HANSRAJ COLLEGE

University Of Delhi

NAAC Grade A++ with CGPA 3.71

Academic session- 2024-2025

Event Name:- 2nd International Seminar Session

Organized By:- Institution's Innovation Council

Date:-22nd February 2025

Resource person: Dr. Srinivas Tadepalli, Assistant Professor, Imam Muhammad Bin Saud Islamic University, Department of Chemical Engineering, P.O. Box 5701, Riyadh-11432 Saudi Arabia

Coordinators: **Dr. Hari Mohan Meena, Dr. Ambika**

No. of Participants: Dr. Jnaneswari, Dr. Ridhi Khurana,

Mode of Session Delivery (Online/Offline/Hybrid):-Online

Report:-

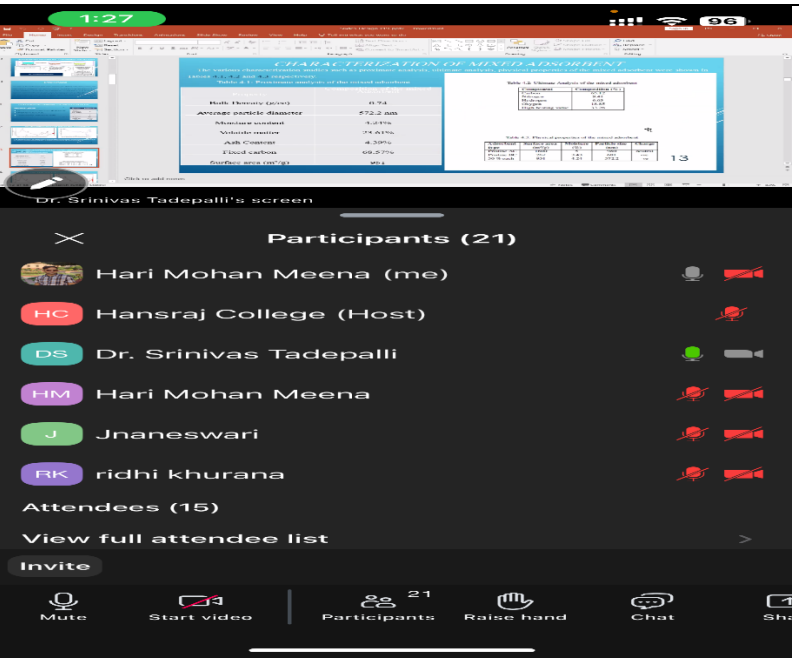
Institution's Innovation Council Hansraj College, Delhi organized the 2nd International Seminar Session activity under Shakti-an initiative of HRC disha under IQAC on 22nd February 2025 through online mode. The program was coordinated by Dr. Hari Mohan Meena, and Dr. Ambika, (IIC convener). The resource person of the session was Dr. Srinivas Tadepalli, Assistant Professor, Imam Muhammad Bin Saud Islamic University, Department of Chemical Engineering, P.O. Box 5701, Riyadh-11432 Saudi Arabia.

