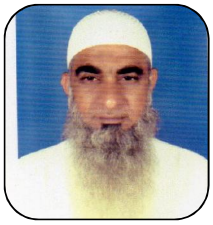
President
Anjuman Islam Janjira

MESSAGE BY
COLLEGE DEVELOPMENT COMMITTEE
Anjuman Islam Janjira Degree College of Science

Chairman

Mr. S. Zainuddin Kadiri

Member



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Mr. Ismail Shaikh

Member

Mr. Tausif Fattey

Member

Mr. A. Latif Pathan

ANJUMAN ISLAM JANJIRA
DEGREE COLLEGE OF SCINCE
(Affiliated to University ofMumbai)
Janjira Murud, Dist. Raigad, Pin.402401
E-mail: aijcollege@gmail.com Website: www.aijdegreecollege.com
Phone : 7038601376 / 9270083578

Anjuman Islam Janjira Established in 1907

NAAC Accredited With 2.35 CGPA B Grade

Best College Award 2019-20 By Jolly Club Raigad

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CDC Member

TAUSIF I. FATTEY
CDC Member

DR. SAJID SHAIKH
I/C. Principal

Ref. No. AIJDCM/ 2747/2022 Date: 25/03/2022

Message by College Development Committee

Anjuman Islam Janjira Degree College of Science, Murud-Janjira, Raigad was established in 2009, the first in Taluka. The entire team of Anjuman Islam Janjira successfully develop the campus infrastructure & college went through NAAC Accreditation first cycle in 2019 with 'B' grade. Earlier this college only cater undergraduate education in the chemistry, Botany & Computer Science. From A.Y. 2021-22, this college started M.Sc. Chemistry & M.Sc. Botany.

Being a chairman and from entire team of college development committee, we feel proud that this college is organizing International e-conference on 'Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology' (ICRTCPLCT-2022) on 29th March 2022. Research scholars & Professors from various part will participate in this conference.

We feel that this conference will be useful to all budding researchers. There will be useful academic work will be shared and discussed in the conference.

The students and teaching staff of this college will also be benefited from this conference.

We all thankful to concern staff involved in organizing the conference & wish a best of success for the conference.

Chairman
College Development Committee

MESSAGE BY
ORGANIZING COMMITTEE

Convener

Mr. Shoyeab Khan

Co- Convener

Mr. Nitin Pawar

Secretary

Dr. Swati Kharade

Member

Mr. Anjum Dakhwe

Member

Miss. Shruti Karbhari

MESSAGE

Its our great pleasure and great honour for us to welcome you all to the International Conference on "Recent Trends In Chemical Science Physical Science Life Science And Computer Technology (Icrtcplct–2022)" on 29th March 2022.

We are very happy that this institute is bringing the distinguished scientists, researchers and budding research scholars together for this conference. I hope these efforts of this institute will explore the recent innovations and provide new directions for the research in this area. On behalf of organizing committee, we thank and welcome to the persons of eminence scientists from different areas of Chemical Science, Life Science, Physical Science and Computer Science from different international and national institutions, faculties from various colleges and research students. We also extend our sincere thanks to management and principal of this institute for their constant support. Thanks to all.

MESSAGE BY HON'BLE

Dr. Sudhir S. Puranik

Registrar

University of Mumbai

University of Mumbai

Re-Accredited A++ Grade with CGPA 3.65 by NAAC

Sudhir Puranik
Registrar

MESSAGE

I am very glad to know that Anjuman Islam Janjira Degree College of Science Murud-Janjira, Raigad organizing International E-conference on 'Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology'(ICRTCPLCT–2022) on 29th March 2022. The focus of this conference is to highlight therecent trends in Science &Technologies.

We are now living in the society of innovation.Innovationscomes up through research. Research becomes one of the most important componentsof Higher Education. Research in the field of Science & Technologies has significance which helps in betterment of human being & environment at large. This Conference which promoting research activities are very much essential for budding scientist.

Organizers of such conferences provide a platform for budding researchers and experts to exchange their views and intellectual discussions which will lead to quality research. I acknowledge thisinstitutes for their efforts towards recognition of the research.

I congratulate the organizers, delegates & wishes best for a great success in organization of International E-Conference'Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology'.

(Sudhir Puranik)
Registrar

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MESSAGE BY HON'BLE

Dr. Sajid F. Shaikh

I/C Principal

Anjuman Islam Janjira Degree College

Anjuman Islam Janjira
Established in 1907

ANJUMAN ISLAM JANJIRA DEGREE COLLEGE OF SCINCE

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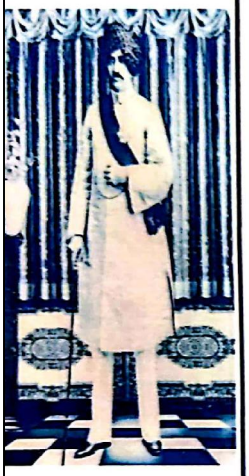

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Murud Halqa President

S. ZAINUDDIN KADIRI
CDC Chairman

DR. SAJID SHAIKH
I/C. Prinicpal

Ref. No. AIJDCM/2750/2022 Date: 26/03/2022

Message

It gives me immense pleasure to welcome honorable delegates& participants on the occasion of First International e-conference on 'Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology' (ICRTCPLCT-2022) organized by this college. It is intention of this college to provide platform to the research scholars in the field of science & technologies to tackle the recent achievement through the present conference organized on 29th March 2022.

This college is one of the Unaided Minority institutes where majority near about 80% Muslim Girls students take education since 2009. This college focus on the honest development of students and also make society responsible & cultured citizens. This college always tries to inculcate value added education by organizing different activities, workshop, seminars& conferences.

I think so this conference will also help to budding researchers to give valuable knowledge and to provide quality research for nations development.

I again welcome all the delegates for this international e-conference & look forward to most successful discussions.

JANJIRA MURUD

Dr. Sajid F. Shaikh
I/C Principal
Anjuman Islam Janjira Degree College of Science

MESSAGE BY HON'BLE

Dr. Sharad S. Phulari

Principal

Thakur Shyamnarayan Degree College

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Ref: TSDC/AIJD/670/21-22

Date: 25th March 2022

MESSAGE

BEST WISHES FOR INTERNATIONAL E-CONFERENCE

I am happy to know the Anjuman Islam Janjira's Anjuman Islam Janjira Degree College of Science, Murud Janjira, District Raigad (Maharashtra) India, 400401, is organizing 'INTERNATIONAL E-CONFERENCE' on Recent Trends in Chemical ,Science, Physical Science, Life Science and Computer Technology, on Tuesday 29th March 2022.

I appreciate the noble, relevant and unique efforts of the IQAC of Anjuman Islam Janjira Degree College of Science, Murud Janjira for organizing such an International event. It is great initiative by the college to have international thought exchange process on recent advances in many more science horizons. The theme of conference covers the important science arenas where advances takes place in every day to every hour and to every minute. The HEI under the leadership of Dr. Sajid Shaikh, putting efforts in finding out recent trends in allied science streams. The outcome of trends in science streams will focuses on global progress.

I extend my greetings and felicitations to all those associates with the Anjuman Islam janjira Degree College of Science, Murud Janjira and wish the International E-conference all success.

Dr. Sharad Phulari
Principal

Mumbai
25th March 2022

MESSAGE BY HON'BLE

Dr. Anil K. Patil

Principal

JSM College- Alibag

Janata Shikshan Mandal's

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Index No. : J/17.07.008

Principal : Dr. Anil K. Patil (M.Sc., Ph.D.)
President : Adv. Gautam P. Patil

Permanently Affiliated to University of Mumbai. Included under section2 (f), 12(B) of the U.G.C. Reaccredited by NAAC with 'B' Grade(CGPA:2.08)
Mumbai University Best College Award 2018 - 2019.

Ref. No. Date :

Message

It gives me pleasure to know that Anjuman Islam Janjira Degree college of science, Murud – Janjira is organising an International E- Conference on 'Recent Trends in Chemical Sciences, Physical Sciences, Life Sciences and Computer Technology'. I am sure this conference will provide a platform for discussion on variety of themes of the conference like Green Chemistry, Biodiversity, Artificial intelligence, Cyber security and Environmental security. The interaction of participants throughout the globe, internationally renowned delegates and scientists will go a long way in knowledge sharing to help students, teachers and researchers participating in the conference.

This is a conference of international significance. The proceedings represent scholarly work of advanced and innovative thinkers and educators from around the world. I feel it is only through the exchange of information can keep us updated about the recent trends and innovation in Science in the rapidly changing world around us.

I wish all the delegates, a great educational and informative experience at the conference. My best wishes to the organizers of the conference. I appreciate the efforts taken by Principal of the college Dr. Sajid F. Shaikh and his team to organize this international conference. I congratulate the management of Anjuman Islam Janjira on preceding this wonderful step.

All the Best Wishes.

Dr. Anil K. Patil

MESSAGE BY HON'BLE

Dr. Mehboob Nagarbawadi

Principal

V.N College Murud Janjira

कोकण उन्नती मित्र मंडळ संचालित
वसंतराव नाईक कला व वाणिज्य महाविद्यालय
KONKAN UNNATI MITRA MANDAL'S
VASANTRAO NAIK COLLEGE OF ARTS & COMMERCE
AFFILIATED TO UNIVERSITY OF MUMBAI, NAAC ACCREDITED COLLEGE
RUD JANJIRA, DIST. RAIGAD 402 401. Ph. No. 02144-274662 / 276484, Email : vrnaikcollege@gmail.com, www.vncollegemurud.com

Founder President
Late Barrister A. R. Antulay
Ex. Chief Minister, Maharashtra
Ex. Union Cabinet Minister,
Govt. of India

28 MAR 2022

It gives me an immense pleasure to know that Anjuman Islam Janjira's, Anjuman Islam Janjira Degree college of Science, Murud-Janjira is organizing an International- E- Conference on Recent Trends in Chemical Science, Physical Science, Life Science & Computer Technology.

It is heartening to know that Anjuman Islam Janjira Degree College of Science Murud-Janjira has been doing a valuable effort in Science education hereby creating a nurturing environment in Education Institution and Research Institutions.

I convey my best wishes for the success of International Conference and Publication of souvenir.

V.N. COLLEGE MURUD JANJIRA RAIGAD

Dr. Mehboob Nagarbawadi.
PRINCIPAL
KUMM'S VASANTRAO NAIK
COLLEGE OF ARTS & COMMERCE
MURUD-JANJIRA

MESSAGE BY HON'BLE

Dr. B. V. Jadhav

Professor

Changu Kana Thakur Arts, Commerce & Science College (Autonomous)
New Panvel- 410206.

Message

It is indeed pleasure to know that the Anjuman Islam Janjira's Anjuman Islam Janjira Degree College of Science, Murud-Janjira District-Raigad is organising International E-Conference on "Recent trends in chemical science, physical, life sciences and Computer technology (ICRT CPLCT-2022)"on March 29, 2022.

Recent Trends in Material Science, Bio-Science and Information Technology has revolutionized modern society through synthesizing new materials and probing into the fundamental processes of life.

I congratulate the team organising ICRT CPLCT-2022and distinguished participants. I hope this conference will provide a platform for the invited expert, eminent researchers, young scholars and students to discuss and deliberate on Recent Trends in Material Science, Bio-Science and Information Technology.

I wish all success to this conference.

Volume 2, Issue 4, March 2022

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

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Oral Presentations

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IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Key Note Address

Unleashing the Power of AI in Education

Rania Lampou
Global STEM Instructor
Greek Ministry of Education & Religious Affairs
Greek Astronomy and Space Company

Artificial Intelligence has the potential to address some of today's most pressing educational issues, reinvent and innovate teaching and learning practices, and as a result accelerate the progress towards SDG 4. However, these rapid technological advancements inevitably carry with them multiple risks and challenges. In this presentation, will be explored the benefits and applications of AI in education as well as the challenges and concerns. It will behighlighted that behindany application of AI in education is not to replace teachers, but give them a helping hand in understanding the potential and limitations of each student. Three parameters will be explored: learning about AI,learning with the use of AI-powered tools in classrooms and preparing citizens for the potential impact of AI on humanity. Finally, this presentation will refer to policy recommendations on AI in education including the promotion of equitable and inclusive use of AI in education, the empowerment of teachers with AI and the development of values and skills for life and work in the AI era.

