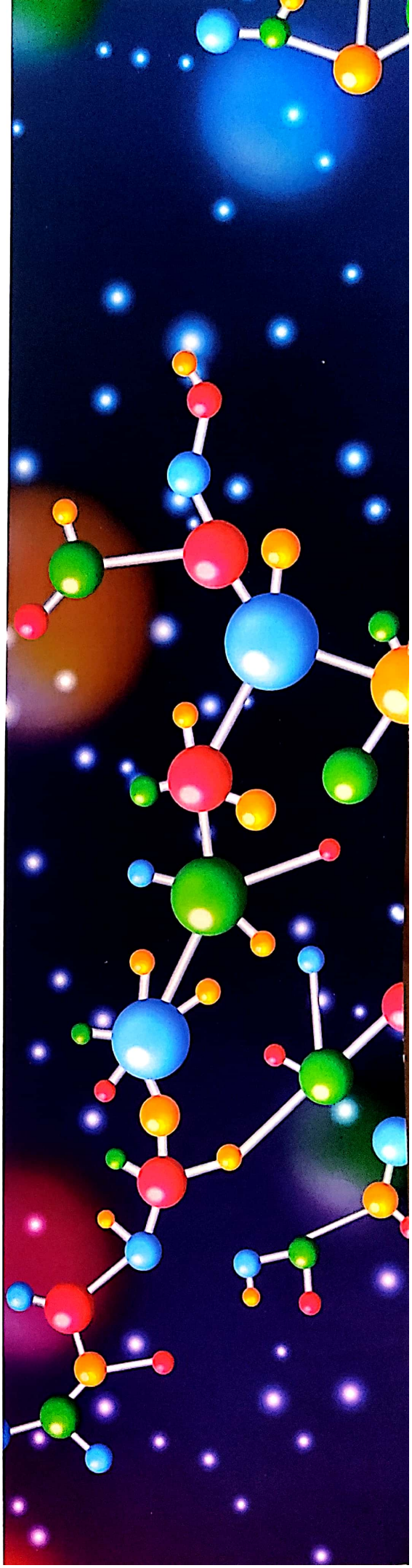
invati®

Improving lives through invention and innovation

INNOVATION AND INVENTION IN NANOTECHNOLOGY



Invati Creations Private Limited

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www.invati.in

/invati-creations /invati.creations /invati.in

ABOUT US

Founded by alumni of IIT Kharagpur & IIM Kolkata, Invati Creations Private Limited has emerged as a nanotechnology invention company. The founders have more than 75 international patents on Nanotechnology and various other fields. We offer a novel Nano Mineral Solution for food fortification to combat anaemia and mineral deficiency, especially in women and children in India. Our research team is also pioneering Lithium-Ion (LFP) batteries, aiming for 3000-5000 charge cycles with fast charging. We are testing new cathode materials for advanced fast-charging capabilities. For more information, contact us at info@invati.in.

OUR CO-FOUNDERS

Dr. Nilanjan Deb

M.Sc. (Ag), M.Tech. (IIT,Kharagpur), Ph.D.

An inventor, experienced professor, and co-founder of Invati with more than two decades of experience. Published/filed 75 international and national patents in the fields of nanotechnology, polymer science, polymeric semiconductor, electronic sensor devices, metallurgy, agriculture, food processing. An institution in itself who thrives to explore, work & develop niche & unique technological solutions. He has co-authored various books and had been visiting faculty invarious institutions, guest speaker at convocation, and seminars. Dr Deb has received numerous awards and recognition across the globe.

Mukeshh Agarwal

IIM Kolkata

Mukeshh is co-founder of Invati with over 18 years of work experience. He is a dynamic, self-driven entrepreneur, an ex-alumni of IIM Kolkata, and found himself chasing his entrepreneurial ambitions as early as 1999. A doer-cum-visionary, Mukesh's string of successes include three flourishing retail ventures in the jewellery, designer apparel, and men's wear segments. In 2006, he took up even bigger challenges, when he moved to Mumbai, and joined an automobile giant as business head. An angel-investor having diversified investment portfolio ranging from structural lights, vegetation, online gaming, F&B & financial services. His key area of focus includes strategy entity set-up & marketing.

