



NEWSLETTER | MARCH 2018

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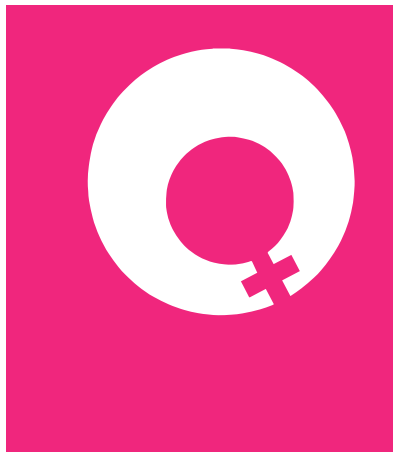
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Mrs. Kalpana Parthiban T,
Dy. Librarian, VIT



International Women's day

My journey of life in Vellore started with my marriage in the year 1983, I was a housewife till 1986 and later during the month of March I joined in VIT as assistant librarian, the campus was at Abdullapuram and then was known as Vellore Engineering College (VEC). I'm a proud VITian" - Mrs. Kalpana Parthiban T, the senior most female staff of VIT with 32 years of experience.

While talking about the milestones of VIT Library, Mrs. Kalpana Parthiban said, "Number of books at the time I joined was 5000 and now the number of books has gone up to 2, 23 000. I have touched each and every book out there as I'm doing the processing works. Till now, the books don't reach stack area without me touching the books. I witnessed the growth of VIT right from its beginning. The library was in GDN in the beginning and later it was shifted to Main Block and finally to the building we see now."

After the demise of her husband in February 2002, she brought up her 2 children and now they are well settled. She thanks VIT management for helping her out during those days. She didn't leave VIT even after getting a job in a bank because of her love for books and dedication towards VIT. She spends most of the day in the library.

"Now the house has become of secondary importance and VIT library is my first home. With the support of Dr. G Viswanathan, Founder and Chancellor, VIT and Mr. G. V. Selvam, Vice President, VIT Radio frequency identification technology (RFID) came into existence," she added. Her message for young women out there: *'Be bold and brave'*.



VIT celebrated 'International Women's Day 2018' on 12th March. Ms. Gautami Tadimalla, Indian Film Actress, and Founder, Life Again Foundation was the Chief Guest and Dr. Pushpa Kurup, Managing Director, Vitalect Technologies India Pvt. Ltd., was the Guest of Honour.

Various competitions were conducted for the women faculty and students of VIT as part of the International Women's Day celebrations. Competitions including Talent Hunt (Poetry / Solo & Group Singing / Solo & Group Dance/ Mime / Skit etc.), Culinary Competition, Rangoli etc. were conducted. Prizes were awarded to the winners.

International Women's Day Celebrations





Book Release Function



'Moondrezhuthuthu Adhisayam MGR' written by Dr G. Viswanathan



Thiru. Banwarilal Purohit, Hon'ble Governor of Tamil Nadu releases the book, 'Moondrezhuthuthu Adhisayam MGR' written by Dr G Viswanathan, Founder and Chancellor, VIT.

The concluding function of Dr. MGR's centenary birth celebrations was held at VIT on 9th March, 2018. Thiru. Banwarilal Purohit, Hon'ble Governor of Tamil Nadu, was the Chief Guest. He released the book, 'Moondrezhuthuthu Adhisayam MGR' written by Dr. G Viswanathan, Founder and Chancellor, VIT.

The welcome address was given by Dr S Narayanan, Pro Vice-Chancellor, VIT. Mr G V Selvam, Vice President, VIT, Honoured the honorable Governor, Dr Sekar Viswanathan, Vice President, VIT, Honoured Thiru K C Veeramani, Honorable Minister for Commercial Taxes, Govt. of Tamil Nadu, Dr Anand A Samel, Vice Chancellor, VIT honoured Dr NiloferKafeel, Hon'ble Minister for Labour, Govt. of Tamil Nadu. Dr S Narayanan, Pro Vice-Chancellor, VIT honoured Thiru Sevvoor S Ramachandran, Honorable Minister for Hindu Religious and Charitable Endowments, Govt. of Tamil Nadu. Dr K Sathiyarayanan, Registrar, VIT honoured Thiru G Hari, Member of Parliament. Mr Sankar Viswanathan, Vice President, VIT honoured Thiru Duraimurugan, MLA, Former Minister of Tamil Nadu.