DOI: 10.48175/568

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
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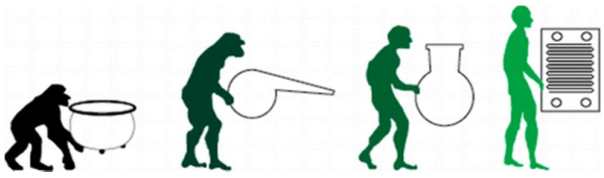
Invited Talk 1

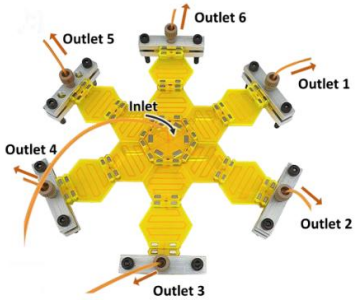
Flask Chemistry to Microreactor Technology from the Perspective of Synthetic Organic Chemists

Brijesh M. Sharma, Ph.D.
Virginia Commonwealth University
Richmond, Virginia, United States of America

Abstract: Recently, there has been increased interest in the application of continuous manufacturing to pharmaceuticals. Fortunately, more and more companies are embracing continuous manufacturing, several receiving approvals of continuously produced drug products in recent years. This presentation will highlight developments in challenging reactions which can be used to access complex small molecules which are otherwise difficult to perform in batch (round bottom flask). Reactions such as ultrafast chemistry, photochemistry, issues of handling of solids in flow and other relevant factors will be discussed. Apart from this few pharma case studies will be presented which has been benefited by continuous flow.I hope to demonstrate how flow chemistry provides us a tool for development of new and more efficient reactions that are robust, highly scalable, and provide access to complex and novel chemotypes.



J. Org. Chem. **2013**, 78, 6384−6389.
ACS Sustain. Chem. Eng, Accepted, **2022**



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IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Invited Talk 2

Fractal and its Application in Daily Life

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Abstract of Talk

Fractals are irregular complex shapes and pretty pictures generated by computers. The real life example of fractals are shape of clouds, the leaves in trees, the veins in a body, the share prices in stock market etc.

To study the complex phenomena occurring in nature such as the scaling behavior of naturally occurring shapes, the concept of fractal and fractal dimension plays great role in such patterns and events. Common aspects of many processes occurring in a strangely wide variety of fields including physics, chemistry, mathematics, biology, economics etc have been represented by the morphological and temporal scaling behavior. In many cases characterization and quantification of complex and irregular nature of phenomena, the associated geometry and the procedure can be done in terms of 'Fractal Dimension'. Fractal dimension is a fractional number characterizing the phenomena and associated complexity. In many cases, from the point of view of its geometry, it represents the dimension of the space in which the object in question is embedded.

Concept of fractal geometry and scaling behavior made the task easy to quantify the highly complex and complicated phenomena and characterized them, which were considered to be difficult to quantify using traditional Euclidean geometry. Study of growth phenomena, such as turbulence, iterative functions, colloidal aggregation, biological pattern formation, stock markets showed scale invariance and self-affinity. The talk which I am going to deliver in this conference deals with study of dendritic patterns, their growth and the growth processes. The study includes random phenomena and their characterization and application of the concept of fractal to characterize irregular shapes. The work includes the branch length, growth velocity and fractal dimension evaluation in viscous fingering. Fractal character of dendritc pattern electro-deposition and electro-less deposition under different conditions is also presented.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Fractal analysis has become common in many disciplines and Fractals have many applications in science and technology.

In Astronomy the galaxy structures are highly irregular and self-similar. The cosmologists need more data about the matter distribution in the universe to prove that we are living in a fractal universe. In nature Fractals are used to study soil erosion and to analyze seismic patterns as well. By looking at nature; so many feature of mother nature exhibit fractal properties, maybe the whole world around us is a fractal after all.

In computer science actually, the most useful use of fractals in computer science is the fractal image compression. This kind of compression uses the fact that the real world is well described by fractal geometry. By this way, images are compressed much more than by usual ways (eg: JPEG or GIF file formats). Another advantage of fractal compression is that when the picture is enlarged, there is no pixelisation. The picture seems very often better when its size is increased.

In fluid mechanics, the study of turbulence in flows is very adapted to fractals. Turbulent flow of fluid are chaotic and very difficult to model. A fractal analysis of them helps engineers and physicists to better understand complexity in flow of fluid. In petroleum science, The Porous media have a very complex geometry and are well represented by fractal. This is useful in recovery of secondary oil.

In Telecommunications, The use of fractal-shaped antennae that reduce greatly the size and the weight of the antennas. The benefits depend on the concept of fractal applied, frequency of interest, and so on. In general the fractal parts produces 'fractal loading' and makes the antenna smaller for a given frequency of use. In Surface physics; The Fractals are used to describe the roughness of surfaces. A rough surface is characterized by a different method of fractals.

In Medicine; Biosensor interactions can be studied by using fractals.

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Impact Factor: 6.252

Invited Talk 3

E-Waste: A Promise for a Sustainable Future

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We have left the information revolution far behind and are now in the social revolution! All thanks to the range of gadgets available in the market at prices suitable to an equally wide diversity of pockets! If industrialisation and urbanisation were not enough, the pandemic increased the need for gadgets and electronic appliances. They are no more a luxury; instead, they have become a necessity. As gadgets make life easy, the consumerism of electronic gadgets has exponentially gone up. Fast changing technology and competition amongst manufacturers has resulted in increased production of electronic waste.

At the times when waste management and overflowing landfills is an unresolved issue, electronic waste poses much bigger challenges that estimated before. E-wate is a much complex waste and almost entirely comprises of non-biodegradable components; additionally, it contains toxic and hazardous. The e-waste is not only a source of pollution but also has a major role in global warming and climate change. This demands a adoption pf responsible measures in producing, utilising, recycling and managing e-waste.

The developed nations are the largest producers of waste but are also better organised in terms of managing their e-waste. Developing and under-developed nations however are not yet organised and aligned to the culture of recycling or reuse. There is extreme lack of understanding e-waste management as an opportunity and e-waste as a resource. An understanding of linkages between e-waste, its production, its disposal, its impact on environment, and economy is preliminary to the future of mankind. There is a need for people's participation to formalise the e-waste recycling sector. With unconventional energy resources replacing the conventional fuels, the demand for batteries is on the rise. Does this mean increased pressure on the electronic waste generation scenarios? Can technology provide a solution? Can we as a society provide a solution for a sustainable future?

IJARSCT
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International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
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Impact Factor: 6.252

Invited Talk 4

Review on Recent Developments in Medicine and Life Sciences

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People living in socially-deprived areas are more likely to die prematurely from cardiovascular (CV) complications according to new research. The study found social deprivation can explain a significant proportion of the geographic variation in premature cardiovascular mortality. Therefore "Socioeconomic status plays a big role in access to preventive care, risk factor control, and incidence of disease". In addition to this the further studies revealed that the risk of suffering an ischaemic stroke, the most common type of cerebrovascular event, is 16 percent less in people who have green spaces less than 300 meters from their homes.

The cardiovascular (CV) complications and cerebrovascular strokes were thought to correlate with 'bad' cholesterol (LDL-C) which was controlled by using statins to lower LDL-C positively. New research from RCSI University of Medicine and Health Sciences has revealed that the link between 'bad' cholesterol (LDL-C) and poor health outcomes, such as heart attack and stroke, may not be as strong as previously thought.

Similarly researchers have observed certain recent developmental mechanisms of self defense in plants. Animals often use highly specific signals to warn their herd about approaching predators. Surprisingly, similar behaviors are also observed among plants.Shedding more light on this phenomenon, researchers have discovered one such mechanism. Using Arabidopsis thaliana as a model system, the researchers have shown that herbivore-damaged plants give off volatile chemical 'scents' that trigger epigenetic modifications in the defense genes of neighboring plants. These genes subsequently trigger anti-herbivore defense systems.

Keywords: Cardiovascular, Preventive Care, Green Spaces, Self Defense in Plants

IJARSCT
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Impact Factor: 6.252

Comparative Study of Structural and Magnetic Properties of Al, Ni and La Substituted M Type Calcium Hexaferrite

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Abstract: In the current research, Al, Ni and La substituted M type Ca hexaferrite with composition $CaM_1Fe_{11}O_{19}$ (M = Al/Ni/La) were synthesized by sol gel auto combustion method using metal nitrates as oxidants and citric acid as reducing agent. The prepared samples were characterized by XRD, FTIR, SEM and VSM. X-ray diffraction study shows that all the samples have lattice parameters 'a' and 'c' well within the range of M-type hexaferrite. The SEM images show that grain sizes are in the nanometer range. FTIR peaks confirm the structure as M-type hexaferrite. EDAX spectrum gives the homogeneous distribution of ions in all the samples. In $CaNi_1Fe_{11}O_{19}$, we get saturation magnetization 12.18 emu/gm and coercivity 193.2 Oe, while in $CaAl_1Fe_{11}O_{19}$, we get saturation magnetization 1.89 emu/gm and coercivity 348.2 Oe. On the other hand, in $CaLa_1Fe_{11}O_{19}$, we get saturation magnetization 0.55 emu/gm and coercivity 404.4 Oe. The obtained result shows that La and Al substituted M-type Ca hexaferrite are suitable for low-density magnetic recording devices.

Keywords: M-type calcium hexaferrite, sol-gel, saturation magnetization, coercivity.

IJARSCT
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Impact Factor: 6.252

Generalized Fibonacci Lucas Sequence's Determinantal Identities

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Abstract: There is different aspect on the study of determinants. Determinants have conned a significant part is individual space in mathematics. For particular, they are entirely useful in the analysis and solution of system of linear equations. In this paper, some identities of Generalized Fibonacci-Lucas sequence related to determinant are presented.

Keywords: Fibonacci Sequence, Lucas Sequence, Generalized Fibonacci Lucas Sequence

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

The Effect of Cyber- Crime Incontextto Society

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Abstract: In the age of science and technology the negative impact of cyber-crime on the society. Now a days everybody use the internet and intranet connectivity and use the information transportation, personal, economical, business, secretes etc. it's used in tremendous by netizens used various gadgets and obtain the information and its misuse. But most of the students unable to understand its crime i.e. cyber-crime.

Now coming days current research papers are mostly concentrate on the awareness among the people and mostly among the students about the cyber-crime awareness. The hackers used the various fishing trap and obtain the various important information, blank information, decoding information, mentally disturb to the users. The every netizens to know aboutthe IT –Act, all information about the act, if violation of the law they know its effect, punishments. Everybody have the basic knowledge of cyber-crime and its awareness using before the internet and technological gadgets.

Keywords: IT Act, Students (Minor), Hackers (Black), Society

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Ultrasound Assisted Synthesis of Quinoline Derivatives through One Pot Multicomponent (Povarov) Reaction

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Abstract: In this study, one pot multistep synthesis of tetrahydroquinoline (4a-h) derivatives was achieved by three component reaction of aromatic aldehyde (1a-h), amylamine (2) and dihydrofuran (3) in using ethanol as a solvent with InCl3 catalyst. Its simple, easily handled and environmentally friendly method (ultrasonic irradiation technique) and single product formed. Synthesized derivatives were confirmed by 1H NMR, 13H NMR, FT-IR etc. spectroscopic techniques.

Keywords: Tetrahydroquinoline, Ultrasonic Irradiation, One pot multicomponent reaction, aromatic aldehyde.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Generalized Exponential Information Measure Defined on Intuitionistic Fuzzy Set

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Abstract: The precise value of some factors is difficult to measure in the faltering atmosphere. It can be easily approximated by intuitionistic fuzzy linguistic term in the real-life world problem. To deal with such situations, in this paper exponential information measures for intuitionistic fuzzy set is introduced and characterized axiomatically which is a generalized version of the fuzzy information measure. To show the effectiveness of the proposed measure, it is compared with the existing measures. Fuzzy discrimination and symmetric discrimination measures are defined and their validity is checked. Important properties of new measures are studied. Their applications in pattern recognition and diagnosis problem of crop disease are discussed.

Keywords: Fuzzy set, Fuzzy information, intuitionistic fuzzy set, Discrimination measure, Pattern cognition.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Use of Silver Nanoparticles for Detection of Arsenic Trioxide Contamination of Water

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Abstract: Arsenic trioxide is a potent contaminant of groundwater. Itis highly toxic, causing chronic poisoning, skin lesions, and skin cancer. It`s permissible limit in drinking water in India it is less than 0.05 ppm. Several methods have been proposed for the detection of arsenic. Present research investigates the use of silver nanoparticles for the detection of Arsenic trioxide contamination in water. Silver nanoparticles were synthesized using $AgNO_3$solution and plant (*Epipremnum aureum)* extract. Standard Arsenic trioxide solution was prepared in 0.005M NaOH solution and its known aliquots were prepared in distilled water. Constant volume of Silver- Nanoparticles was allowed to react with different concentrations of Arsenic trioxide. Color change was observed showing absorption maxima at 353 nm with an increase in absorbance with Arsenic trioxide concentration from 1 ppm to 100 ppm.Use of silver nanoparticles is a rapid and cost-effective method for detection of Arsenic trioxide contamination of water.

Keywords: Arsenic trioxide, water contamination, silvernanoparticles, green synthesis

IJARSCT
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International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Fruite Juice as a Biocatalyst for Synthesis of Schiff Base: a Green Approach.