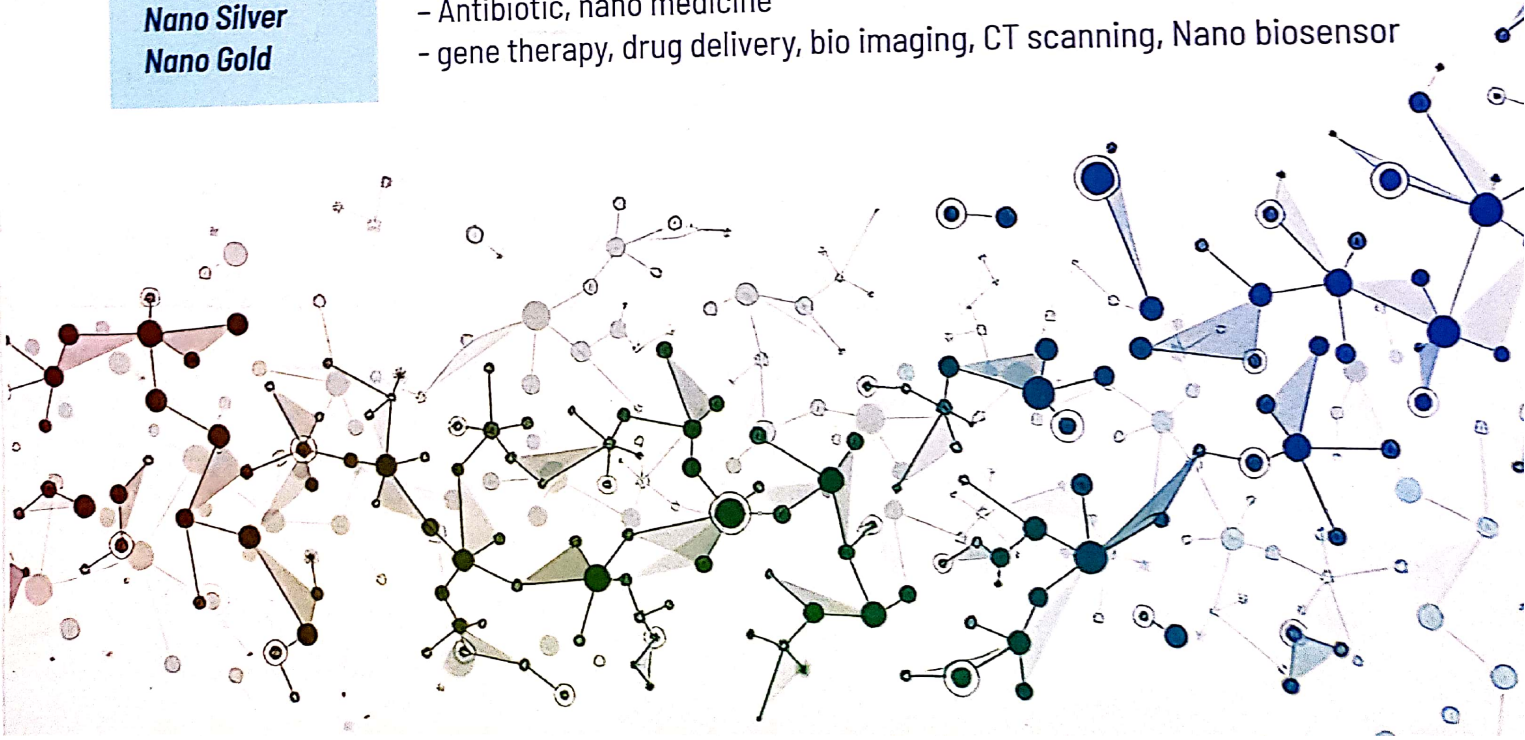
invati®

Nanotechnology

- **Metal & Metal-oxide Nanoparticle**
  - Nano Nutrients for Agriculture
  - Nano Nutrition for Humans
  - Innovative Materials
- **Nano Medicine & Nano Sensors**
  - Drug Delivery
  - Nano Sensors for Diagnosis
  - Cancer Treatment
- **Nano Electrodes for Li-ion Batteries**
  - Nano LFP
  - Nano Graphite-silica Anode
  - Other Nano Electodes