Dr. G Viswanathan donated furniture worth Rs. 50,00,000/- to Govt. Schools.

MGR Photo Exhibition



As part of the concluding function of the centenary birth celebration of Dr MGR, a photo exhibition was inaugurated by Mr. Ponnaiyan, Former Minister, Govt. of Tamil Nadu.

MGR car exhibition inauguration



Thiru. K C Veeramani, Hon'ble Minister for Commercial Taxes, Govt. of Tamil Nadu inaugurated the exhibition of the car used by Dr. MGR, on 9th March in the presence of Dr. G Viswanathan, Founder and Chancellor, VIT. Mr. G V Selvam, Vice President, VIT, Dr. Sekar Viswanathan, Vice President, VIT, Mr. Sankar Viswanathan, Vice President, VIT, Dr. Nilofer Kafeel, Hon'ble Minister for Labour, Govt. of Tamil Nadu, Thiru. Sevvoor S Ramachandran, Hon'ble Minister for Hindu Religious and Charitable Endowments, Govt. of Tamil Nadu, Thiru G Hari, Member of Parliament. Thiru. Durai Murugan, MLA, Former Minister of Tamil Nadu were present on the occasion.



▲ Dr. Thiruvengadam V, Medical Practitioner, Chennai receiving the memento from Mr. G V Selvam, Vice President, VIT.

The Weekend Leader VIT Person of the Year (2017) Award Function

Dr. Thiruvengadam V, Medical Practitioner, Chennai, was recognized as the 'Person of the year'

Dr. Thiruvengadam V, Medical Practitioner, Chennai was selected as the 'VIT- the Weekend Leader - Person of the year 2017'. His humanitarian efforts of treating patients at low cost won him this recognition. The function was held on 14th March at Dr. M Channa Reddy Auditorium, VIT. Dr. D Ashok, Dean, VIT Business School delivered the welcome address. Mr. G V Selvam, Vice- President, VIT, honoured Dr. Thiruvengadam with a citation and a cash prize of Rs. 25,000.

In his Acceptance speech, Dr. Thiruvengadam said, "I saw underprivileged people who are finding it difficult to meet the medical expenses and then I decided to give cost-effective medical treatment."

The 66 year old doctor does not charge for home visits, and he goes to meet the sick persons in their houses for free. As a note of advice to the audience, Dr Thiruvengadam said, "The secret of health is not medicine but is regular exercise." Dr. N Jayasankaran, Advisor, VITBS and Dr. Anand A Samuel, Vice Chancellor, VIT felicitated Dr. Thiruvengadam.

Mr. G V Selvam, Vice- President, VIT, in his address said, "Dr. Thiruvengadam is just 16 years with 50 years of experience. Students must learn from him, learn what you have to do for society once you get out of the college and this is the reason why we are organizing such functions," He further said "Students must keep a positive attitude; they should think of the problems of the society and should help them. Think of Entrepreneurship which helps the society, the cost-efficient one. Come up with research which results in cost-efficient products that helps society." "Interest in new innovations among students can increase new findings to reduce the cost of medical treatment as well as medicines. People are reluctant towards helping others when they happen to see a road accident. Do not hesitate to help, take them to the hospital instead of worrying about police cases." said Mr. G V Selvam. The Lead Star magazine was released at the function along with the launch of the Weekend Leader App. Mr. P C Vinoy Kumar, Editor, Weekend Leader delivered the introductory speech, Dr Rajesh M, Programme Chair, BBA, delivered the Awardee introduction, Dr. A Siva Kumar, Professor, VITBS proposed the Vote of Thanks.