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Abstract: The naturally available fruit juice as a bio catalyst in synthesis fulfils almost all the terms and conditions of green chemistry.The best thing is that fruits are easily available, cheap and can be easily extracted. Schiff bases have been synthesis by the condensation of primary amine with aldehyde under organic solvent free condition. The reaction is catalysed by natural acid found in different natural products like kiwi and strawberry. This reaction is very simple and has many benefit because of cheap catalyst, high yield of product, simple experiment condition and easily available nature products. Many method of Schiff base synthesis are reported but our objective is that to utilize such method and reagent which is environment friendly along with good yield. Most organic reaction utilized organic solvent and acids in which some are curse for environment because of this reason we did not any organic solvent and acid. In this method Benzaldehyde is reached with aniline in the presence of natural acids extracted from kiwi and strawberry to give Schiff base SP-5 (Benzylidene aniline). The produce (SP-5) were identified by various spectroscopic techniques such as IR, Mass and 1H-NMR. These products also showed significant antibacterial, antifungal and antioxidant activities. The synthesis of kiwi and strawberry is a new environment friendly method for the synthesis of Schiff base. The Present work revealed that Schiff bases with potential biological activity can easily be synthesized in the presence of natural acids as a catalyst. This method is effective, give good yield time saving and easily approachable to everyone.

Keywords: Green chemistry, organic solvent free condition, environment friendly, antibacterial, antifungal and antioxidant activities.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
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Impact Factor: 6.252

Green Synthesis of Palladium nanoparticles from Eucalyptus globulous Leaves Extract Characterization and Biological Activity studies

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Abstract: Effective biological methodologies have been broadly designed for the preparation of metal nanoparticles. Hence, the use of biogenic materials such as plants, bacteria biomass, algae, enzymes and fungi has been utilized to synthesize various metal nanoparticles as an efficient, economical and sustainable process. Aqueous extract of dried leaves of Eucalyptus globulous is used as a biogenic reducing agent for ecologically sound synthesis of palladium nanoparticles. Dynamic Light scattering (DLS), UV-visible spectroscopy, Fourier-Transform infrared spectroscopy (FTIR), Energy Dispersive X-Ray analysis (EDAX) and Scanning electron microscope (SEM) analyses were used to characterize the formed Palladium nanoparticles. The synthesized palladium nanoparticles exhibited antimicrobial activities.

Keywords: PdNps, bioreductant, stabilizing agents,

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

One-pot Three-Component Synthesis of Biologically Active Structurally Diverse Functionalized Thiazolidinones

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Abstract: A simple, efficient and facile synthesis of 3-benzimidazolyl-2-aryl thiazolidinones derivatives via one-pot three-component reaction using environmentally benign choline chloride-based deep eutectic solvent (DES) is reported. Easy work-up, rapid, excellent yield of the desired products are the remarkable features of this methodology. The eutectic solvent acts as a catalyst as well as reaction media and recyclable up to five times without loss in its catalytic ability. Superparamagnetic MNP-Fe3O4 nanoparticles in deep eutectic solvent were also explored for the synthesis of various heterocyclic moieties.

Keywords: Choline Chloride, Multicomponent reaction, Thiazolidinones, Thioglycolic acid, MNP-Fe3O4.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Cytotoxic assay on Bacteriocin B25 produced by Marine *Lactobacillus pentosus* B25

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Abstract: The in vitro antimicrobial efficiency of the bacteriocin B25 is well documented, however its clinical application needs investigation, as its toxicity may well be totally different in in vitro (haemolytic and bactericide activity in blood and toxicity towards traditional human cell lines). The cytotoxic result of bacteriocin on traditional human blood cells (lymphocytes) was evaluated by MTT assay. Inhibition of cell proliferation was quantitated. a gentle cytotoxic result of bacteriocin was found on lymphocytes. The bacteriocin concentration fifty µg/mL to two hundred µg/mL used and the death of lymphocytes was ascertained in bacteriocin treated lymphocytes, twenty µg/mL to a hundred and sixty µg/mL from concentration, when a hundred and sixty µL there have been not found any changes in lymphocytes. It had shown the gentle toxicity. The IC50 worth was obtained as a hundred and sixty µL +/-20 µL. The Student's two-tailed t-test was accustomed verify applied mathematics significance of the variations between untreated cells and cells treated with the varied concentrations of bacteriocin.

Keywords: toxicity, bacteriocin, MTT Assay, lymphocytes

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Cyber Security Challenges and its Emerging Trends on Latest Technologies

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Abstract: Cyber Security plays a very important role within the field of data technology Securing the data became one amongst the most important challenges within the gift day. Whenever we predict concerning the cyber security the primary factor that involves our mind is 'cyber crimes' that square measure increasing vastly day by day. numerous Governments and corporations square measure taking several measures so as to forestall these cyber crimes. Besides numerous measures cyber security remains a awfully huge concern to several. This paper principally focuses on challenges moon-faced by cyber security on the newest technologies .It additionally focuses on latest concerning the cyber security techniques, ethics and therefore the trends dynamic the face of cyber security.

Keywords: Cyber Security, Cybercrime, Cyber Ethics, Social Media, Cloud Computing, Automaton Apps.

IJARSCT
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International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Studies on Mixed Ligand Complexes of Zinc (II) With Paracetamol and Amino Acids

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Abstract: The Study was aimed at investigating the suitability of Paracetamol-amino acid novel metal (II) complexes. Synthesis of mixed ligand zinc (II) complexes of type $[M(par)(L)].2H_2O$ have been carried out by using Analgesic drugs Paracetamol (par) as a primary ligand and Amino acid (HL) such as L-Valine, L-Threonine and L-Serine as a secondary ligand. Synthesized metal (II) complexes have been characterized on the basis of elemental analysis, electrical conductance, room temperature magnetic susceptibility measurement and spectral analysis which include UV, IR and XRD techniques. An electrical conductance studies indicates non-electrolyte nature and magnetic susceptibility measurement revealed paramagnetic nature of the complexes. UV spectra shows intra-ligand, charge transfer and d-d transition and IR spectra confirm bonding of metal ion through O or N donar ligands which further indicates complexation. The agar cup method and tube dilution method have been used to study antibacterial activity of the complexes against pathogenic bacteria such as Aureus, C. Diphtheriae, S.Typhi and E.coli.

Keywords: Mixed Ligand Complexes, Paracetamol, Amino Acids, Metal Ion.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Organic Farming of Some Valuable Medicinal Plants

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Abstract: The excess use of chemical fertilizers and biopesticides creates various side effects on human body. To overcome this condition people moving towards organic food. In pandemic all over the world high demand on organic medicinal plants has increased. Organic farming increases soil organic carbon, phosphorus content and microbial population of soil. In present study, different organic amendment scan supply the nutrient requirement to selected medicinal plants.

Organic farming shows great influence on medicinal plant. Therefore, it helps to farmers who adopted the organic management practice have a way to improve soil quality and capacity for next generation. From this research paper, technical aspects of cultivation of medicinal plants shows safer way for sustainability. By these ways, it helps to improve economic aspects in the agricultural.

Keywords: Organic farming, medicinal plants.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Ethics in Ethical Hacking

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Abstract: This paper explores the ethics behind moral hacking and also the issues that pair this rising field of network security. Since moral hacking has been a polemic subject over the past few years, the question remains of verity intentions of moral hackers. The paper additionally appearance at ways in which during which future analysis can be looked into to assist to keep moral hacking, ethical.

Keywords: Moral Hacking, Hacking, Hackers, Education and Coaching, Risk Management, Automatic Security

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International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Synthesis and Characterization of Some Pyrazine ring containing Heterocycle's

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Abstract: Heterocyclic chemistry has numbers of applications in the field of pharmaceutical chemistry. These compounds are synthesized worldwide by different synthetic methods. Two or more hetero elements containing heterocycles are synthesized and all these compounds were found stable. Chalcones a precursor has great importance in natural as well as synthetic heterocyclic compounds. Nitrogen atom containing heterocycles has very important role in medicinal field due to their biological activities. After reviewing literature survey, it was found that, nitrogen containing five membered heterocycle like pyrazoles, six membered Pyrimidines, seven membered benzodiazepines were synthesized by different synthetic methods. This literature survey promoted us to prepare highly stable five, six and seven membered ring structure using pyrazine ring containing derivatives and check their pharmacological activities. These compounds were characterized using IR, ^{1}H-NMR and Mass spectra and Elemental analysis. The compounds were found to be the most active against bacterial & fungal human pathogens.

Key words: Benzodiazepines, Chemistry, Heterocycles, Pyrazole, Pyrimidine,

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Impact Factor: 6.252

Emerging Wild Plants to Build up Immunity

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Abstract: The aim of this document is to study role of wild plants in boosting immunity, fighting diseases and other viruses. It also reveals that the diversity, distribution, parts used and season of availability of wild food plants that can be useful in boosting immunity to fight seasonal infection. Wild vegetables have been an important part of human diets from ancient times. They contain important micronutrients, like vitamins and minerals which maintain health and promote immunity against infections. Wild plants can grow easily, they do not required much care as compared to other traditional cultivated species and are rich source of micronutrients. Hence, they could make an important contribution to fight against micronutrient malnutrition also providing food security. Unfortunately, wild vegetables are currently used less and have been neglected by researchers.

Keywords: Wild Plant, Boosting Immunity, Micronutrients, Diseases.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
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Impact Factor: 6.252

Ethical Hacking

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Abstract: The Internet's explosive growth has conducted several virtuous things: ecommerce, e-mail, cooperative computing & new fields for promotional material and data distribution. moral hacking has become a main anxiety for businesses & governments, conjointly called the intrusion testing or penetration testing. Organizations square measure involved regarding the likelihood of being "hacked" & potential purchasers square measure involved regarding keeping personal info in restraint. Hackers square measure classified per their work and data. The white hat hackers square measure the moral hackers. moral hackers use hacking approaches to confirm safety. moral hacking is required to shield the system from the hacker's harm. This paper provides a short plan of the moral hacking & each facet. As these days all the knowledge is on the market on-line, an oversized variety of users square measure accessing it, a number of them use this info for gaining data and a few use it to understand a way to use this info to destroy or steal the information of internet sites or databases while not the data of the owner. the aim of this paper is to inform what's hacking, UN agency is hackers, what's moral hacking, what's the code of conduct of moral hackers and also the would like of them.

Keywords: Cybercrimes, Clearing Tracks, laptop Security, moral Hacking, Scanning and Enumeration.

IJARSCT
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International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
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Impact Factor: 6.252

Simultaneous HPTLC Determination of Aceclofenac and Drotaverine Hydrochloride in Tablet Dosage Form

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Abstract: A normal-phase simple, rapid and precise high performance thin – layer chromatographic method has been developed for simultaneous quantitative determination of Aceclofenac and Drotaverine hydrochloride in a tablet dosage form. The analysis was performed on Silica gel $60F_{254}$ on aluminum plates with acetonitrile – ethyl acetate – triethylamine, 2 : 7.6 : 0.4 v/v as a mobile phase. Detection and quantitation were performed densitometrically at wavelength 282nm. The developed method was validated for linearity, precision, solution stability, accuracy and robustness parameters. The linearity of Aceclofenac and Drotaverine hydrochloride were in the range of 50-150 µg/mL and 40-120µg/mL respectively. The correlation coefficient of Aceclofenac and Drotaverine hydrochloride were observed 0.9992 and 0.9995 respectively. Accuracy was checked by performing recovery studies from the pharmaceutical preparation. The average was found to be 99.48 ± 1.62% for Aceclofenac and 99.32 ± 1.52% for Drotaverine hydrochloride. The proposed HPTLC method was found to be accurate, precise and rapid for the simultaneous determination of Aceclofenac and Drotaverine hydrochloride in tablet dosage form.

Keywords: Drotaverine hydrochloride, Aceclofeanc, HPTLC

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Post Harvest Management of Agricultural Produce

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Abstract: The minimization of wastage of agricultural produce is the ultimate goal of post harvest management. The post harvest management has increasing population and shrinking agricultural land and other resources. Present situation is the main global challenge to ensure food security in a sustainable manner safe to mankind and environment. The production of agricultural crops have increased during the recent years, but the development and adoption of post harvest technology is lacking and resulting in huge post harvest losses. The factors which affect on post harvest during harvesting, storing, transporting, and marketing is microbial activity. The highly perishable crop like horticultural produce need much more attention and to ensure promotion of processing and value addition. The value chain for processing has become a important to improve the food safety and strengthen national food security. The value chain in post-harvest management of horticultural crops mainly comprise of pre-harvest factors, harvesting, market preparation (common storage, sorting, grading, packaging and on-farm storage), transportation, storage by-product waste management.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Artificial Intelligence

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Abstract: Use of computer science (AI) has hyperbolic within the aid in several sectors. Organizations from health care of various sizes, sorts and totally different specialties square measure currently a days additional curious about however computer science has evolved and is serving to patient wants and their care, additionally reducing prices, and increasing potency. This study explores the implications of AI on aid management, and challenges involved mistreatment AI in aid in conjunction with the review of many analysis papers that used AI models in numerous sectors of aid like medical specialty, Radiology, Drug style etc.AI refers to machine tools that square measure able to substitute for human intelligence within the performance of bound tasks. This technology is presently advancing at a unsafe pace, very like the exponential growth practiced by information technology within the late twentieth century. Databases have mature to become the core infrastructure that drives enterprise-level code. Similarly, most of the new price more from code over the approaching decades is predicted to be driven, a minimum of partially, by AI.