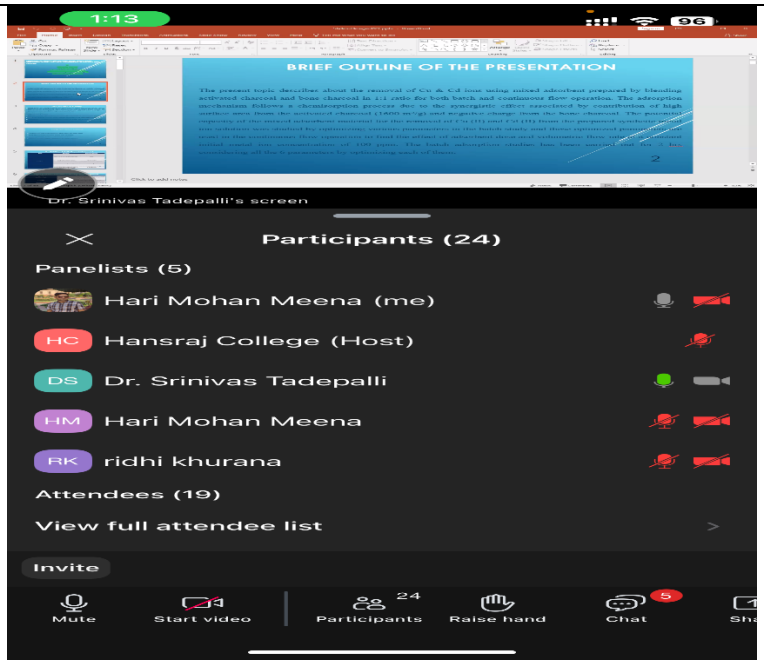
Dr. Srinivas Tadepalli presented the use of kinetics studies and isotherms in the removal of hazardous heavy metals from industrial effluent. According to him, the adsorbents and adsorption isotherms are very important for determining how the concentration of heavy metal ions in a solution (adsorbate) affects the amount of metal ions that are adsorbed onto the surface of an adsorbent at equilibrium. These isotherms show how much heavy metal can be absorbed by a certain amount of adsorbent at a certain concentration, while the adsorbent

itself provides the surface area and functional groups needed to bind and remove heavy metal ions from the solution. Together, they determine how well the heavy metal removal process works. Many times, the Langmuir, Freundlich, and Dubinin-Astakhov models are used to fit experimental data and explain how adsorption works. However, each model makes different assumptions about the adsorption sites and how they interact with each other. Isotherm model fitting gives important details for judging how well an adsorbent works, like how it adsorbs, how much it can hold, and the basic rules of the adsorption process. He also addressed that the kinetics models are very important because they tell us, how fast heavy metal ions stick to the surface of an adsorbent. This affects how quickly and effectively the metal is removed from a solution and is affected by things like contact time, temperature, and the initial concentration of the metal ions. Knowing kinetics lets you improve adsorption processes so that they remove metal as efficiently as possible in the shortest amount of time. However, he explained the best model fitting doesn't always work with equivalent methods in different heavy metal studies. He advised college students that heavy metals such as lead, mercury, arsenic, cadmium, and chromium are extremely poisonous and can lead to several health issues contingent upon the degree of exposure and the particular metal in question. A significant number of students participated in the whole session, and some had inquiries, which the speaker addressed.

