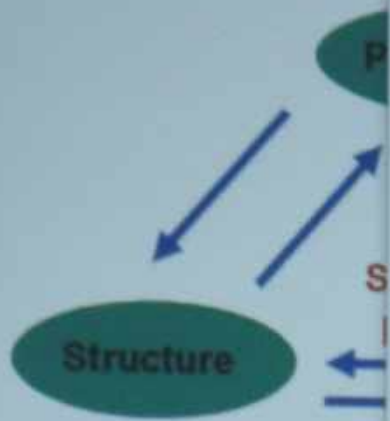


Engineering Science



Chat window screenshot with the following messages:

- From Dr Noor Mohamed Butt to Everyone: I cannot hear him N.M Butt
- From Javed to Me: (Privately) Can you please allow me to record, thanks.
- From Gabriel to Everyone: We may try the VOOV meeting platform, its a free software (belong to Tencent Company). I have used it for several International conferences. <https://www.vooxmeeting.com/index.html>, here is the link.

At the bottom of the chat window, there is a 'To: Javed (Privately)' field and a 'Type message here...' input area.

Tailed structured nanomaterials?







Principles for precipitator design

Micromixing
characteristic time τ_M

$$\tau_M = k \left(\frac{V}{\varepsilon} \right)^{1/2}$$

Nucleation
characteristic time τ

$$\tau = \frac{6d^2 n^*}{D \ln S}$$

Principles

- When $\tau_M < \tau$, ideal reactor for fast reaction process, easy control (**ideal environment**)
- When $\tau_M > \tau$, non-uniform environment, difficult to control (**non-ideal environment**)





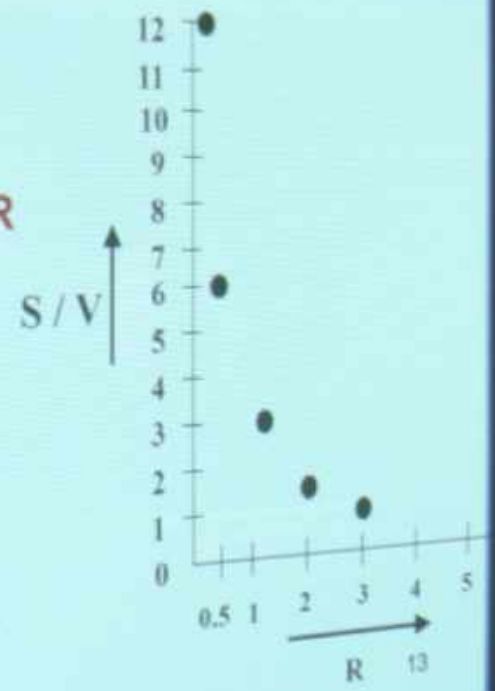
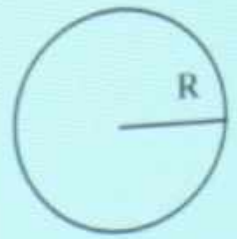
Why nano size will change the properties of materials?

Smaller the size: larger the surface to Volume Ratio.

Sphere Particle:

- Volume, $V = \frac{4}{3} \pi R^3$
- Surface Area, $S = 4\pi R^2$
- Ratio $S/V = 3/R \propto 1/R$

R	S/V
3	1
2	1.5
1	3
0.5	6
0.25	12
0.125	24



A vertical stack of four video thumbnails. From top to bottom: 1. A person in a white lab coat. 2. A group of people in a meeting. 3. A close-up of a person's face. 4. A person in a white lab coat.