Keywords: Artificial intelligence; healthcare; pharmacy; patient care; deep learning, machine learning

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Synthesis and Characterisation of Pdnanocatalyst and their Application as Catalyst Towards Reduction of p-nitrophenol

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Abstract: Globalization and rapid industrial growth have increased environmental pollution in recent decades, owing to the discharge of toxic effluent into bodies of water that contain hazardous contaminant such as 4-nitrophenol (4-NP). Detoxification of 4-NP is done by various methods like ozonation, reduction, electrochemical degradation and biodegradation etc. However, these methods have some disadvantages like it is time consuming, requires harsh conditions, hazardous organic solvents, high temperature and hydrogen pressure. Therefore, it is important to develop a simple and facile process for conversion of nitro compound to amino compound in aqueous solution under mild condition. In this work Palladium nanocatalyst were synthesized by solvothermal method using a Schiff base derived from 5–chlorosalicylaldehyde and o–phenylenediamine. The as-prepared Pdnanocatalyst was further characterized by various techniques like X-Ray Diffraction (XRD), Field Emission – Scanning Electron microscopy (FE-SEM), Energy dispersive X-ray Spectroscopy (EDAX) and Transmission Electron microscopy (TEM). The catalytic activity of Pdnanocatalyst was performed towards reduction of 4-nitro phenol to 4-amino phenol in presence of aqueous solution of $NaBH_4$ at room temperature. The results exhibited fast catalytic activity as the reduction of nitro to amino compound takes place within 9-11 minsand also the catalyst has excellent reusability for three successive cycles.

Keywords: Solvothermal, Palladium nanocatalyst, Catalytic reduction, 4-Nitrophenol

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Do Fertilizer Affect Plant Disease

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Abstract: Commercial fertilizers are commonly applied in farming to maximize a crop yield. Lifting nutrient limitation to plant growth the when water and light conditions are sufficient may permit for plants to grow to the maximum of their ability; however, plant ability to resist pathogen infections is also modified. A meta-analysis was a conducted on 57 articles to identify the way plant disease severity of fungal the pathogen-induced infection is modified following fertilizations, and the key regulators of such a effect. The analysis largely focused on N fertilizations events in order to minimize the effect of heterogeneity that is could result from differences in the way different nutrient fertilizers are able to a modify plant diseases severity. Fungal pathogen identity and fungal pathogen lifestyle wereis the main significant regulators affecting the extent of the modification of plant disease of resistance following N fertilization. No differences were the detected between pot or field experiments and following artificial or natural infection. It is concluded that the potential of some a plant species such as Solanum spp. To show reduced disease severity following N fertilization requires further investigation, as in such cases N fertilization is could potentially be used as an additional means of suppressing fungal a pathogens.

Keywords: Fertilizer, Plant disease and affect

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Cyber Security

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Abstract: In the current world that is controlled by innovation and organization associations, it is vital to know what network protection is what's more, to have the option to utilize it really. Frameworks, significant documents, information, and other significant virtual things are in danger on the off chance that there is no security to safeguard it. Whether it is an IT firm not, each organization must be safeguarded similarly. With the improvement of the new innovation in digital protection, the aggressors also don't implode behind. They are consuming better and improved hacking methods and point the flimsy parts of numerous organizations out there. Digital protection is fundamental since military, government, monetary, clinical and corporate associations gather, practice, and stock remarkable amounts of information on PCs and other gadgets. A significant standard of that information can be delicate data, whether that be monetary information, licensed innovation, individual data, or other different sorts of information for which illicit access or colleague could guarantee negative worries.

Keywords: Introduction, Methodology, Review, Benefits, Hindrances, Results & Discussion, Conclusion, Acknowledgement and References.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

A Mini-Review on the Synthesis of Organic Reactions: Recent Progress and Perspectives

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Abstract: Green chemistry is the innovative and rapid emerging field of chemistry. Its growing importance is in its application in maximum possible resources in such a way that, there is negligible or minimum production of chemical by products. It is one of the novel and dynamic sustitute for traditional chemical synthesis procedure. Green reactions allow avoiding problems with many environmental regulations and laws. Greener reactions are especially important in organic chemistry, due to a huge number of industrial processes with the use of hazardous chemicals and solvents, severe damage to the environment takes place. Green chemistry for chemical synthesis addresses our future challenges in working with chemical processes and products by inventing novel reactions that can maximize the desired products and minimize by-products, designing new synthetic schemes and seeking greener solvents that are subsequently environmentally and ecologically benign. Environmental pollution and global warming cause serious problems in human life. Since the demand for our human daily appliances had been increased by years, the organic chemical-based industries response that demand increment by increasing their production process. Because of that, the environmental pollution becomes worse and worse. Green chemistry thus was introduced to influence the chemical industries to strive for better environmental sustainability. Over past few years, green chemistry principles have influenced the organic chemistry field especially as many researchers have put their attention on that field of research. So far, synthesis process involving organic compounds has been considered on waste prevention, safer solvents, design for high energy efficiency, and usage of renewable raw materials. This paper mainly discusses in brief about the implementation of green chemistry principle and their applications in the synthesis process of organic compounds.

Keywords: Organic synthesis, solvent-free technique, green chemistry, nanoparticles, phase transfer catalysis, ultrasound irradiation

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Smoke Treatment on Seed Germination

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Abstract: Smoke is thought to be one of the most import for the betterment of ecosystem and impact of smoke treatment on seed germination of species at community level. smoke shows to stimulate s seed germination and growth of seedlings of economically important plant species. Smoke treatment can be used to improve growth and crop yield.

Keywords: Smoke Treatment, Ecosystem, Crop Yield, Seed Germination.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Smart Computing

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Abstract: Following the well-known concepts of computerization and infomatization, a rising technology of cyberization, which is considered as a reformation of the existing bodily, social and intellectual worlds, has become a hotly mentioned fashion within the new cyber global. Cyberization refers to using conversation and pc technology to interconnect computers and various electronic terminal devices allotted in extraordinary locations. It permits customers to share software, hardware and statistics resources consistent with positive network protocols. Cyberization has substantially advanced the sensible application of computers and has been broadly applied in transportation, finance, commercial enterprise management, schooling, telecommunications, commerce, and so on in our day by day life.

Keywords: Introduction, Methodology, Review, Privacy, Security, Behavior and influence analytics in social computing, Results & Discussion, Conclusion, Acknowledgement and References.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Challenges and Opportunities in Green Solvent Mediated Organic Synthesis

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Abstract: Green solvents are a subject of growing interest in the research community and also in the industry because of a growing awareness of the impact of conventional solvents on pollution. Solvent represents a serious portion of organic pollution, and solvent removal represents a large proportion of method energy consumption. To counter these problems, a range of greener solvent planned and developed over the past three decades. The main focus has been on the environmental credentials of the solvent itself, though however a substance is deployed is as vital to property as what it's made from. during this Review, try is made to contemplate many aspects of the foremost outstanding property of organic solvents in use nowadays, ionic liquids, deep mixture solvents, critical fluids, switchable solvents, liquid polymers, renewable solvents and challenges associated with green solvents.

Keyword: Deep eutectic solvents, Choline chloride and Physical properties

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

The Role of Soil PH on Plant Growth

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Abstract: In the natural atmosphere, soil hydrogen ion concentration has a huge influence on soil biogeochemical processes. Soil pH is, therefore, delineated because the "master soil variable" that influences myriads of soil biological, chemical, and physical properties and processes that have an effect on plant growth and biomass yield. This paper discusses however soil hydrogen ion concentration affects processes that square measure interlinked with the biological, geological, and chemical aspects of the soil atmosphere yet as however these processes, through anthropogenesis interventions, induce changes in soil hydrogen ion concentration.

Keywords: Soil pH, Plant Growth, Biogeochemical.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Machine Learning in Artificial Intelligence

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Abstract: AI has received increased attention from the information systems (IS) research community in recent years. There is, however, a growing concern that research on AI could experience a lack of cumulative building of knowledge, which has overshadowed IS research previously. This study addresses this concern, by conducting a systematic literature review of AI research in IS between 2005 and 2020. The search strategy resulted in 1877 studies, of which 98 were identified as primary studies and a synthesise of key themes that are pertinent to this study is presented. In doing so, this study makes important contributions, namely (i) an identification of the current reported business value and contributions of AI, (ii) research and practical implications on the use of AI and (iii) opportunities for future AI research in the form of a research agenda.

Keywords: Artificial intelligence, AI Machine learning, Systematic literature review, Research agenda.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

A Review Article on Chemistry, Synthesis and Therapeutic Importance of Thiazole Derivatives

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Abstract: Thiazole is a heterocyclic compound containing nitrogen and sulphur atoms, and has very important applications in medicinal chemistry. It is necessary scaffold present in most of the and synthetic medicinal important compounds. Thiazole is an essential part of penicillin nucleus and its derivatives which have shown antimicrobial (sulfazole), antiretroviral (ritonavir), antifungal (abafungin), antihistaminic and antithyroid activities. Thiazole chemistry has developed after the pioneering work of Hofmann and Hantsch. Bogert and co-workers has significant contribution to expand this field. Mills gives the importance of thiazole nucleus in cyanine dyes which is used as photographic sensitizer. Benzothiazole, a fused derivative of thiazole have also commercial value. This review article gives the literature ducuments available on the methods of prepration of thiazolederivatives and their biological activities.

Keywords: Thiazole, Heterocyclic compound, medicinal chemistry, antimicrobial, antifungal, benzothiazole.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effect of Pollution on Plant Growth

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Abstract: The air and soil quality in the vicinity of cement industry influences the soil properties and distribution pattern of plants. Sensitive plant species are abolished from such areas, however, only pollution tolerant species survive under stress conditions. In this study, the potentially toxic metal pollution in soil and Air Pollution Tolerance Index (APTI) of plants occuring nearby the cement industry, Bhagwanpur (Haridwar) were evaluated. Four biochemical parameters such as leaf relative water content (RWC), ascorbic acid (AA) content, total leaf chlorophyll (TCh), and leaf extract pH were used to develop an APTI. It was found that the soil in the vicinity of cement industry was having high concentrations of potentially toxic metals in comparison to control but within the permissible limits as per international standards.

Keywords: Environmental pollution, potentially toxic metals, cement factory, APTI, Bhagwanpur, Uttarakhan

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Ethical Hacking and Its phases

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Abstract: The state of security on the internet is very poor. Hacking is an activity in which, a person exploits the weakness in a system for self-profit or gratification. As public and private organizations migrate more of their critical functions or applications such as electronic commerce, marketing and database access to the Internet, then criminals have more opportunity and incentive to gain access to sensitive information through the Web application. Thus the need of protecting the systems from the hacking generated by the hackers is to promote the persons who will punch back the illegal attacks on our computer systems. Ethical hacking is an identical activity which aims to find and rectify the weakness and vulnerabilities in a system. Ethical hacking describes the process of hacking a network in an ethical way, therefore with good intentions. This paper describes what is ethical hacking, what are the types of ethical hacking, impact of Hacking on Businesses and Governments. This paper studied the different types of hacking with its phases.

Keywords: Artificial invulnerabilities, Hacker, Cracker, Port and Intrusion.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Green Chemistry for Chemical Synthesis

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Abstract: Green chemistry has been a major part of sustainable development and also had an important trend in recent years. In order to extrapolate the state of the work in this field, a systematic laboratory work has been performed, also it's is used to identify possible developments for future research. Now specially, the main aim of this research is to investigate how Green Chemistry, Sustainability and Circular Economy concepts are related to each other and how researchers are addressing and analyzing this relation. Since the main purpose of this chemistry is to produce intermediate substances that are generally used by other industries, this focus is mainly placed on industrial sector. Or we can say, chemistry involves most of production systems. Green chemistry for chemical synthesis define our future challenges and scopes in working with chemical procedures and products by inventing new reactions that can give maximum desired products and less or no by-products, designing new synthetic procedures and apparatus that can simplify operating in chemical productions, and to seek greener solvents that are environmentally and ecologically benign.

Following basic principles of green chemistry should be followed:

1) Prevention of waste or by-products.
2) Maximum incorporation of reactants in final products.
3) Minimization of hazardous products
4) To design safer chemical
5) To select most appropriate solvents
6) Use of catalyst should prefer.
7) Biodegradable products.
8) Such manufacturing plants should be designed to eliminate the possibility of accidents.

Keywords- Green Chemistry, Green Synthesis, Development of Green Chemistry, Principles of Green Chemistry, Application of Green Chemistry.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effects of Magnesium on Plants

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Abstract: The geomagnetic field is a natural component of our environment. Plants that sense different wavelengths of light, respond to gravity, and respond to touch and electrical signaling cannot escape the effects of GMF. While phototropism, gravitropism, and tigmotropism have been well studied, the effects of GMF on plant growth and development have not been well understood. This review describes the effects of changing the conditions of the magnetic field (MF) on plants, in which the response of plants to MF values is considered more or less the same as that of GMF. The possible role of GMF in plant evolution and the nature of the magnetic septum are also discussed.