DEVSPACE

Shri. Pakalavan P, Superintendent of Police (SP), Vellore inaugurated DEVSPACE in VIT

DEVSPACE, A two-day National level hackathon was inaugurated at VIT on 16th March by Shri Pakalavan P, Superintendent of Police (SP), Vellore, in the presence of Shri. G V Selvam, Vice President, VIT, Dr. S Narayanan, Pro Vice-Chancellor, VIT and Shri. Ponnusamy Mathaivanan, SAP Consultant, VIT Alumni.

DEVSPACE, the National level hackathon aims at bringing together India's most fast-forward thinkers, innovators and implementers for the progress of technology and literacy. 24 hours dedicated to drive our nation further into the digital revolution.



Invictus'18

Mr K Madavan, MD, PEPS Industries Pvt. Ltd inaugurates Invictus'18

Invictus'18, organized by VIT Business School was inaugurated on 16th March at Sarojini Naidu Gallery, VIT by Mr K Madavan, MD, PEPS Industries Pvt. Ltd in the presence of Dr Anand A Samuel, Vice-Chancellor, VIT and Dr D Ashok, Dean, VIT Business School.

INVICTUS is an International management Summit. It is a flagship event of VIT Business School that challenges to beat the thoughts and deeds of every aspirant. It goes by the meaning "conquer the unconquered", encouraging the aspirants to achieve breaking internal and external boundaries and emerge as a leader.



ASCE - VIT

ASCE, the fest of the Department of Civil Engineering was held on 15th to 18th March. This time the ASCE-VIT set new goals to a grand history like never before. Taking place in India for the very first time, this ASCE India Student Conference touched heights that were never reached before. The inaugural function showcased the keen interest of promising civil engineering minds. We were honoured by the presence of eminent dignitaries who inspired a sense of motivation.



STARS DAY

Stars Day at VIT: Chancellor distributes awards to students

The annual STARS (Support the Advancement of Rural Students) Day was held at VIT on 17th March. Actor and motivational speaker Dhamu took part in the event and extolled students to observe the code of conduct most essential in life. Founder and Chancellor of VIT, Dr. G. Viswanathan handed over prizes to meritorious students who had availed benefits under the STARS project.

The STARS project was launched in 2008 under the aegis of the Centre for Sustainable Rural Development & Research Studies. It selects a girl and boy student from every district of Tamil Nadu, and they are provided free education with food and accommodation. Over 513 students have benefited from the STARS scheme, and currently are working in premier companies. Speaking on the occasion, Dr. Viswanathan said that the scheme was in operation for the past 10 years, and 67 percent of the beneficiaries were first generation learners. He said that success would reach only those who pursued education and worked hard. If all youth studied well and worked hard, India would become a developed nation. Dr. Viswanathan appealed to the students to give up complacency. He asserted that laziness would result in individuals losing opportunities in life and it would thwart the country's march towards progress.

Dr. Viswanathan said that there was no greater fulfilment than the completion of the STARS project. He said that the students should help other youth who are in need of assistance. He recalled his case as an example of a person belonging to a rural background and rising up in life. Recalling that he was a law graduate, he said that he got an opportunity to enter the Parliament through former Chief Minister C.N. Annadurai. Education not only provides knowledge, but also helps in building character and discipline. If one had to emerge out of poverty, education was mandatory, Dr Viswanathan said.

In his address, Mr. Dhamu said that former President A.P.J. Abdul Kalam had launched a scheme PURA for the development of rural areas. If students had to grow and prosper in life, education was most essential. Along with knowledge assimilated through education, sound physical health was also a must. If a situation arose where youth had to go abroad for work, they should not settle down there and instead return to India and work for the country's development.

Poet and writer Professor S. Abdulkhader, Mr G.V. Selvam, Vice President of VIT, Pro Vice-Chancellor S. Narayanan and parents of students who were the beneficiaries of the STARS project offered their felicitations. K. Thazhuva Kuzhanthai, the former student of STARS project proposed a vote of thanks.