Attendance: Total Attendees: 24

Attendance Sheet



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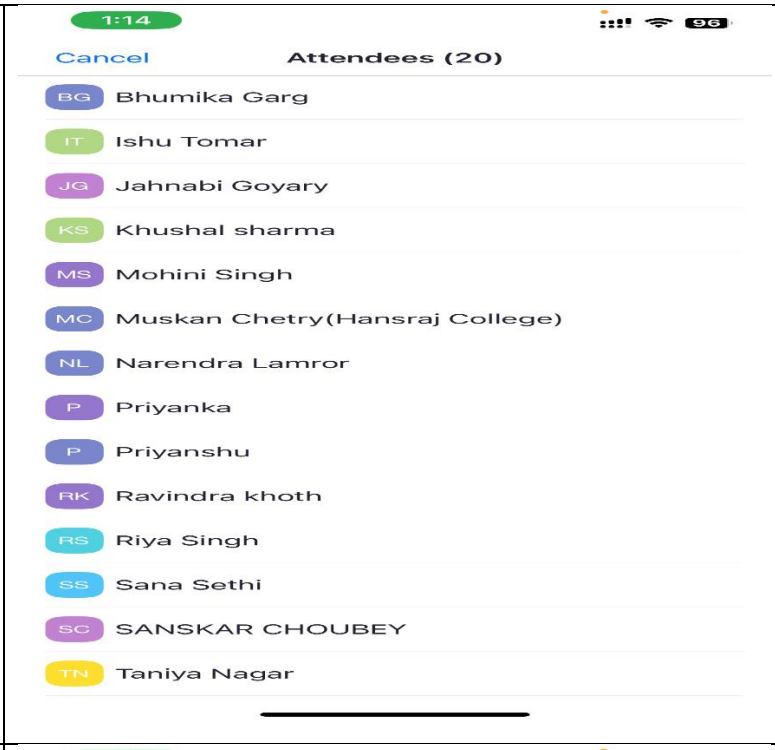
AM Arkaprava Mukherjee
AH Aun Hussain
B Bhoomika
BG Bhumika Garg
HA Himanshi Agrawal
IT Ishu Tomar
JG Jahnabi Goyary
KS Khushal sharma
MS Mohini Singh
MC Muskan Chetry(Hansraj College)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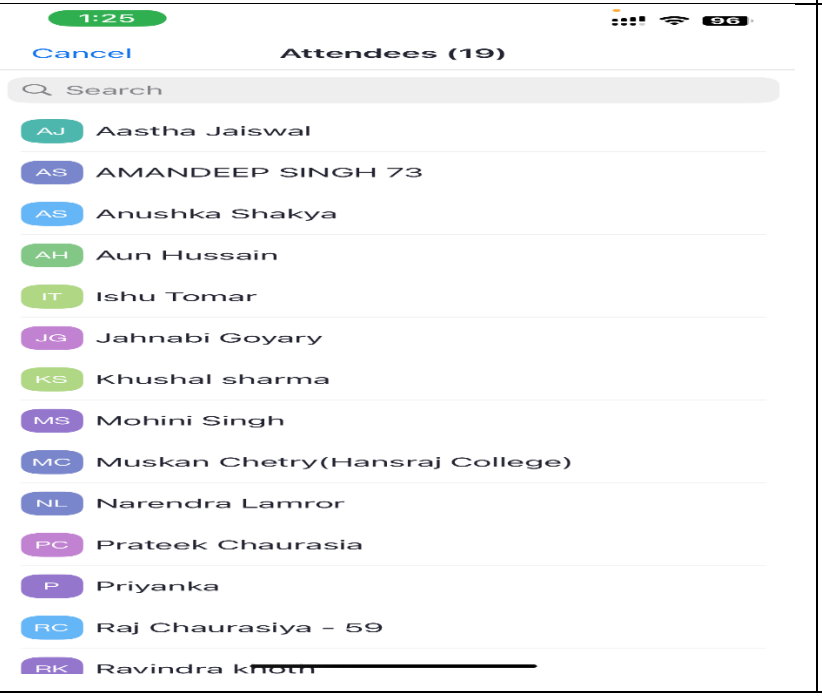
KS Khushal sharma
MS Mohini Singh
MC Muskan Chetry(Hansraj College)
NL Narendra Lamror
P Priyanka
P Priyanshu
RK Ravindra khoth
RS Riya Singh
SS Sana Sethi
SC SANSKAR CHOUBEY
TN Taniya Nagar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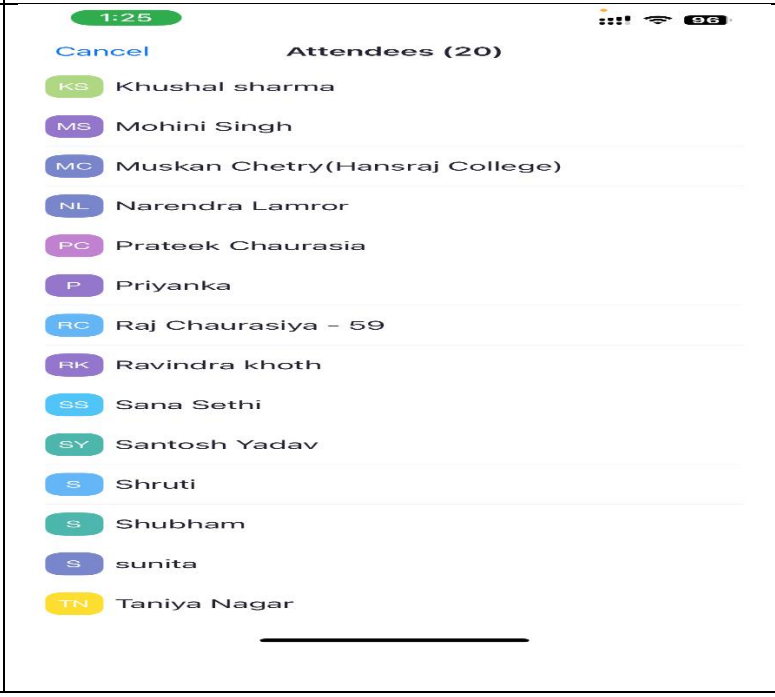