Keywords: Geomagnetic field, plant reaction, evolution, magnetorception, crypto chrome.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Smart Computers

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Abstract: Current user interfaces are not very "smart" in that computers dumbly do what the user explicitly commands it to do via buttons or menus. As the computers become more capable and applications become complicated, more "smart" user interfaces are desired. We are exploring possible "smart" user interfaces in the domain of pen-based computing and interactive 3D graphics. The idea is to allow the user to intu-itively express his/her intention by combining sketching and direct manipulation, and have the computer take appropriate actions without explicit commands. This talk consists of many live demonstrations to illustrate the idea of interactive "smart" interfaces. I plan to show 2D geometric drawing program, electronic whiteboard system, sketch-based 3D modeling, automatic zooming, clothing manipulation interfaces, and other interesting systems.

Keywords: Introduction, Methodology, Review, Privacy, Security, Behavior and influence analytics in social computing, Results & Discussion, Conclusion, Acknowledgement and References.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review Article: Impacts of Pesticides on Human Health and Environment: Need for a New Concept in Agriculture

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Abstract: Increasing demand of food has increased the chemical burden on natural ecosystem. A pesticide is a chemical product used in agriculture to protect crops from pests, weeds and to enhance crop yields. However, these pesticides causes large number of negative health and environmental effects. Now a days their side effects have become an important environmental risk factor. The sustainability of agriculture cropping system is a basic question on which the future of humanity is relying. Several indicators tend to suggest that the current system of agriculture production is reaching its limit and become unsustainable. The urgent need for more sustainable agriculture practice has produced many innovative ideas. This review paper emphasised on how the agricultural reforms and food production implementing sustainable practices will evolve to food sovereignty.

Keywords: Ecosystem, pesticides, Agriculture, sustainable agriculture

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effects of Acid Rain on Trees

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Abstract: Acid rain is an rain form or any other form of precipitation that present acidic and possesses elevated levels of hydrogen ions (low pH). Acid rain is caused by emissions of Sulfur Dioxide and Nitrogen Oxide, which react with the atmospheric water and water vapours to produce acids. Trees and soil are the prime receptor of acid deposition and function as sink. Monocotyledons plants are reported to be relatively less affected by acid rain as compared to dicotyledons plants and young rootlets, leaves and shoots are typically more sensitive to low pH conditions. It also effects the compositions of soil water which is the main medium of nutrient supply for the plants and soil microflora. Acid rain solutions make their entry into the leaf tissue through the cuticle and produce marked effects on tress. Acid rain generally retards the growth of trees by stimulating abnormalities in metabolism of the trees, like photosynthesis, nitrogen and sulphur metabolism, however, there are exceptional cases of promoting growth as well. Studies conducted globe on the exposure of various crop plants to acid rain and its ultimate effects on plant growth and reproduction and draws attention for development of plant types suited to acid rain affected lands.

Keywords: Acid rain, Air pollution, Development, Growth, Plants, Yield, Trees, Global, Water, Soil.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Sensors

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Abstract: The availability and wide range of application of low cost sensors have encouraged a demand for improved sensor performance. Integrated sensors are being developed to meet the designer's need for simpler systems. Smart sensors are becoming integral parts of systems performing functions that previously could not be performed or were not economically viable.

Keywords: Introduction, Methodology, Review, Privacy, Security, Behavior and influence analytics in social computing, Results & Discussion, Conclusion, Acknowledgement and References.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Glycerol as Green Solvent in Organic Synthesis

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Abstract: Glycerol came out as favourably green solvent. Physio chemical properties are used for different applications. short analysis of organic reactions which engage glycerol as a green solvent are presented. Organic modification in glycerol medium arise with or without any catalytic material. Glycerol is also used as hydrogen donor to carry out hydrogenation reaction of organic compound. The supremacy off glycerol over other solvents turned out to be described in terms of its solubility, availability, non toxicity and chemical reactivity. Organic synthesis is exothermic reaction in which both reactants and catalyst are dissolved in solutions. In this paper, glycerol. Is appeared as nontoxic, recyclable and eco friendly liquid, which is manufactured from renewable sources. It has very high potential to serve as alternative green solvent in many organic reactions.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Does Burn Soil Effect on Seed Germination

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Abstract: For the germination of the seed, there are various conditions to be meet. One of important factors in the moisture level. Burning can really affect the soil moisture content as well as soil structure. If burn the soil, some nutrients element are lost. For instance nitrogen is lost through burning. Looking at the seed planted into the burnt soil, it seems like the germination will greatly depend on the water additional on the soil or not as well ad on the quality of the seed. If the seed is of good quality and soil moisture is maintained around the field capacity soil water content. Seeds will really germinate. The other cases with poor quality seeds with bad soil moisture will negatively affect seed germination in the burnt soil.

Keywords: Burned, Milkweed, Germination, Moisture, Survival Ship

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Application of Computer and Information Communication Technology in Libraries

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Abstract: Computer technology and ICT has converted library services in a better way. The library can perform its all operations with more accuracy and speed. Current world is known for electronic information. Bulk of the information is in electronic format, to handle this type of information Computer technology and ICT suit very important. With the use of Computer technology and ICT libraries can perform its functions more effectively, and it can provide more accurate and up-to-date information as per user's need. The article states that what is Computer technology and ICT Components of information technology, application of Computer technology and ICT in libraries, what is information and communication technology? What is library? And application of Computer technology and ICT in libraries.

Keywords: Computer technology, Information communication technology and its application in libraries

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Kinetic Interpretation of Esterification of Citric Acid

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Abstract: Esterification of acid (CA) with the first alcohols and therefore the hydroxyl radical teams of polyose chain (n = 1-2) in parched condition were investigated by victimization density useful theory (DFT) methodology and a two-layer ONIOM approach. pure mathematics and energy of reactants, products, and transition state (TS) structures were optimized at B3LYP/6-311g (d, p) level and ONIOM (B3LYP/6-311g (d, p):PM3MM) level. The machine results show that the organic compoundification happens within the 2 main steps: the primary step is that the dehydration reaction of CA to make anhydrides of five-membered ring and six-membered ring and therefore the second step is that the ring gap reaction with the hydroxyl radical –OH teams to make the ester merchandise. The energy barrier of dehydration reaction step is way over that of ring gap reaction step. result of substituent R in primary alcohol R-CH2OH (R: CH=CH2, CH2NHCH3, CH2OCH3, CH2Cl) and polyose chain (1G, 2G) on the reactivity, that has negative inductive result –I, is critical. the mix of calculation knowledge and experiment knowledge were applied to create findings a lot of rigorous. The energy of CA make up my mind by victimization differential scanning mensuration (DSC) and thermal measuring (TG) analysis to be = 47.8 kcal/mol; the experimental knowledge favoured the dehydration reaction step of CA.

Keywords: Energy of Reactant, Condensation, Plasticizers

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Hybridization in Plants

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Abstract: Hybridization aims to create variations, when two genotypically different plants form hybride plant followed by segregation and recombinationin next generation. Hybridizationis an important evolutionary phase which leads to interspecific and intraspecificgic genetic diversity of population. And creation of new species, species extinction through generationof invasive genotype and genetic assimilation for evolution in hybridization and identificationn of hybrid plants.

Keywords: Plant Hybridization, Hybrid Plants, Crossbreeding.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Step Towards Better Future: Treating the Waste Water Generated from Dairy Industries using Fruit Peels

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Abstract: Now-a-days water scarcity is the major problem faced by world; hence it is important to treat waste water generated from various sources before it is discharge. Among various techniques, adsorption is a fast, inexpensive and universal method. The method followed for removing the useful organic substance include Dehydration and carbonization, investigating effect of pH, time, adsorbent dosage and particle size.The review of study on removal of organic substance from dairy waste using de-hydration, carbonization and batch extraction method is discussed in this paper. As noted, most researchers deal with the batch extraction, as this process shows good result for removal of different organic and inorganic contaminants from dairy waste. In batch extraction it was observed that the combination of banana and orange peel provides the better results. The carbonization method is found to be more efficient than the de-hydration method. The carbonization method is efficient because carbon is strong oxidant and has a unique pores structure with absorbs the organic substance on its surface easily.For the removal of turbidity, total suspended solids [TSS], biochemical oxygen demand [BOD] and chemical oxygen demand [COD] orange peel was found to be more efficient than banana peel in all the methods this is due to the characteristics of orange peel, the orange peel contain fibre which has more hydroxyl radical, hence more adsorption capacity. But the combination of orange and banana peel in 1:1 proportion act as a best adsorption, even better than orange peel alone.

Keywords: Fruit peels, BOD, COD, TSS, Turbidity.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effects of Harmful Families of Agaricus

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Abstract: There is evidence from both in vitro and animal models that the consumption of edible mushrooms has beneficial effects on health. It is unclear whether similar effects exist in humans and which bioactive compounds are present. This review synthesises the evidence on the world's most commonly consumed mushroom, Agaricus bisporus to examine its effect on human health outcomes; and (ii) determine the nutrient density of its bioactive compounds, which may explain their health effects. A systematic literature search was conducted on the consumption of A. Bisporus, without date and study design limits. Bioactive compounds included ergosterol, ergothioneine, flavonoids, glucans and chitin. Two authors independently identified studies for inclusion and assessed methodological quality. Beneficial effects of A. Bisporus on metabolic syndrome, immune function, gastrointestinal health and cancer, with the strongest evidence for the improvement in Vitamin D status in humans, were found. Ultraviolet B (UVB) exposed mushrooms may increase and maintain serum 25(OH)D levels to a similar degree as vitamin D supplements. A. Bisporus contain beta-glucans, ergosterol, ergothioneine, vitamin D and an antioxidant compound usually reported as flavonoids; with varying concentrations depending on the type of mushroom, cooking method and duration, and UVB exposure. Further research is required to fully elucidate the bioactive compounds in mushrooms using vigorous analytical methods and expand the immunological markers being tested. To enable findings to be adopted into clinical practice and public health initiatives, replication of existing studies in different population groups is required to confirm the impact of A. Bisporus on human health.

Keywords: Systematic review; Agaricus bisporus; Mushroom; Health; Human; Bioactive

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Natural Adsorbent Plays Vital Role in Removal of Metals & Dyes from Wastewater: - It's Review

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Abstract: Wastewater could be a water that is generated once the utilization of water in several application like food scarps, excreta, oils, soaps and chemicals etc. There are three types of waste water like domestic waste water, Industrial waste water and storm waste water. This review paper shows that the variable adsorbent might be used as a good Bio-sorbent for binary compound solutions containing this metals and dyes. Coconut shell is used to filter water. Carbonization is a method or a process to convert coconut shell to charcoal. The activated coconut charcoal was used to remove impurities such as toxic metals and dyes from waste water.In this paper, continuous biosorption operation in an exceedingly fixed-bed column had been performed for serious metals and dyes biosorption by variable adsorbent is discussed.

Keywords: Coconut shell, Activated Charcoal, fixed-bed column, bio-sorbent, Carbonization.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

The Consequence of Losing Biodiversity

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Abstract: The most unique feature of earth is the existence of life and the most extraordinary feature of life is its diversity. However, the ecosystem consequences of extinction in influence in natural communities are moderate by compensatory species dynamics yet these processes the rarely accounted for in impact assessment and seldom considered in conversation programme. Our findings indicate that the generalized biodiversity from relation curve, as derived from multiple empirical investigation of random species loss, is unlikely to yield representative predication for ecosystem properties inatural system because the influence of post-extinction community dynamics are under-represented .Recognition of this problem is fundamental to management and conservation efforts, and will be necessary to ensure future plans and adaptation strategies minimize the adverse impact of the biodiversity crisis. Their loss may have important consequences for the delivery of ecosystem services to local communities, even if individual trees have low conservation values. Overall, our Finding demonstrate that future conservation and restoration programs in mix landscape should both protect a large diversity of tree species including rare tree species and promote multifunctional. keystone species to ensure a long diverse ES supply.

Keywords: Land Use Change, Extinction, Conservation, Ecosystem Service Diversity.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review on Olive Stone as Low-Cost Adsorbent for Organic Pollutant Removal

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Abstract: Organic pollutant in the water is the serious environmental problem. The organic pollutants like pesticides, hydrocarbons, phenols, biphenyls, oils, detergent, etc. are may be present in wastewater. There are efficient methods for the removal of highly toxic organic compound from water and wastewater. Absorption is recognized as a best method for the removal of organic pollutant from waste water due to its inexpensiveness and universal nature. For adsorption process the low-cost adsorbent is considered. The low-cost adsorbents are such as household waste, agricultural products, industrial waste, sea materials, soil and ore minerals, metal oxides and hydroxides. These low-cost adsorbents currently pose a variety of disposal problem due to their bulk volume toxicity or physical nature. If these wastes can be used as low-cost adsorbents it will give a twofold benefit to environmental pollution. The variety of adsorbent is examined as their ability to remove various types of pollutants from waste. Removal of organic pollutants by eco-friendly and inexpensive adsorbents such as Olive stone is discussed here. For adsorption olive stone is treated by two methods that is carbonization and activation. The activated carbon of olive stone helps to remove phenols, dyes, metals, etc.