Jilani Yousuf

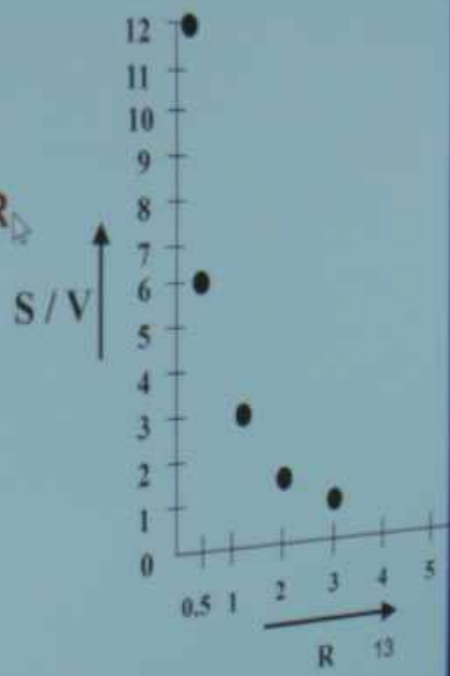
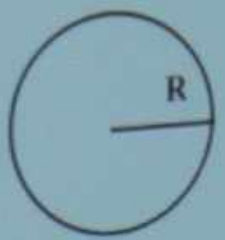
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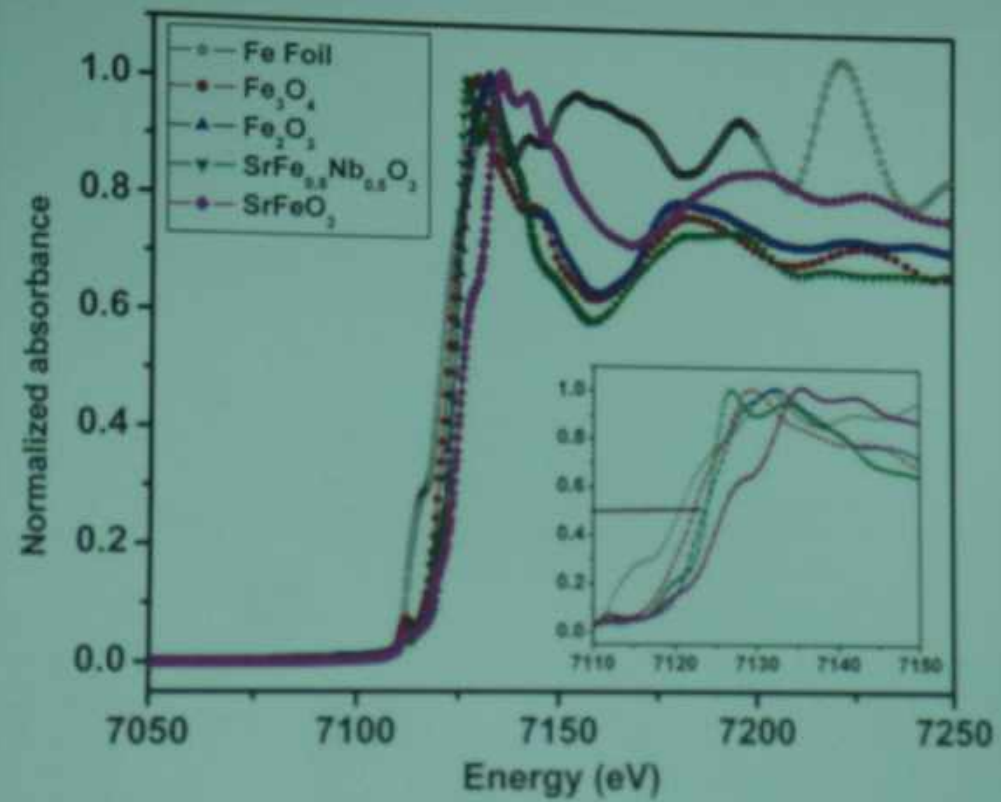
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Jilani Yousuf

Information obtained from XANES





Contents

- ▶ 1- *What is Nanotechnology and its significance*
- ▶ 2- *Use of Nanotechnology in Biotechnology*
- ▶ 3- *Nanotechnology for Biomedical Applications*
 - a)- *Drug Delivery* b)- *Cancer therapy* c)- *Diagnosis/Imaging*
 - d)- *Disease Detection*
- 4- *Bio Related Nanotechnology Research at NIBGE*
- 5- *How Nanotechnology can play its role for the Economic Prosperity & Security of Pakistan*
- 6- *Conclusion*

Javed



Fyozan Akbar...



Gabriel

Waheed Khan



Waheed Khan



Pakistan Academy of Engi...



Waqar Hassan



Ibnu Rizvi



Dr Nasim Akhtar Khan



Dr.-Ing. Syed Mushahi...



Jianfeng Chen



Dr Noor Mohammad ...



Gabriel



Ehsan Kakar



Connecting to audio ...



Galaxy J5



Dr. Afzal



Javed



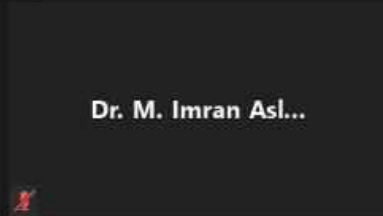
Connecting to audio ...



Dr. M. Humair A...



Khalid Z. Mirza



Dr. M. Imran Asl...



saira ishaq NIO...

Click to join audio

Join Audio

Start Video

Participants 18

Chat 4

Share Screen

Record

Reactions

Leave