TEAM ASSAILING FALCONS HAS ONCE AGAIN PROVEN TO BE A TEAM FULL OF PASSION, AMBITION AND EXCELLENCE

The team Assailing Falcons comprising 31 skillful and passionate aspiring engineers carefully moulded and created a flying Beauty for the SAE Aero Design East Competition- 2018 and showcased it at the event held at Florida air museum, in Lakeland, Florida during 9th-11th March. They built an advanced class aircraft with payload dropping Mechanism which would be helpful at disaster-struck areas.

They successfully secured an overall 6th position in the world at the SAE 2018 Aero Design East competition. Team Falcons dominated the Asian continent and secured the 1st position overall in the competition in Asia.

The following is the breakup of the ranking



PRESENTATION	Overall 6 th Position
TECHNICAL INSPECTION	Cleared at one go
DESIGN REPORT	Overall 8 th Position
FLIGHT ROUNDS	Overall 6 th Position
OVERALL ADV. CLASS RESULTS	6 th World wide 1 st Pos. in Asia



Dr. Bhanu Pant, Group Director MMG, VSSC, Trivandrum Inaugurates Mechnovate'18 at VIT

The four day international technical symposium- Mechnovate'18 - was inaugurated in VIT on 22nd March by Dr Bhanu Pant, Group Director MMG, VSSC, Trivandrum and Dr. S V S Narayana Murthy, MCD, MMG, VSSC in the presence of Dr. G Viswanathan, Founder and Chancellor, VIT, Dr. S Narayanan, Pro Vice-Chancellor, VIT, Dr. N Arivazhagan, Dean, SMEC, VIT. "Mechnovate'18 is an international level technical symposium organized by the international chapter, American Society of Mechanical Engineers (ASME), VIT. This symposium is a carnival for all those engineering students out there who are interested in learning new things and are looking forward to enlighten their knowledge. This fest will have various technical and nontechnical events, series of lectures, seminars and exhibitions which will enrich an engineer with advanced knowledge in their field and attract students of various disciplines from all over India. Mechnovate has been improving its standards to meet its tag ENVISION THE CHANGE," said Dr. M Anthony Xavier, Organiz-

ing Secretary, Mechnovate'18.

Dr. S V S Narayana Murthy, MCD, MMG, VSSC said, "Students must put extra efforts in the design and manufacturing of the essential machines including sintering furnace and friction stir welding machine."

"Number of UG students contributing for research is more in VIT and I haven't seen this enthusiasm in other institutions including IITs": Dr. Bhanu Pant.

Dr. G Viswanathan, Founder and Chancellor, VIT, said, "India is missing 140-150 Billion dollars in trade every year. The rate of import is higher than the export in the Country. Mechanical Engineers can contribute a lot to help the country in reducing the import. Students must work with a common goal to fulfil the Make in India challenge dream of the Honorable Prime minister." He further said, "Manufacturing contributes only 16 percent of the GDP, while in China it contributes 25-30 percent. China has become one of the global hubs of manufacturing."





While talking about the quality of manufactured products Dr. Viswanathan said, “People tend to prefer German products because of the quality. Thus, we need to concentrate on quality along with the quantity of the products in order to increase the exports.”

“India contributes only 2 percent in production and manufacturing globally, while China contributes 28 percent. In order to compete with the world nations, our students must put in their efforts to increase the production and they must be encouraged to become entrepreneurs,” concluded Dr. Viswanathan.

Dr. Bhanu Pant, Group Director MMG, VSSC, Trivandrum said, “India is looking for innovation especially in the manufacturing sector. As Material engineers, we do Quality Control, Production Control, Production Planning,

Project Planning and Implementation.”

“Number of UG students contributing for research is more in VIT and I haven’t seen this enthusiasm in other institutions including IIT’s,” said DrBhanu Pant. Team Anant, VIT who recently won the Human Powered Vehicle Challenge (HPVC) 2018 that was held at Delhi Technical University (DTU), Delhi were felicitated during the function.

“We won 1st overall in the Asia Pacific Region and bagged Rs 50, 000, 1st in Design and received a cash prize of Rs 15, 000 also 3rd in Drag,” Said Sabella Prasanna Reddy, Captian, Team Anant.