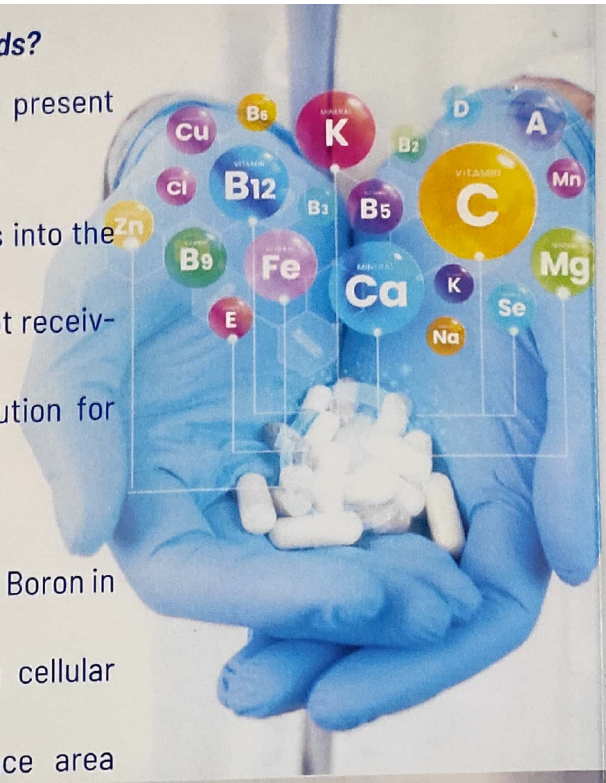
INVATI NANO PRODUCTS

Nano Urea	- for agriculture, catalytic converter, medicine
Nano Zinc	- Plant nutrient , nano mineral for human, rubber, Paint
Nano Boron	- plant nutrition, nanomedicine
Nano Iron	- nano mineral for human health
Nano Carbon	- thermal fluid, supercapacitors, energy storage
Nano Selenium	- nano nutrition for poultry, hair serum(anti dandruff)
Nano Potassium	- plant nutrient
Nano Sodium	- electrolyte
Nano Silver	– Antibiotic, nano medicine
Nano Gold	- gene therapy, drug delivery, bio imaging, CT scanning, Nano biosensor



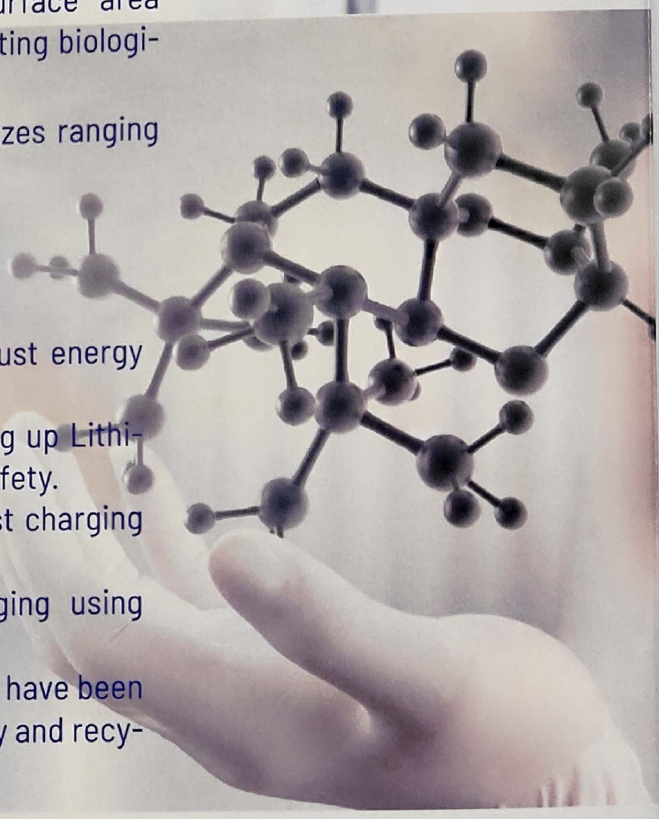
Why nano-scale minerals are better than present mineral compounds?

- Nano scale minerals have higher bioavailability compared to present mineral compounds.
- Most mineral absorption occurs in the small intestines.
- The small intestine is lined with microvilli that absorb nutrients into the bloodstream.
- The absorption process can be impaired, leading to the body not receiving essential nutrients.
- Nanoparticles of essential minerals provide an effective solution for better nutrient absorption in the body.



Salient Features of Invati Nano Minerals

- Invati Nano Minerals include Iron, Zinc, Magnesium, Calcium, and Boron in nano-form (< 100 nm).
- Nanoparticles have an acceptable zeta potential, enhancing cellular uptake and reducing unwanted interactions.
- Nano-scale minerals exhibit a dramatic increase in surface area (2000-3000X) compared to native forms, significantly boosting biological activity.
- Uses a novel carrier, water-soluble carbon, with particle sizes ranging from 100-1000 nm.
- Proven safe through a series of clinical trials.



Nano Li-ion Electrodes Invati Sodium ion battery

- Rechargeable lithium batteries are crucial for more than just energy storage; they are essential for a sustainable future.
- The Invati research team focuses on developing and scaling up Lithium-iron-phosphate (LFP) batteries for longer lifespan and safety.
- The goal is to achieve 3000 to 5000 charge cycles with fast charging capability.
- New cathode materials are being tested for fast charging using advanced rocking chair and solid rock phenomena.
- Sodium ion nanostructures with excellent structural stability have been synthesized and are currently being tested for charge density and recyclability.