PC Prateek Chaurasia
P Priyanka
RC Raj Chaurasiya – 59
RK Ravindra khoth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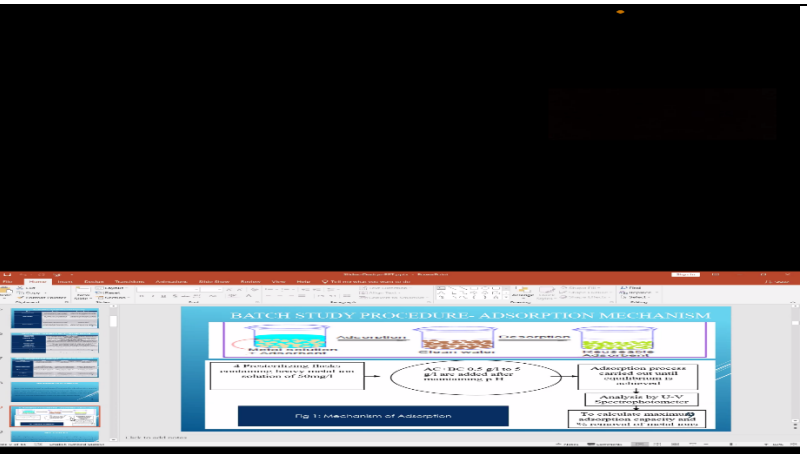
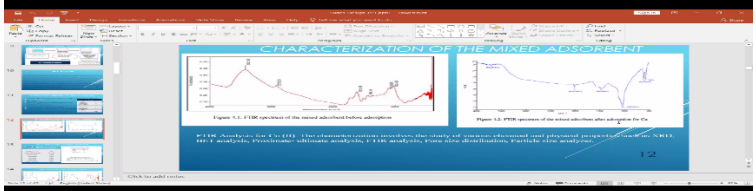
PC Prateek Chaurasia
P Priyanka
RC Raj Chaurasiya – 59
RK Ravindra khoth
SS Sana Sethi
SY Santosh Yadav
S Shruti
S Shubham
S sunita
TN Taniya Nagar



Dr. Srinivas Tadepalli's screen



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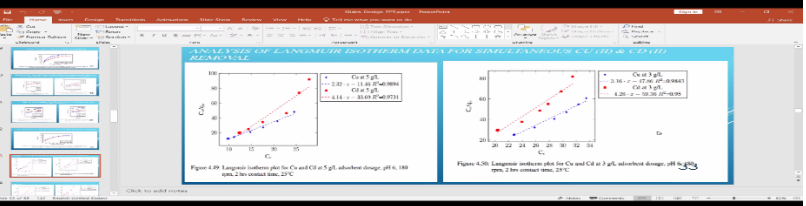

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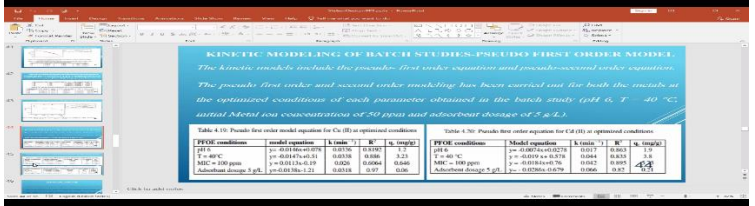

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