A total of 630 students participated in the first day of the conference and more than 900 students in the subsequent days. Prof. P Jeyapandirajan, Department of Manufacturing, delivered the Vote of thanks.



SPE-VIT, Best outstanding student chapter award



The Society of Petroleum Engineers (SPE-VIT) has won the ‘Best outstanding student chapter award’ in Asia, Europe and Pacific Region. This was awarded by SPE-Middle East Chapter Head, during GEW 2018 Summit held at American University, Cairo, Egypt (7th March 2018).

ASME - VIT



The ASME-VIT Show is one of the flagship events of Mechnovate featuring the premier automobile and aero designing teams of VIT performing some breathtaking stunts.

The event bridges the gap between the students and the racing teams by making them witness their marvelous creations. This was followed by the stunts performed by the teams. This show showcased the racing beasts performing in all their fury.







MARCH 22 - WORLD WATER DAY

One - Day national seminar conducted to observe World Water Day



Dr. G. Viswanathan, Founder and Chancellor of VIT, inaugurated the Seminar on World Water day on 22nd March. In his inaugural address, Chancellor gave an insightful talk on the state of water and its poor management. He stressed upon the fact that when the population of the country is rapidly rising, it is high time that we conserved and preserved the most precious resource or else the day is not too far when we will be completely running out of the water. He gave the statistical details of water utilization around the world and particularly in India. He mentioned the quantum of money spent by the State and the Central governments. Chancellor expressed his deep concern about the depletion of water resources and the necessity for collective effort to solve the issue.

Dr. A. Narayamoorthy, an expert in micro irrigation technology delivered the talk on Micro-irrigation practices in Agriculture. He stressed upon

the fact that due to declining groundwater table, agriculture has to use water efficiently by adopting micro-irrigation techniques such as Drip Irrigation Method and Sprinkler Irrigation method. He emphasized that the future irrigation from groundwater source will be limited if these methods are not adopted. These methods if employed will reduce the water consumption in agriculture and also provides adequate profits to the farmers. The per capita availability of water is fast declining and climate change is going to alter the entire situation. The state of TN is very precarious. Climate change is going to aggravate the situation with the lesser number of rainy days and more amount of rainfall. The irrigation scenario of TN is not appreciable since late 1970s.

Dr. Maria Saleth, in his talk, emphasized that water is increasingly becoming scarce. Declining economic and welfare contributions of water resources can also be found in other sectors. The declining trend in the net economic contributions of water resources occurs

obviously due to inefficient use, poor management, declining water productivity and increasing environmental and financial costs. As against the binding limits for supply augmentation, water demand is increasing due to a fast-growing global population and an ever-expanding scale of economic activities. Besides the socio-economic consequences of its quantitative dimension, water scarcity also has far more serious effects on its qualitative dimension.

Dr. A. Narayamoorthy, Professor & Head (Former NABARD Chair Professor) Department of Economics & Rural Development Alagappa University, Karaikudi, a micro-irrigation expert and Dr. R. Maria Saleth, Visiting Professor, Madras School of Economics, Chennai, an expert in Water institutions were the guests of the day.



Mr. G.V. Selvam, Vice President, VIT Vellore, receives Diamond Certificate from QS I-Gauge



VIT, Vellore has received the Diamond Rating (Highest rating) from QS I-GAUGE based on Teaching and Research Data. Mr. G V Selvam, Vice President, VIT, Vellore, received the QS I-Gauge Diamond Certificate from Hri. Pranab Mukherjee, the former President of India at a function held on 23rd March in New Delhi. Prof. Virander S Chauhan, Chairman of NAAC, Mr. Ben Sowter, Director, QS, UK, Mr. Ashwin Fernandes, CEO of QS-Era Foundation and Mr. S V Ranganathan, Chairman, QS I-Gauge Advisory Board, were present on the occasion.

QS launched India's first Nationwide Higher Education Rating System "QS I-Gauge" in 2018. QS, based in the United Kingdom, is a global higher education organization known for publishing QS World University Rankings- the world's most popular university ranking system.