Supercapacitor for future energy storage

- Development of Supercapacitors (SC) from facile synthesized graphene oxide is underway.
- Supercapacitors are unique electrochemical devices with high energy and power densities.
- Applications include electric vehicles and power tools.
- Scientists at Invati have synthesized and patented graphene oxide for supercapacitors.
- These supercapacitors are particularly useful for hybrid electric vehicles (EV) and backup power supplies.

NANO I TECHNOLOGY

THE THIRD EYE TO VISUALIZE AND RECTIFY ISSUES

NANO I TECHNOLOGY

A start-up company for nanoemulsion-based products

Portfolio focused on effective, safe, and sustainable products

Three patents on nanoemulsion formulations

Key areas of focus:

- Aquaculture, Agriculture, and Food industries

Nanoemulsion products:

- Nanoemulsions infused Feed-based shrimp growth
- Nanoemulsions for shrimp pathogen management
- Edible nanoemulsions for fruit/Vegetable preservation
- Pesticide detox nanoemulsion
- Nanoemulsions for ESKAPE pathogens management

Highlights of Nanoemulsion

- 100% safe composition
- Affordable price
- User friendly

Founder: Dr. R. Karthikeyan, M.Sc. M.Phil., Ph.D.

CEO : Ms. A. Ishwariya, B.E., B.A., MBA, PGDMKD

Email: Nanoltechnology@gmail.com

Mobile: +917502534668; +918012062224

Safety for Humans & Animals

- Test was conducted on extracts on ISO 10993-5-2009.
- Non toxic to humans and animals.
- 99.99% bacteria are killed.
- 99.99% Antifungal agent.
- Even after prolonged UV exposure or rigorous cleaning procedures, the antibacterial properties do not diminish over time.
- Non- Poisonous, Non- Allergic, Fast acting, Highly effective.

ABOUT COMPANY

Scitechesy Research And Technology Private Limited is a distinguished Manufacturer and Supplier of Silver nanoparticles based paste (Silver Paste), Colloidal Silver Nano Particles, and Silver Nano Powder. We are located at Varanasi, Uttar Pradesh, India with a modern production base having advanced technology machines and tools to develop the best for the clients.

Contact Information

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CDC Building, BHU, Varanasi

SCITECHESY RESEARCH AND TECHNOLOGY PVT. LTD

Startup India DIPP Recognized Company

FOUNDER & DIRECTOR

Dr. Fanindra Pati Pandey

Ph.D (Physics), BHU.

COLLOIDAL SILVER NANOPARTICLES SOLUTION

Introduction

- Silver nanoparticles (AgNPs) are one of the most vital and fascinating nanomaterials among several metallic nanoparticles that are involved in biomedical applications. It has vital importance in nanoscience and nanomedicines to treat and prevent vital disease in human beings especially in cancer treatment.
- Colloidal silver nanoparticles refer to tiny particles of silver suspended in a liquid medium, typically DI water. These nanoparticles are on the nanoscale, typically ranging in size from 1 to 100 nanometers. Due to their small size and large surface area, they exhibit unique properties and have found applications in various fields.

Characteristics

- Particles Size ≈ 10-100nm.
- Stability ≈ 6 Months.
- Color appearance depend upon concentration.
- Broad Spectrum Activity.

Properties

- Antibacterial Activity: Due to their large surface-to-volume ratios and crystallographic surface structure.
- Antifungal Activity: Biocompatible, non-toxic, and Environmental friendly.
- Antiviral Activity: inhibit the viability of viruses.
- Anti-Inflammatory Activity: Reduction in wound inflammation, and modulation of fibro-genic cytokines.
- Anti-Antigenic Activity: Block the formation of new blood micro-vessels.
- Anticancer Activity: Programmed cell death or induce apoptosis but also sensitize cancer cells.

Testing

- Strongly combat gram- positive and gram-negative bacteria, stains of bacteria resistant to antibiotics, yeast, and fungus.

Application

- Solar cells to enhance photoelectric conversion efficiency and photovoltaic performances.
- Antibacterial agents and are used in textiles, electronics products, the medical industry, environmental applications, coatings, food preservation.
- Disinfectant for home appliances, sewage treatment and surgical equipment for sterilization.
- Coating for cardiovascular implants and central venous and neurosurgical catheters.
- Biosensors for quantitative detection as biological tags.
- Incorporated in clothes, shoes, paints, wound dressings, appliances, cosmetics, and plastics.