Keywords: Organic Pollutant, Olive Stone, Eco-Friendly, Inexpensive, Adsorption.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effects of Soil Temperature on Plant Growth

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Abstract: Studying soil temperatures, earth heat fluxes, and, in particular, correlations between wet and dry lands and their heat absorbing capacities helps agriculturalists to productively schedule field events. The temperature of soil is a significant parameter in agriculture since proper warmth at proper depths not only conditions efficient plant growing. It also determines the time for sowing, due to the importance of soil temperature for seed germination

Keywords: Soil temperature, heat, organic matter decomposition, plant growth, radiant energy

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Study on Rice Husk as Natural Adsorbents for Phenol Removal from Waste Water

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Abstract: Now-a-days waste water is generated a lot by industries which leads to water scarcity; hence it is important to treat waste water generated from various sources before it is discharge. In this research paper review on the preparation and characterization of rice husk for phenol removal is discussed. Rice husks are nothing but the hard protective coverings of rice grains which are comes out from the grains during milling process. Rice husk is available as large waste material in all rice producing countries, and it contains near about 30%–50% of organic carbon. Rice husk is a base adsorbent for pollutant removal. It is a cost-effective material and a renewable resource. Here the physio chemical characterization of chemically and thermally treated rice husk adsorbents for phenol removal from aqueous solutions is also discussed. The thermal and chemical modifications of rice husk resulted in phenol removal efficiencies of 36%–64% and 28%, respectively. This paper recommends use of thermally treated rice husk as a promising adsorbent for phenol removal from aqueous solutions.

Keywords: Rice Husk, renewable resource, phenol, waste water, physico-chemical.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effect of Climate Change on Plant Disease

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Abstract: Climate changes are in response to changes in hydrosphere, biosphere, atmosphere and other interacting factors. Human activities drive by demorphic, economic, ecological and social changes have a major impact on climate change. The climate influence the incidence as well as temporal and spatial distribution of plant disease. The climate change affects the survival rate of multiplication, sporulation. Climate effects all life stages of pathogen and host and clearly process a challenge to many pathosystem the environmental changes specially when combine with pathogen and host introduction main result in unprecended affects.

Keywords: Climate Change, Plant Diseases, Plant Pathogens, Temperature.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Efficiency of Activated Charcoal towards Textile Wastewater Treatment: Its Review

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Abstract: Due to the textile industry, environmental issues are mainly related to the need to dispose of large quantities of fresh water are highly polluted wastewater. The exceedingly large quantities of textile industry influence with high concentration of heavy metals are associated with the water pollution. The waste water discharge after dyeing is characterized by high concentration of COD, BOD, alkalinity, suspended solids, sulphate, hardness, chloride, fluoride etc. The removal of dye materials from textile wastewater is important as the presence of this kind of pollutant influence the quality of water and makes it aesthetically unpleasant. As the chemical structures of dyes are complicated hence it is difficult to treat dyes with normal waste treatment operations. Even a trace quantity of dye does cause high visibility and undesirability. There is various treatment technique reviewed for the removal of dye in textile wastewater. Recently there is increase in the use of different types of charcoal as adsorbent. Activated charcoal act as an adsorbent. Charcoal is efficient in removing different types of contamination. The treatment of textile wastewater using activated charcoals as an adsorbent is discussed here.

Keywords: Activated charcoals, adsorbent, pollutants, hardness, textile wastewater.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Heavy Metals Removal from Contaminated Water using Waste Printing Paper as Analogous Adsorbent: Its Study

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Abstract: Contaminated water treatment is a major issue across the world despite different technological progression and inventions. The wastewater which includes heavy metal ions proves dangerous to human health if it is not treated properly. Among various wastewater treatment methods, adsorption is most common method to remove heavy metals due to its flexible design, cost effective solution and simplicity. Waste printing paper is common local waste material and it causes so much environmental pollution therefore it is necessary to reduce it. Waste printing papercan be used to remove hazardous chemicals from contaminated water like Cadmium (II), copper (II), nickel (II) and lead (II) ions by varying incubating period, metal dosage and chemical modification with hydrogen peroxide. The adsorption ability of waste printing paper is greater than 90.0%. Metal Dosage have high effect on waste printing paper adsorption ability. While hydrogen Peroxide treatment shows negative effect on waste printing paper adsorption ability. Waste printing paper as analogous adsorbents for heavy metals in contaminated water.

Keywords: Waste printing paper, heavy metals, contaminated water, hazardous, cost effective.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review Article on Green Chemistry

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Abstract: Green chemistry is chemistry for environmental and is really philosophy and a way of thinking what can help chemist in research and production to develop more eco-friendly and efficient product and processes. Designing new products and process which can show their less impact on environment will be guided by the principles of green chemistry. Sustainable development is the middle of environmental technologies. One of the most dynamic regions of research and development in green chemistry is the improvement of explanatory procedures to the pretend green analytical chemistry. Green chemistry is an interdisciplinary field and covers regions for example amalgamation, catalysis, solvents and productive procedures. Paul Anastas and John Warner during the 1990s proposed the 12 standards of green chemistry.

Keywords: Green Chemistry, eco-friendly, Sustainable development, catalysis

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effect of Herbal Tooth Powder on Tooth Healt: An Evaluating Study

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Abstract: Herbal tooth Powders dwell of various important ingredients that are available in the global market. Therefore, fashionable strategies that specialize in the aspects area unit helpful for the standardization of herbs and their formulations. customers believed by mistreatment seasoner primarily based toothpowders area unit Safe, effective, and fewer Poison. This study is so aims to produce another to the buyer and formulate seasoner tooth powder mistreatment clove, stevia leaf, salt, Neem stem, tree stem, mustard oil, Ginger and Amla. The mouth cavity infections area unit the customarily sorts of infections. caries is associate degree communicable disease, infection of enamel and causes malady and dentine. it's not treated, the infection continues and can result in tooth loss. The mouth contains traditional flora of opportunist bacterium that area unit -non-pathogenic. The imbalance of this example. Causes infection and tooth injury. eubacterium mutants' area unit thought of because the main species concerned within the development of tooth Powder carries. S. mutants, acid-producing bac teria, causes fermentation of carbohydrates that end in tooth injury. Therefore, within the gift work, the subsequent look of seasoner tooth powders were planned for the formulation, standardization of seasoner tooth Powder, and anti-bacterial screening take of seasoner tooth powder.

Keywords: Herbal Ingredients, synthetic ingredients, Anti-bacterial effect, Oral hygiene.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review Article: Sterilization of Water Using Bleaching Powder

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Abstract: Water is an important resource in our day-to-day life and an essential ingredient to survive on this planet. It is very crucial for carrying out different metabollic and anabolic processes in body and to carry out haemoglobin in body. A daily average of one gallon per man is sufficient for drinking and daily purpose like cooking, because of increasingly world population, demand of drinkable water supply increased and is currently increasing rapidly.So, it is indispensable to identify water resource from which we can use it for drinking as well as daily purposes as many resources of water does not have drinking water. So, in order to execute the demand of pure and drinkable water first it need to get purified and then supply it in orderly and organized way.

Keywards: Sterilization, metabolic and anabolic processes, Drinking water, Bleaching powder

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Turmeric as Natural Medicine: A Mini Review

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Abstract: Turmeric is a important plant of curcuma longa. Turmeric medicine is a branch of Ayurvedic medicine. Turmeric is initially used as a dye. In India turmeric has been used since from 2500 years ago. It is most useful herbal natural medicinal plants. It has antioxidants properties and is beneficial in conditions like inflammation, various cancer and ulcer. Turmeric is used in traditional ayurvedic medicine in India, Bangladesh, Nepal and Pakistan. Turmeric is commonly used as a spice in Asian food and kitchens. Turmeric is also used in skincare treatment. It can be taken in water or milk and is reputed to alleviate asthma and cough. The rhizome is the part of the plant skeleton that is most widely used. In dysentery roasted powder turmeric is used as an ingredient and turmeric is also used in tooth decay powder. Turmeric water is an Asian and global cosmetic to impart a golden glow to the complexion.

Keywords: Anaemia, room temperature, curcumin.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Hypertension-The Restrained Terminator: A Mini Review

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Abstract: Hypertension, the "silent killer" is a modern day's epidemic and is an increasingly important medical and global public health issue its role in causation of coronary heart disease, stroke, and other vascular complications. Hypertension is one of the major risk factors for cardiovascular disease and this leads cause of death worldwide. High blood pressure is another home of hypertension High blood pressure, often has no symptoms most of the studies on hypertension provided the data on older of high blood pressure so. the study on prevalence pressure among younger age group and their socio- demographic variables provides the guide for requirements of any intervention. The present study indicates the Current prevalence of hypertension and its correlates in the state of Maharashtra. I've searched PubMed, Embase, Cochrane library, Google Scholar and includes cross sectional studies reporting data on hypertension prevalence among young adults. For more state I've visited national library of medicine and analyzed National family Health surrey Date (NHFS). The data collected is present using Microsoft Excel. Overall prevalence of hypertension was 35-40% and that of pre-hypertension was 40 45%. among the study population human ecology factors like age, mode of travel, physical activity, hypertension, male gender, family history of hypertension, mode of travel, physical activity, overweight, years of service, intake of coffee and smoking had shown significant association with hypertension.

Keywords: Hypertension, Prevalence, Young adults, NFHS

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Water Cleaning Processes: Review Article

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Abstract: The medical aid of raw water plays a very important role in environmental handling. In this document we have a tendency to summary many feedback controllers projected by totally different authors to purify the water contained in water distribution systems. many techniques to purify the water and therefore the sensors required as a part of the complete system square measure bestowed to supply a summary of the parts and processes encountered in water treatment plants. The review is dedicated to the matter of water purification within the field. An appraisal of the benefits and downsides of all thought of technologies has been disbursed.

Keywords: Cleaning, Aeration, Purified Water, Particle, River Water

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review Article: Important Trends in Medicinal Plant Chemistry

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Abstract: The use of medicinal plants chemistry has been done since precedent days and should even be thought-about the origin of contemporary drugs. Compounds of plant origin are and still square measure a vital supply of compounds for medication. during this study a bibliometric study of all the works indexed within the Scopus info till 2019 has been allotted, analyzing quite a hundred,000 publications. On the one hand, the most countries, establishments and authors researching this subject are known, yet as their evolution over time. On the opposite hand, the links between the authors, the countries and therefore the topics beneath analysis are analyzed through the detection of communities. The last 2 periods, from 2009 to 2014 and from 2015 to 2019, are examined in terms of analysis topics. it's been determined that the areas of study or clusters are reduced, those of the last amount being those engaged in unclassified drug, ancient drugs, cancer, in vivo study—antidiabetic activity, and animals—anti-inflammatory activity. In summary, it's been determined that the trend in world analysis is targeted additional on the seek for new medicines or active compounds instead of on the cultivation or domestication of plant species with this incontestable potential.

Keywords: Healthful Plants, Drugs, Worldwide Analysis, Bibliometrics, Ancient Drugs

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Water Stress and Their Effect on Plant Growth

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Abstract: Water is one of the most important factors that determine the distribution of species around the globe. Because of water stress soon become loose. Water stress is found the most important factor of controlling Water is used to supply the limit water to the plant so they cannot cause water stress. Water stress is referred to as a limited water supply to plant roots, which reduces the rate Water stress results in disruption of agriculture, hence it affects food production in the world, resulting in famine. The draught area does not need any water for growth is the most important factor that determines the growth and development of organisms. Plant under the water scarcity it damages the plants and the soil also and decrease the photosynthesis of the plant and the trees

Keywords: Marginal leaf scorch, water stress.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Salinity Stress on Plant Growth

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Abstract: Salinity is a major stress limit growth and productivity of plants in many areas of the world due to increasing use of good quality of water for irrigated and soil salinization. Plant accommodates or sufferance to salinity stress involves composite physiological characteristic, metabolic progressions and molecular or gene complex. A inclusive understanding on how plants respond to salinity stress at different levels and an integrated attitude of combining molecular tools with physiology and biochemical techniques are authoritative for the developmental varieties of plants in salt-affected areas.

Keywords: Microbiome; Plant Growth-Promoting Bacteria;

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Ecological Consequences of Genetically Modified Tomato Species

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Abstract: Currently, genetically modified crops are among the most important constituents in all aspect of our life. Recent controversies about genetically modified crops in United Kingdom and other European countries indicate the apparent differences in public opinion on this subject across the Atlantic, where people do seem untroubled with GMO as compared to other countries. Among plants after potato, tomato is the model plant for genetic changes. A number of genetic modifications of tomato are available especially against different insects, pests and fungus. Gene silencing techniques against viruses have been applied for silencing the expression of damage causing gene. Genetic modifications inducing significant events regarding fruits ripening and growth in tomato and vaccines are of the particular importance. In this review article, we have covered genetic modifications which cause insect, virus and fungus resistance; confer fast growth, chilling, salinity and drought tolerance, increased and improved nutrients, yield, fruit ripening, quality and color of the tomato. Factors affecting photosynthesis and metabolic rate are also discussed in this review.