TEAM OJAS, VIT'S OFFICIAL FORMULA ELECTRIC TEAM UNVEILED THEIR LATEST BUILD, TOR'18 WITH A SPIRITED ROLLOUT ON THURSDAY, MARCH 22ND. THE EVENT ENDED ON A THRILLING NOTE WITH THE CAR RUNNING AMIDST A FLURRY OF COLORS AND SMOKE FLARES.





TEAM ECO TITANS



The hard work and sleepless nights spent in the workshop by Team Eco Titans bore fruit when it went to Shell Eco-Marathon Asia, 2018. Team Eco Titans registered a mileage of 250 MPG (Miles per Gallon of Gasoline).

The Results of the competition are as follows:

- 01st in India - ICE
- 03rd in India - Overall
- 18th in Asia - Prototype category
- 2nd Fastest Indian Team to Clear Technical Inspection



TEAM ANANT



Team Anant, VIT, won the Human Powered Vehicle Challenge (HPVC) 2018 that held at Delhi Technical University (DTU), Delhi. "We won 1st overall in the Asia Pacific Region and bagged Rs 50, 000, 1st in Design and received a cash prize of Rs 15, 000 also 3rd in Drag." - Sabella Prasanna Reddy, Captian, Team Anant.



competition. VIT, Vellore was adjudged the winner of the competition and NMIMS, Mumbai was the first runner-up. VIT qualified for the concrete canoe national competition to be held in San Diego from 22nd June.

American Society of Civil Engineers- VIT Student Chapter organized the 1st ASCE India Regional Section Student Conference from 15th - 18th March 2018. American Society of Civil Engineers organizes 18 student conferences around the globe annually. For the first time in the history, ASCE Regional Student Conference was held in India, and the Indian conference was hosted by Vellore Institute of Technology (VIT), Vellore. Students from five engineering institutions in India proved that they can make a canoe out of concrete that can not only float on water but also can be used for sailing. ASCE India Conference held at VIT University unfolded the National Concrete Canoe Competition (NCCC), one of the premium events conducted every year in the USA. Punjab Engineering College from Chandigarh, R V College of Engineering from Bangalore, Bannari Amman Institute of Technology from Satyamangalam, NMIMS from Mumbai and VIT from Vellore participated in the competition that was held in Krishnapatnam Port in Nellore. Dr. Rajesh Kumar Garje, HOD of Civil Engineering, NIT Warangal was the head judge for this

CONCRETE CAN FLOAT!





“Learning is not imperative, but the curiosity to learn is more important. What you learn now will not be on frontier after ten years, so you need to fuel your knowledge with curiosity. Children have a much higher level of curiosity. The learning ability of students is several 1000 times powerful than an adult’s. But we lose the curiosity to learn in the busy schedules of our lives,” said the Chief Guest, Mr. R Seshasayee, Chairman, Indusind Bank Ltd, in his address during the University Day and Annual Sports Day celebrations of VIT, Vellore on 30th March.

He further said, “Along with curiosity, students must be creative. The knowledge must be transformed into creativity, to find creative solutions for the real-life problems. The fear of risk or failure stands as the hindrance to creativity. The fear of failures must be thrown to come out with flying colours. Prize money worth Rs 12.03 Crores was distributed to 4187 students on the occasion. Ms. Rachana K from School of Computer Science and Engineering (SCOPE) was awarded the prize for best outgoing student (Chancellor’s gold medal). Dr.R. Thundil Karuppa Raj, School of Mechanical Engineering (SMEC) was awarded the best CTS Faculty, Mr. Abhijeet Thakur, SMEC was awarded the best Cognizant Technology Solutions (CTS) Student and Mr. Shivohum Bahuguna, School of Bio Science and Technology (SBST) received the Tata Consultancy Services (TCS) Best Student Award.

“Students of the present generation are living in a fascinating time in the human history. The magnificent time where the physical and the digital world are coming

together, which we haven’t seen in recent years. Students are in the centre of digital disruption, so learning is the currency of the digital world.” said Mr. Samson David, Senior Vice President, Global Head- Delivery & Operations, India Managing Director, DXC Technology. He further asked students not to stop learning after they leave college. “Life itself is learning. Always hope in becoming better than what you are now. Life will undergo tremendous change. You’ll be knocked down, things might not happen in the way you want it to be, but be brave enough to face it.”