Application of AgNPs

- Anti-Tumor
- Anti-Oxidative
- Bio-Sensing
- Imaging
- Textiles
- Drug Carrier
- Water Treatment
- Human Health Care
- Cosmetics
- Anti-Bacterial
- Anti-Viral
- Anti-Fungal
- Anti-Inflammatory
- Anti-Angiogenic

Autarkic India

Changing the Rules of the Game

Autarkic India, with the use of Ray Nano Urea, can achieve self-sufficiency in fertilizer production, reduce import dependency and minimize foreign currency outflow. The adoption of Ray Nano Urea technology can lead to a more sustainable and eco-friendly agriculture sector, improving crop yield and quality while reducing environmental pollution.

It can also help in reducing the carbon footprint of the agriculture sector and contribute to India's goal of achieving a greener future.

)iscover the Future Of Agriculture with

Nano Urea

(https://wa.me/917284096666?text=Hi

Nano urea is a new form of urea fertilizer that is created by breaking down conventional urea into tiny particles that are around 100 nanometers in size. Thi rocess is achieved using nanotechnology techniques such as high-pressure homogenisation and sonication. The resulting nano urea particles have severa

UPTO 8% YIELD GAIN

REDUCED COST OF TRANSPORTATION

REDUCED COST OF LABOUR

LESSER STORAGE SPACE

REDUCTION IN AIR & SOIL POLLUTION

Unlock the Power of Green

Ray Nano Science & Research Centre

We are a leading manufacturer and supplier of innovative Nano fertilizers designed to improve the efficiency and sustainability of agriculture. We are committed to providing farmers with the best possible solutions to increase their crop yields, while also reducing environmental impact and promoting sustainability.

(https://wa.me/917284096666?text=Hi

At Ray Nano Science & Research Centre, we pride ourselves on our commitment to quality, safety and sustainability. Our products are manufactured in state-of-the-art facilities using the latest technologies and processes to ensure that they meet the highest standards of quality and safety.

TPS://STAGING.RAYNANOFERTILIZER.COM/ABOUT-US/)

Imagine the World Where

Top Dressed Urea is 100% Replaced with Nano Urea

↓ **>30%**
in Agro CO_2

↓ **>25%**
in Agro N_2O

↑ **8%**
in Agro Yield

75K Cr
Subsidy Savings

Stay in the Loop of the World of Agriculture

(https://wa.me/917284096666?text=Hi)

News & Updates

India's Urea Giant HURL Signs Landmark Agreement With Ray Nano Science (https://raynanofertilizer.com/in urea-giant-hurl-signs-landmark-agreement-for-nano-urea-technology/)

We are thrilled to announce a groundbreaking partnership between Hindustan Urvarak & Rasayan Limited (HURL), and Ray Nano Science & Research Centre. This strategic collaboration

READ MORE »
(HTTPS://RAYNANOFERTILIZER.COM/INDIAS-UREA-GIANT-HURL-SIGNS-LANDMARK-AGREEMENT-FOR-NANO-UREA-TECHNOLOGY/)

20/06/2024

Breaking Boundaries: Ray Nano Science Granted Export Permission for Nano Urea by Ministry of Chemicals & Fertilizers (https://raynanofertilizer.com/br boundaries-ray-nano-science-granted-export-permission-for-nano-urea-by-ministry-of-chemicals-fertilizers/)

Introduction:We are thrilled to announce a significant milestone for Ray Nano Science & Research Centre – the attainment of export permission from the Ministry of

READ MORE »
(HTTPS://RAYNANOFERTILIZER.COM/BREAKING-BOUNDARIES-RAY-NANO-SCIENCE-GRANTED-EXPORT-PERMISSION-FOR-NANO-UREA-BY-MINISTRY-OF-CHEMICALS-FERTILIZERS/)

27/12/2023

Ray Nano Science & Research Center signs MOU in Vibrant Gujarat 2024 (https://raynanofertilizer.com/ra nano-science-research-center-signs-mou-in-vibrant-gujarat-2024/)

In an exciting development, Ray Nano Science & Research Centre, led by Rahul Doshi and Kartik Doshi, has officially signed a Memorandum of Understanding (MOU)

READ MORE »
(HTTPS://RAYNANOFERTILIZER.COM/RAY-NANO-SCIENCE-RESEARCH-CENTER-SIGNS-MOU-IN-VIBRANT-GUJARAT-2024/)

13/10/2023

A leading manufacturer and supplier of innovative Nano fertilizers designed to improve the efficiency and sustainability of agriculture.

Follow Us On Facebook (https://www.facebook.com/people/Ray-Nano/100090787238342/?mibextid=LQQJ4d)

WE ARE HERE

(https://wa.me/917284096666?text=Hi)