DEPARTMENT OF PHYSICS, UDALA COLLEGE, UDALA

REPORT

The departmental seminar entitled **" Nanomaterials"** for the academic session 2024-25 was held on dt- 18-01-2025 in the Seminar Hall of the college. This insightful event was inaugurated by the esteemed Principal, Dr. Jatin kumar Mohakud by lighting the ceremonial lamp. The meeting was presided over by the HOD, Miss Snigdha Agarwalla. The keynote address of the topic was delivered by the faculties of the department Gajendra Hansdah, Sudam Hembram and Laxman Gilua. The technical session included paper presentation by +3 6th semester students of the department. The seminar ended with the concluding summaries of the topic lucidly with vote of thanks by Gajendra Hansdah, Lect. in Physics.

Participants in the Seminar:-

I. Chief Guest:- 18.01.25

II. Faculties of the Dept.:- H.O.D / S Agarwalla 18/01/25

Gajendra Hansdah 18/01/25

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DEPARTMENT OF PHYSICS
SEMINAR ON NANOMATERIALS
DATE : 18/01/2025
UDALA COLLEGE, UDALA
GPS Map Camera
Udala,Odisha,India
Udala Baripada Road, Udala, Udala, 757041, Odisha, India
Lat 21.587343, Long 86.570653
01/18/2025 10:58 AM GMT+05:30
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3. Mechanical properties :-
Strength, Plasticity, Hardness, Toughness, Ductility, Rigidity
In metals and alloys, the hardness and toughness are increased by reducing the size of the nanoparticles.
Mechanical properties ↑ Nanomaterials size ↓
In ceramics, ductility and super plasticity are increased on reducing grain size.
Hardness increases 4 to 6 times as one goes from bulk Cu to Nano crystalline and it is 7 to 8 times for Ni.
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Udala, Udala, 757041, Odisha, India
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SYNTHESIS OF NANOMATERIALS -
Synthesis of Nanomaterials
Two aprroaches :
Bottom up
Top-down
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1.DRUG DELIVERY
Drug consuption and side effects can be reduced consider by depositing the active agent in the diseased region and inappropriat dose.
Nano particles can deliver drugs directly to disease cell i.e Cancer cell
Nano particles can cross biological barriers like the blood brain barrier , enabling treatment of Neurological Disorders.
Nano porous materiel can be used to hold small drug molecules and to transport them to desired location.
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