“you are the future of the planet. Many of you may not understand the impact. But you’ll understand when you look back; choose something that can make an identity for you in the universe,” he added.

“Only 3.5 crores students out of 14 crores students are going for higher education in india. The gross enrollment ratio (GRE) of India is 24 percent which is 10 percent less than the world average. Government must take steps to increase the rate of GRE ratio. Also the Government must see no colleges are closing down and should encourage the upcoming of more government as well as private colleges in the country. He further asked VITians to be the role models for other students.

Mr G V Selvam, Vice- President VIT honoured Mr R Seshasayee and Mr Samson David with memento. DrAnand A Samuel, Vice- Chancellor, VIT, Dr. S. Narayanan, Pro- Vice Chancellor, VIT, Dr K Sathyanarayanan, Registrar, VIT and Dr. Amit K Mahendrakar, Director, students welfare director graced the occasion.

VIT DISTRIBUTES SCHOLARSHIPS WORTH RS 12.03 CRORES TO 4187 STUDENTS ON UNIVERSITY DAY

“The fear of the risk or failure stands as the hindrance to creativity”

Mr. R Seshasayee,
Chairman, Indusind Bank Ltd

Role of Metal and Metal Oxide Nanoparticles in Reduction of Environmental Pollutants



Scope of the metal nanoparticles

In recent decades, impressive attention has been created among researchers to synthesize metal nanoparticles (NPs) such as Au, Pd, Pt and Ag NPs, because of their unusual properties that are markedly different from their respective bulk metals in various fields such as electronics, optics, waste water treatment, medicine, catalytic processes etc. Nano-sized metal nanoparticles are very active as well as susceptible to agglomerate due to van der Waals forces and high surface energy. Hence, different types of matrixes like dendrimers, polymers and surfactants are used frequently to stabilize the metal nanoparticles. Many methods have been established for the synthesis of metal nanoparticles which includes chemical reduction, sonication, vapour deposition, electroless plating etc. But all these methods involve chemicals, which are highly hazardous to the environment. Thus, a simple and eco-friendly method is needed to synthesise the nano materials hence green methods strives ascertain synthetic process which reduces the usage of harmful chemicals completely as well as increases the efficiency of the method.

Different natural resources such as plant extract, micro-organism, animal tissues are used as probable reducing as well as stabilizing agent. Among all, plant extracts have been recognized as a versatile and appropriate substitution to chemical and physical methods for the nanoparticles synthesis, because of their cost effectiveness, economic

and valuable alternative for the large-scale production of nanoparticles.

Impact of pollutants on environment

4-Nitrophenol is a by-product derived from the manufacture of pesticides, herbicides, explosives, and dyes, and is a most common organic pollutant in industrial and agricultural wastewaters. The reduction of 4-nitrophenol to 4-aminophenol by reducing agents (e.g., sodium borohydride, alcohols and hydrazine, etc.) is of particular interest. Because of the high toxicity to human health and the environment, 4-nitrophenol has been listed as one of the priority pollutants by the U.S. Environmental Protection Agency. On the other hand, the reduction product of 4-nitrophenol to 4-aminophenol, finds wealth of applications such as a photographic developer, corrosion inhibitor, dyeing agent, anticorrosion lubricant and especially as an intermediate in the manufacture of most analgesic and antipyretic drugs. This reaction is widely used as a model to examine the catalytic activity of metallic nanoparticles.

In the other side, the efficient removal of dyes from textile industry effluents is still a major environmental challenge. Most of the dyestuffs are highly structured polymers and are very difficult to decompose. Currently, various chemical, physical and biological treatment methods are used to remove colour. Many of these methods for treating dye wastewater have not been widely applied in the textile industries due to their high cost and disposal problem.