Keywords: Transformation, Photosynthesis, Metabolic Rate.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Climatic Changes and Its Effect on Plant Biodiversity

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Abstract: Biodiversity indicates a healthy environment and the ability of ecosystems to convert their life support processes that provide the fundamental basis for human welfare. During the last century, climate change, pollution, and extreme involution and due to unmanageable use of natural resources have impaired biodiversity so hardly that this situation now approach human life. These effect plant diversity. Climate change bring out worldwide changes in the living conditions for plants. These explain overall condition of plant diversity effected by global climate change.

Keywords: Climate Change, Biodiversity and Effects.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Study of Sustainable Urban Development in India

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Abstract: As India becomes more and more urban, sustainability will become an issue of increasing importance. But what constitutes sustainability and how it should be pursued as a policy goal is contested and shows considerable variation both in theory and practice. In the first part of this paper, different conceptual perspectives on urban sustainability are examined, namely, sustainability as understood from the Brundtland Commission's Report, sustainable urban form as defined by planners, and the political economy approach of structuralist and post-structuralist scholars such as David Harvey. In the second part of the paper, urban sustainability is examined as policy in the Indian context, from the period before economic liberalization to the present and changes in policy are discussed. The current thrust on smart cities and gigantic urban-industrial corridors indicates that the scale of thinking about the urban has changed. The final section turns to the implications of the proposed policies in the context of land availability and sustainability.

Keywords: Society, Environment, Culture and Economy.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Effect of Leaf Size on Plant Transpiration Rate

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Abstract: Leaf Size that is Leaf surface area and leaf dry mass profoundly effect of variety of biological carbon, water and energy processes. The remarkable variability in individual leaf size and its trade- off with total leaf number in plant have particularly implication for understanding the adaptation of plan to environment change. The various leaf size of plants growing in the same habitat are expected to have distinct abilities of thermal regulation influencing leaf water loss and shedding heat. Leaf size in leaf temperature regulation in dry environment with strong radiation. The size dependent leaf water relation is of central importance to organize the functional role of leaf size changing climate including rapid change in air temperature and rainfall.

Keywords: Leaf, Temperature, Number.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review Article: Recycling of Polyethylene Waste Material to Useful Products

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Abstract: Disposal of plastic waste in environment is considered to be a big problem due to its very low biodegradability and presence in large quantities. As sources of raw materials to produces different helpful product from those polythene waste materials. Therefore, finding different ways of disposing waste by exploitation friendly ways are getting a significant analysis issue. during this analysis, high density polythene waste is mixed with Portland cement to analyze the chance to supply plastic cement, and study the result of commutation sand by fine polythene waste with totally different proportion on the properties of product. This large increase in plastic commodities additionally will increase the waste generation therefore making new challenges. This paper reviews the result on recycling methods of polyethylene waste materials and properties of recycled HDPE/LDPE/Nylon PSW with totally different reinforcements like sand, fibre, hemp fibre, metal powder.

Keywards: Biodegradable, Polyethylene, Disposal, Portland Cement, Recycling

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Production of Mosquito Repellent Insecticide using Ecofriendly Means

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Abstract: Mosquito repellents are substances that can use to repel mosquitoes which is a transmitted malaria. A typical example of a mosquito repellent is mosquito coil which drives away mosquito when it is start to burning. These active ingredients have known to act as repellent agent which cause a unpleasant environment for the mosquito and act as agents of reduced which disturbs the food searching mechanism of the mosquito. Orange peels contains oil known as Limonene oil which has causing effect on mosquitoes and some other insects. It can be used as active ingredient to produce mosquito coil, which when start to burning, will repel Mosquito repellent finished material also are a locality of protecting fabric. Many plants have insecticidal properties in order that they also are known as natural pesticides. The orange (Citrus sinensus), may be a valuable fruit not just for its edibleness, except for the high quantities of the substance d- limonene, found in its peel and zest. D-limonene may be a chemical and is found in several business insect repellents. Oil derived from orange rind includes a ninety to ninety-five % content of d-limonene, that is deadly to fleas, hearth ants and flies. terpene affects insects on contact, effectively dyspneal them by damaging their metabolic process systems. several insects like roaches, ants and silverfish don't take care of the scent of orange oil and can avoid it. inserting bits of orange rind or zest round the garden repels flies and mosquitoes.

Keywords: Mosquito repellent, DEET, orange peel, tendency

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Mixed Metal Oxides as Gas Sensor-A Mini Review

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Abstract: In this paper a review of different technologies for gas sensors is depicted. The different types of gas sensors technologies including catalytic gas sensor, electrochemical gas sensors. The advantages and disadvantages of each sensor technology are also highlighted. All these technologies have been used for several decades for the development of highly sensitive and responsive gas sensors for the detection of flammable and hazardous gases. Basically, traditional detection methods which produce systems that sounds an audio alarm to notify people when there is a gas leakage that is harmful or poisonous is not very dependable because it is required to obtain accurate real-time measurements of the concentration of a target gas. However, for many centuries, different gas sensor technologies have been used for different gases detection including semiconductor gas sensors, catalytic gas sensors, electrochemical gas sensors, optical gas sensors and acoustic gas sensors. The performance characteristic of every sensor is based on some properties including sensitivity, selectivity, detection limit, response time and recovery time. However, for improved sensitivity and selectivity for these sensors, future trends and outlook for researchers and scientists are suggested in the conclusion of this research article.

Keywords: Gas Sensor, Sensitivity, Selectivity.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Vermicompost: A Sustainable Soil Amendment for Carbon Sequestration, Enhancing Microbial Growth and Physicochemical Properties of Non-Agriculture Soil

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Abstract: Vermicompost is proved to be one of the best natural/organic fertilizers for the soil amendment for restoring physicochemical and biological properties of the soil. The chemical composition of the vermicompost depends on the substrate and contains the micro and macro nutrients, various bio molecules like cytokinin, auxins, PGR's, enzymes required for seed germination, healthy microbial and plant growth. The use of organic amendment like vermicompost, organic manure is simple, user-friendly, eco-friendlyand sustainable alternative for soil restructuring. It was observed that vermicompost has ability tomaintain the carbon to nitrogen ratio for healthy microbial growth, slow down the use of chemical fertilizers, pesticides, increase disease resistance in crop and thereby yield per hector of the crop land by converting non agriculture land into fertile crop land. Organic amendments like vermicompost are proven to be essential for mitigating the climate change, healthy ecosystem and wellness and wellbeing of the globe.

Keywords: Vermicompost, Organic fertilizer, Soil Amendment, Carbon to Nitrogen ratio, Seed germination, Physicochemical Properties.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Green Synthesis, Characterization and Biological Applications of Copper Oxide Nanoparticles

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Abstract: TheCuONPs were synthesized following green chemistry principles using the ginger lily leaves extract. The characterization of synthesized CuONPs was carried out by UV-Visible, FT-IR, XRD, HRTEM, FESEM-EDAX and PL spectra. The particle size (average) revealed on the basis of XRD, HRTEM and FESEM analysis was 40 nm. The UV-Vis. spectra confirmed the successful synthesis of CuONPs by exhibiting absorbance around 300 nm while the peaks around 295 and 590 nm in PL spectra revealed its luminescence property. The synthesized CuONPs were verified against some bacterial and fungal strains. The CuONPs exhibited outstanding antibacterial activities versus *E. coli* and *S. Pyogenus* while considerable antifungal activities against selected fungal strains.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Scientific study for Content of N-Nitrosodimethylamine in Valsartan by GCMS Technique

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Abstract: Active pharmaceutical ingredients are making vital role in preparation or formulation of any medicines. It is the prime duty of ourselves to monitor the overall quality of pharmaceutical drugs as well as products for safety and efficacy. With the advancement in science of chemistry and other branches of instrumental devices including analytical sciences and biotechnology, the scope of analytical chemistry has reached to, much higher extent. The main focus in current usage of analytical methods advance analytical technology has made it possible not only to evaluate the potency of active ingredients in dosage forms and API's but also to get deep knowledge in characterization, structural elucidation, identifying and quantifying stereo isomers active moiety, possible impurities, metabolism, chirality of API and anticipation of possible degradations likely impurities being generated. Pharmacopoeias rely more on instrumental techniques rather than the classical wet chemistry method. In my research work a scientific attempt, I am going to adopt strategy of development, validated analytical methods for the determination of API single dosage form using GCMS technique.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Comparative Leaf Anatomy of Three Medicinal Plants from Menispermaceae Family

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Abstract: Comparative leaf anatomy studies were conducted in three medicinally important plant species, *Cissampelos pareira Linn., Cyclea peltata*(Lam.) *Hook.f. & Thomson*., and *Stephania japonica (Thunb). Miers*, all belonging to the family Menispermaceae. Cross-sectionswere taken using a freehand section ofhealthy petioles and laminas. Thin sections were selected and observations wereperformed under a light microscope.Results showed the similarities and variations in leaf anatomical characteristics between the three species. Anatomical characters such as leaf epidermal cells, mesophyll layers, the pattern of vascular bundles in midrib and petiole, presence of crystals, types of trichomes, etc. were observed.The study presents the anatomical markers in the leaves of respective plant species.

Keywords: Leaf Anatomy, Trichomes, Vascular Bundles, Anatomical Markers

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Review on Adsorption of Different Heavy Metals on Natural Adsorbent Sawdust

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Abstract: Natural adsorbent i.e. Sawdust has been proved to be effective low cost adsorbent for removal of metals, dyes from their aqueous solutions. Sawdust is available in ample amounts in nearby area, so its use can be greener way of water purification. This paper reviews the findings of some researchers for the use of saw dust in different forms for heavy metal removal. Reported optimizing factors of adsorption, its isotherm analysis and kinetics are reviewed in this paper. It has been found that generally Langmuir and Freundlich adsorption isotherms fit well to batch experimental data. Pseudo-Second-order kinetic model best describe these processes. In some cases intraparticle and Elovich models are also used. Observations of effectiveness of Saw dust can be useful in future for designing water purification technology.

Keywords: Adsorption, Sawdust, Heavy Metals, Adsorption Capacity, Isotherms, Kinetics

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Recent Advances in Ayurveda in India with Reference to COVID-19 Pandemic

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Abstract: In India, Kerala State Government stated 1206 AYUSHRaksha Clinics and associated task forces across the state in April 2020. It is to apply Ayurvedic Preventive, Therapeutic and Convalescent care strategies for the COVID-19 pandemic. Sayed Ahmad et. al. (2021) worked on medicinal plants and formulations and their potential against COVID-19 preclinical and clinical research. According to them, the AYUSH recommended formulations of medicinal plants routinely used by Indian population, which can be tested against COVID-19. AYUSH emphasised on Indian medicinal plants reported for antiviral, immunomodulatory and anti-allergic/anti-inflammatory activities. AYUSH also categorised for prioritization in research on the basis of earlier reports. Sayeed Ahmad et. Al. (2021) further suggested that AYUSH has promising formulations with Indian medicinal plants to be investigated on a priority basis to solve the present pandemic situation. According to Unnikrishnanet. Al. (2020), approach of Ayurveda in pandemic situation like COVID-19 will reduce long time for clinical trials of allopathic drugs. Ayurveda and its derived drugs in COVID-19 resolved the long time for pandemic remedies. They also said that efforts should be taken to bring the whole systems approach into research methodologies to effectively generate evidence supporting Ayurveda interventions for COVID-19. Rakesh Kotecha (2021) state that use of immunity promoting interventions form the ancient traditional systems of medicine involving Ayurveda, Yoga and Naturopathy, Unani, Siddha, Sowa Rigpa, and Homeopathy (AYUSH) and several home remedies based on traditional knowledge played important role in lowering rates of mobility and mortality in India during COVID-19 pandemic Situation. Harish Singh(2022) provided a pragmatic plan for Ayurveda intervention in COVID-19 pandemic situation. He said that it should be implemented immediately it will be helpful to learn, to generate evidence of application of Ayurvedic in COVID-19 pandemics.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Synthesis and Characterization of Novel 2-phenyl-5-((2-phenylthiazol-4-yl) methyl)-1, 3, 4-oxadiazole derivatives

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Abstract: The chemistry of heterocycles has drawn much attention of synthetic organic chemists due to their varied biological activities Thiazole and their derivatives have attracted continuing interest over the years because of their varied biological activities. 1, 3-thiazole compounds have exhibited a broad range of biological activities such as Anti-cancer, Anti-tumor, Antibiotic, Anti-inflammatory, Anti tubercular, Antibacterial, Antifungal.1,3,4-Oxadiazole is associated with potent pharmacological activity due to the presence of toxophoric –N]C–O– linkage. The synthesis of heterocyclic compounds containing multi-structure in a molecule has received much attention in recent years. Compounds bearing 1,3,4-oxadiazole nucleus possess significant Anti-inflammatory, Anticancer, Antibacterial, Antitubercular, Analgesic activities.