Research contribution to green environment

Keeping all these points based on the environmental concerns, the research group has prepared eco-friendly hydroxyl terminated PEG-core dendrimer to synthesise the various metal nanoparticles by conventional chemical method. Silver, gold and palladium nanoparticles act as an efficient catalyst for the conversion of the environmental pollutant 4-nitrophenol to an important pharmaceutical starting material 4-amino phenol using sodium borohydride (NaBH₄) as a reducing agent.

Moreover, the team also explored the plant resources for the same purpose. Hence, *Actinodaphnema draspatna* Bedd, an Indian medicinal plant, rich in phyto constituents like tannin, saponins, alkaloids, triterpenoids, carbohydrates and glycosides was chosen. The feasibility and availability of the poly phenolic groups present in the *Zctinodaphnema draspatna* Bedd plant extract motivated us to explore its efficiency towards the synthesis of different metal/metal oxide nanoparticles. The prepared metal/metal oxide nanoparticles efficiently degraded the various organic pollutants such as 4-nitrophenol, methylene blue and acid violet dyes. The results of the study indicated that this could be adopted as a method for reducing similar type of compounds to eliminate them from environment, thereby restoring environment green.

Published papers in reputed journals.

FINNOVATICA



“FINNOVATICA” is a Digital Initiative organized by “FULLERTON INDIA CREDIT COMPANY” a leading NBFC promoted by Temasek Holdings PTE Ltd , Singapore. It focuses on promoting FINTECH ideas and startups across various partner engineering institutions across India to help students right from ideation to product development under the mentorship of Fullerton top management in Mumbai.

JOURNEY SO FAR:

Out of the 97 teams across India which applied for Finnovatica, 17 Teams from various institutions were selected to pitch their idea to the Top management of Fullerton. Out of these, 7 teams qualified for Final prototype presentation. The VIT team won Rs 15 lakh cash grant and got support to complete the product in their Mumbai head office.

The team was also incubated under VIT- Technology Business incubator, which supported with all the resources needed to complete the prototype. The team has successfully completed the prototype and has started working on scaling the product and implementing it for Fullerton India Credit Company, which is the team's first Institutional customer. With this alliance with Fullerton India Credit Company, the team will have ready access to their huge Fullerton's customer base for our product.

ABOUT THE PRODUCT:

The product FINLIT is a complete personal finance management suite which focuses right from expense management to financial planning.

INTERNATIONAL RELATIONS





Dr. C. Vijayakumar with Prof. Eria Hasal Acting Vice Chancellor, Mekerere University, Uganda

Dr. C. Vijayakumar, Director, International Relations visited Uganda as part of International Promotional activity. He visited Makerere University and discussed on student mobility programmes (long-term and short term), academic and research collaboration and joint degree programmes.



Dr. C. Vijayakumar with Prof. S A Ariadurai, Vice Chancellor, Open University of Sri Lanka



Professor Anthony Forster, Vice-Chancellor and Professor Dominic Micklewright, Dean of Partnerships, University of Essex, UK visited VIT on 5th March 2018 and a brain storming session was arranged with our Chancellor, Vice President Deans and Director to take forward academic and research co-operation between VIT and University of Essex. Opportunities for collaboration in Business and Engineering were discussed, with an emphasis on student mobility programmes (long-term and short term), academic and research collaboration and dual degree programmes for the following fields.

Biological Sciences

- Indian Politics, Law & Business environment
- Computer Sciences, Robotics, Games technology
- Indian Culture & Society

Student exchange programmes and scholarships were also discussed to encourage student mobility between the institutions.





Professor Dr. Raj Srinivasan, Head, Dept. of Mathematics and Statistics, University of Saskatchewan, Canada visited us on 6th March 2018 and strategic discussion was arranged with our Chancellor to explore the specific aspects of collaboration with a decision to move forward on the following programmes

- Student Exchanges
- Short Term Student mobility Programmes
- Joint Research Projects



Prof. Martha Ludwig, Head, Coordinator of Biotechnology, University of Western Australia, Perth visited VIT for a discussion on pathway agreement between M.Sc Biotechnology 5Year Integrated course of VIT with UWA. The professors and HoDs were present during the the meeting





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