Keywords: Thiazole, Oxadiazole

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Synthesis, Characterization and Photoelectrochemical Properties of CdNiSe Thin Films

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Abstract: CdNiSe thin films have been deposited by simple and cost effective chemical bath deposition technique containing cadmium sulphate octahydrate, nickel sulphate octahydrate, tartaric acid, sodium hydroxide, ammonia and sodium selenosulfate onto stainless steel substrate. The preparative parameters like ion concentration, temperature, pH, speed of substrate rotation and deposition time have been optimized for good quality thin films. X-ray diffraction studies revealed the polycrystalline nature of sample with the solid solution of nickel(II) ions in CdSe host lattice, having a hexagonal phase structure. Scanning electron micrograph suggested that the grains were spherical and uniformly distributed over the substrate surface. Film composition was determined by atomic absorption spectroscopy as well as energy dispersive X-ray atomic spectroscopy. Optical absorption data showed the presence of direct transition with energy band gap 1.61 eV for the deposited thin films. The dark specific conductance of CdNiSe thin films was found to the order of 10−8 (Ωcm)−1 having p-type semiconducting nature. Photoelectrochemical characterization was carried out using sulphide /polysulfide electrolyte with 0.65% efficiency.

Keywords: Chemical bath deposition; Photoelectrochemical studies, X-ray diffraction

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

An Insight into the Physico-Acoustical Properties of Biologically Active heterocycles: Chalcones in Different Solvents at Various Temperatures

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Abstract: The density, viscosity and ultrasonic velocity have been measured for synthesized (2E)-3-(4-Chlorophenyl) -1-(4-fluorophenyl) propenone (FCC)in DMF, THF and $CHCl_3$solutions of various concentrations at 300.15K with a view to understand the molecular interactions in these solutions. The experimental data have been used to calculate various acoustical parameters, which are interpreted in terms of solute-solute and solute-solvent interactions in different solvents.

Keywords: FCC**,** density, viscosity, ultrasonic velocity, DMF, THF, $CHCl_3$,acoustical parameters.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Morphological Studies and Classification of Mantis of Genus *Gongylus Thanberg*

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Abstract: The present study was conducted to study the Praying mantids (Mantodea) from Mangaon area in relation to their morphological characteristics and classification.Here focussed was only on one species of Mantis. Mantids play both positive and negative roles in ecosystem.Mantids are generally large insects ranging in size from 1 cm to more than 17 cm. Females are usually larger than males. The two front legs of mantids are highly specialized for catching the prey and during hunting they assume a praying position, folding the front legs under their head, hence derived the name 'Praying Mantis. Globally 2400 species of mantids are known belonging to 142 genera and 18 families. A total 162 species exist in India belonging to 68 genera. The study was conducted in rainy season of 2021 from June to September in Mangaon area. Around 35 Mantids were collected belonging to *Empusidae* Family, and Genus *Gongylus Thanberg* found in grassland ecosystem.

DOI: 10.48175/568

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Preparation of V_2O_5 nanocrystallites using Vanadium oxalate Complex and its use in Degradation of Methylene Blue Dye

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Abstract: The chemical path provides us new materials which are having specific size, shape, morphology and stoichiometry which have very interesting applications.$V_2O_5$is used as catalyst for various industrial applications, in making LASER Crystals, electrode in development of super capacitors, also it is used for various photocatalytic reactions. Methylene blue is an organic chloride salt having 3, 7-bis (dimethylamino) phenothiazin-5-ium as the counter ion. Methylene blue is an oxidation-reduction agent. Methylene blue is produced as water pollutant in textile, plastic and dye industries. If directly discharged into water, they can cause serious damage to the environment due to their deep colour and low degradation rate. Herein, we demonstrate one convenient monitoring method to prepareV_2O_5nanocrystallites using oxalic acid metal in 1:2 ratio. The complex was characterised by Uv-Vis, FTIR. The complex was used as single source precursor for preparation ofV_2O_5nanocrystallites.0.300 g of complex was taken for open air pyrolysis in horizontal furnace at 510 ^oC and it was annealed for two hours and furnace was allowed to cool at room temperature. The orange colour powder was characterized by powder XRD,SAED and TEM. The prepared nanoparticles showed very excellent result in degradation of Methylene blue upto 50 photo catalytic cycles with in few seconds

Keywords: Vanadiumpentaoxide, Methylene blue, degradation

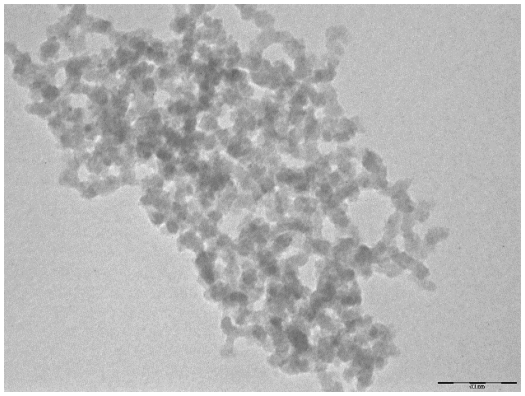

Figure: TEM image of V_2O_5nanocrystallites.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Extractive, Comparative Study and Spectrophotometric Determination of Some Metal Ions With Imine (Schiff Base) Derivative As An Analytical Reagent

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ABSTRACT: The spectrophotometric method is coupled with solvent extraction technique and used for the determination and comparative study of some transition metal ions using N,N'bis(O-hydroxy acetophenone) ethylene diimine(HAPED) as an analytical reagent. This reagent is synthesized in the laboratory and characterized by NMR, IR, Mass and elemental analysis for its purity. This reagent forms different colored stable complex with metals, which can be quantitatively extracted into chloroform at different pH range. This Metal-HAPED complex in chloroform exhibit intense absorption peak at different wavelengths. Solvent extraction is considered to be one of the best methods of separation. It is based on transfer of a solute from one phase to another, which is immiscible with each other. The Stoichiometric ratio of complex of metals studied by Job's Continuous Variation method, Mole ratio and Slope ratio method have been studied and it is found to be metal and ligand ratio is 1:2. The Molar absorptivity and Sandell's Sensitivity are also calculated. The proposed method is rapid, sensitive, reproducible and accurate and has been satisfactory applied for determination and separation of metals in commercial mixtures, pharmaceutical samples and alloys.

Keywords: N,N'bis(O-hydroxy acetophenone) ethylene diimine (HAPED) reagent, Sandell's Sensitivity, Molar absorptivity, Spectrophotometric determination.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Study of Natural Bio-Coagulants Moringa Oleifera and Cicer Arietinum for the Purification of Waste Water

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Abstract: Water is the most vital parameter among natural resources. Turbidity impart enormous problem in waste water treatment. In this present study, an attempt has made to evaluate the comparative effectiveness of chemical coagulant alum with natural coagulant such as Moringa Oleifera & Cicer Arietinum seed powder & oil extract. The pH, COD, BOD & turbidity was determined in treated sample of coagulant & maximum reduction efficiency was found in combined use of Moringa Oleifera & Cicer Arietinum seeds. As a result, it shows that the seed extracted powder of Moringa Oleifera and Cicer Arietinum removes the turbidity of water by nearly 96.5 to 98.3%. Moringa Oleifera and Cicer Arietinum seeds are very common & can easily available in nature and having low cost. Hence it was very cheap & every person can prepare it in their own at home in any village and can be used for the purification of water.

Keywords:-Moringa Oleifera & Cicer Arietinum seeds, Waste water, Turbidity, Natural bio coagulants, etc.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Study of Intermolecular Interaction of Allyl Bromide with Acetone through dielectric and Thermodynamic Properties

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Abstract: The dielectric constant (εσ) and Relaxation time (τ) for binary mixtures of Allyl Bromide (ALB) with Acetone (ACE) were determined for eleven concentrations at temperatures 293.15 K, 303.15 K and 313.15 K in the frequency range of 10 MHz to 10 GHz using time domain reflectometry (TDR). Density and refractive index of same mixture at same temperature are also obtained which are further used to known excess molar volume and excess molar refraction respectively. These excess parameters are compare with excess dielectric parameter. Comparisons confirm that there is intermolecular interaction between ALB and Acetone (ACE). The values of Kirkwood factors indicate antiparallel dipoles in ALB and parallel dipoles in Acetone.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

Green-Synthesis of Silver and Gold Nanoparticles in Leaf and Bark of Plant *Vitex leucoxylon*

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Abstract: Nanotechnology has emerged up as integration between biotechnology and nanotechnology for developing biosynthetic and eco-friendly technology for synthesis of nanomaterials. Nanoparticles are extensively used in biological and medical research due to their unique properties. Use of such nanoparticles in biological & medicinal field gives rise to the concept of biomedical nanotechnology, bio nanotechnology& nanomedicines. Green-synthesis of nanoparticles is immerging area in plant science research. Different plants are used for this purpose being it is most ecofriendly and convenient method of synthesizing nano scale particles of different salts.The plants are their potent sources of many valuable bioactive constituents and these constituents contributes reduction of salt in the system.In present work,leaf and plant bark of *Vitex leucoxylon* plant was taken as an experimental system for Green-synthesis ofsilver and gold nanoparticles from silver nitrates and gold chloride salt. *Vitex leucoxylon* is rich source in secondary metabolites especially polyphenols such as alkaloids, tannins, flavonoids and also steroids, triterpenes etc. which has lots of medicinal importance. The extract reaction mechanism of the nanoparticles synthesis by using biomaterials is yet to elucidate in detail; the work done proposes the involvement of redox enzymes in the reduction of silver and gold ions.Different biological sources can be used for synthesis of AgNPs and AuNPs such as bacteria, fungi, algae and plant material. Silver and Gold nanoparticles are gaining more attention due to their enormous applications, which includes biolabeling in optical receptors, catalyst in many chemical reactions and also possess different biological activities such as antibacterial, antifungal, antioxidant, antiviral activities.

Keywords: Nanoparticles, Green-synthesis, Vitex, Silver Nanoparticles, GoldNanoparticles, NTA, TEM, UV-Vis.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

To Study Histology of Ovary of the Fresh Water Bivalve, *Lamellidens marginalis* under the Stress of Tributyl tin oxide

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Abstract: The aim of the present study is to study the significant Histological changes seen due to Organotin Compound TBTO on ovary of fresh water bivalve species *L. marginalis*. Organotin compound is generally used on large scale as biocide in Aquatic ecosystems. The bivalves are bio-indicators to determine aquatic pollution on large scale in riverine Ecosystem. Histological study of these reflects the health of an entire aquatic ecosystem in the bio-monitoring process. Histological responses may also serve as Eco-toxicologically meaningful biomarkers since they form an important link between effects at the biochemical level and those measured in whole organism. The adverse effect of Tributyltin Oxide has been studied on ovary of freshwater bivalve. To study the acute lethal dose of Tributyltin Oxide the acute toxicity of TBTO is calculated under controlled laboratory conditions at 24 hrs , 48 hrs , 72 hrs and 96 hrs respectively. *L. marginalis* exposed to Tributyltin Oxide to 4.2 ppm, 3.6ppm, 2.8 ppm and 1.6 ppm for 24, 48, 72 and 96 hours respectively and studied its effect on the ovary. Results were compared with control group and illustrated histological changes in ovary. The results show gradual degenerative changes in its ovary. The severe damage was observed in the tissue of 72 & 96 hrs exposure to TBTO than compared to 24 & 48 hrs. Results showed damage to ovary tissue as exposure period increases and this was noted for all three observations.

Keywords: *Lamellidens marginalis*, Bis (tributyltin) oxide, ovary etc.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, March 2022
Impact Factor: 6.252

"Synthesis, Characterization and Antibacterial Studies of p-Dimethylaminobenzaldehyde Derivative of α-Benzilmonoximehydrazone ligand and its Zn(II), Cd(II) and Hg(II) Metal Complexes".

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Abstract: It is difficult to imagine life without biological metal complexes. Human being can't ignore the role of coordination compounds in the various physiological processes taking place inside our body. Hence coordination compounds synthesized compounds can compete with the vital biological reactions taking place in the body. Therefore, the metal complexes can inhibit the life cycle of various microbes and find their application in the medicine world. Here, we report the synthesis of divalent metal ions of Zn, Cd and Hg complexes with derivatives of Benzilmonoximehydrazone as ligand. Synthesized complexes were characterized by using traditional instrumental data and attempt to figure out the geometry of the complexes based on spectroscopic data. Antimicrobial studies were performed to assess the biological properties against the both the gram positive and negative bacteria using streptomycin as a standard. The results obtained were encouraging.

Key words: Coordination chemistry, Zinc, Cadmium, Mercury and Antibacterial Activity.

Lambert Publication's

Souvenir of International Conference on "Recent Trends in Chemical Science, Physical Science, Life Science and Computer Technology: (ICRTCPLCT–2022) 29th March 2022"

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Scope Database
Journal indexing & Citation Analysis

ISSN No. : 2581-9429

Impact Factor: 6.252

Scientific Journal Impact Factor

Crossref

Lambert Publication's

www.ijarsct.co.in

7972611953

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