

DST GUJCOST SPONSORED

Online Two Days National Workshop
on
“Upcoming Research and development Challenges for Chemical Engineers”
(26-27 August, 2021)



Organized by Chemical Engineering Department
S N Patel Institute of Technology & Research Centre, Umrah



Sponsored by DST GUJCOST

Report Prepared by:

Dr. Koshal K. Singh
Event Co-Ordinator
Associate Professor,
Chemical Engineering Department
S N Patel Institute of Technology & Research Centre,
Umrah

TITLE OF THE EVENT

**Upcoming Research and development
Challenges for Chemical Engineers**

CATEGORY

Academic Activity-FDP

DATE AND DURATION

26th-27th August 2021

VENUE

(Online Mode)

**S N Patel Institute of Technology & Research Centre,
Umrah (049)**

Banner for the Event:



S. N. Patel Institute of Technology & Research Centre, UmraKh
(A Vidyabharti Trust Institution)

Chemical Engineering Department

For Details Visit www.snpitrc.ac.in

Organizes
Two Days Online National Workshop
on

Last Date for
Application
20th Aug, 2021

Upcoming Research & Development Challenges for Chemical Engineers

Principal
Dr. Piyush S. Jain

(26th & 27st August, 2021)

To Register click on
<https://forms.gle/atGmTxqVFKxQgK4f7>
OR Scan

Coordinator
Dr. Koshal K. Singh

Co-coordinators
Dr. Chandra Bhushan Pal
Dr. Miral R. Thakkar
Prof. Vishal Shah

Dst
Department of Science & Technology
Government of Gujarat

SPONSORED BY

Gujarat Council on Science & Technology (GUJCOST)



Vidyabharti Campus, At & Po Baben, Ta.: Bardoli , Dist.: Surat, Pin: 394601

Event Details:

Event Name	Upcoming Research and development Challenges for Chemical Engineers
Date	26-27 August, 2021
Participants	UG-PG Students, Faculty Members, Researchers and Industry Persons
Venue	Online Platform
Funding Support	GUJCOST, Department of Science & Technology, Government of Gujarat
Principal	Dr. Piyush S Jain
Event Coordinator	Dr. Koshal K. Singh, Associate Professor & I/C Head, CHED
Event Co-Coordinators	Dr, Chandra Bhushan T. Pal, Assistant Professor, CHED Dr, Miral R. Thakker, Associate Professor, CHED Prof. Vishal Shah, Assistant Professor, CHED

PROGRAM SCHEDULE

Time	Theme	
	26th August 2021	
9.00 am-10.00 am	REGISTRATION	
10.00 am- 10.30 am	Inauguration	
10.30 am -12.00 pm	Thermodynamics of phase change phenomena in super cooled regions	Dr. A. K. Gautam, Assistant Professor, Chemical Engg Dept, National Institute of Technology, Hamirpur, (H.P.)-177005, India
12:00 pm-1.30 pm	Lunch Break	
1:30 pm-3:00 pm	Gas sweetening process, troubleshooting and optimization	Mr. Nutan R. Paliwal Executive Engineer Oil and Natural Gas Corporation Ltd. Hazira, Surat
3:00 pm-4:30 pm	Catalytic Transformation of bio-derived furans to fuel additives and value added chemicals	Dr. Sanjay K. Shrivastava, Assistant Professor, Chemical Engineering Dept, Government Engineering College , Valsad
	27th August 2021	
10.30 am -12.00 pm	Digestive Ripening: A Fine Machinery Process at Nanoscale	Dr. Puspanjali Sahu Senior Project Associate CSIR-Institute of Minerals and Materials Technology Bhubaneswar Odisha
12:00 pm-1.30 pm	Lunch	
1.30 pm -3.00 pm	Process intensification: An indispensable tool for the future chemical and allied industries	Dr. G. C. Jadeja, Assistant Professor, Chemical Engg Dept S V National Institute of Technology, Surat
3:00 pm-4:30 pm	Research by Sustainable Routes, Greener routes for Sustainable development	Dr. Meghal A. Desai., Associate Professor, Chemical Engg Dept S V National Institute of Technology, Surat
4:30 pm	Valedictory	

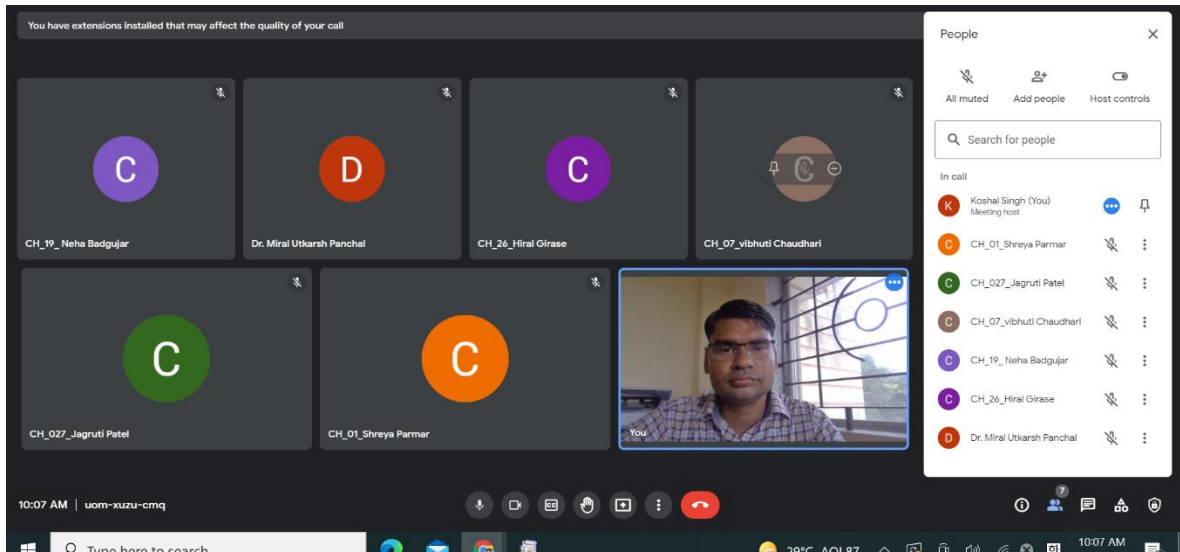
Vidyabharti Trust is the name associated with the education for more than three decades near Bardoli of Surat district and has now evolved as a symbol of quality education dedicated to nurture the talent and aspirations of the bright youth of our nation. S N Patel Institute of Technology & Research Centre (Degree College) is a premier institution approved by the All-India Council of Technical Education (AICTE), New Delhi & affiliated with Gujarat Technological University (GTU), Ahmedabad.

Institute is running Bachelor of Chemical Engineering course since 2014 having the current intake of 60 seats. Department consists of highly qualified young and dynamic faculty members. The prime goal of the department is to bridge the gap between Rapidly expanding technology demands with innovation research-based by using skilled / quality conscious approach to achieve an admirable grip in the academic field of chemical engineering. The Department is having state of art laboratory facilities (NABL accredited)

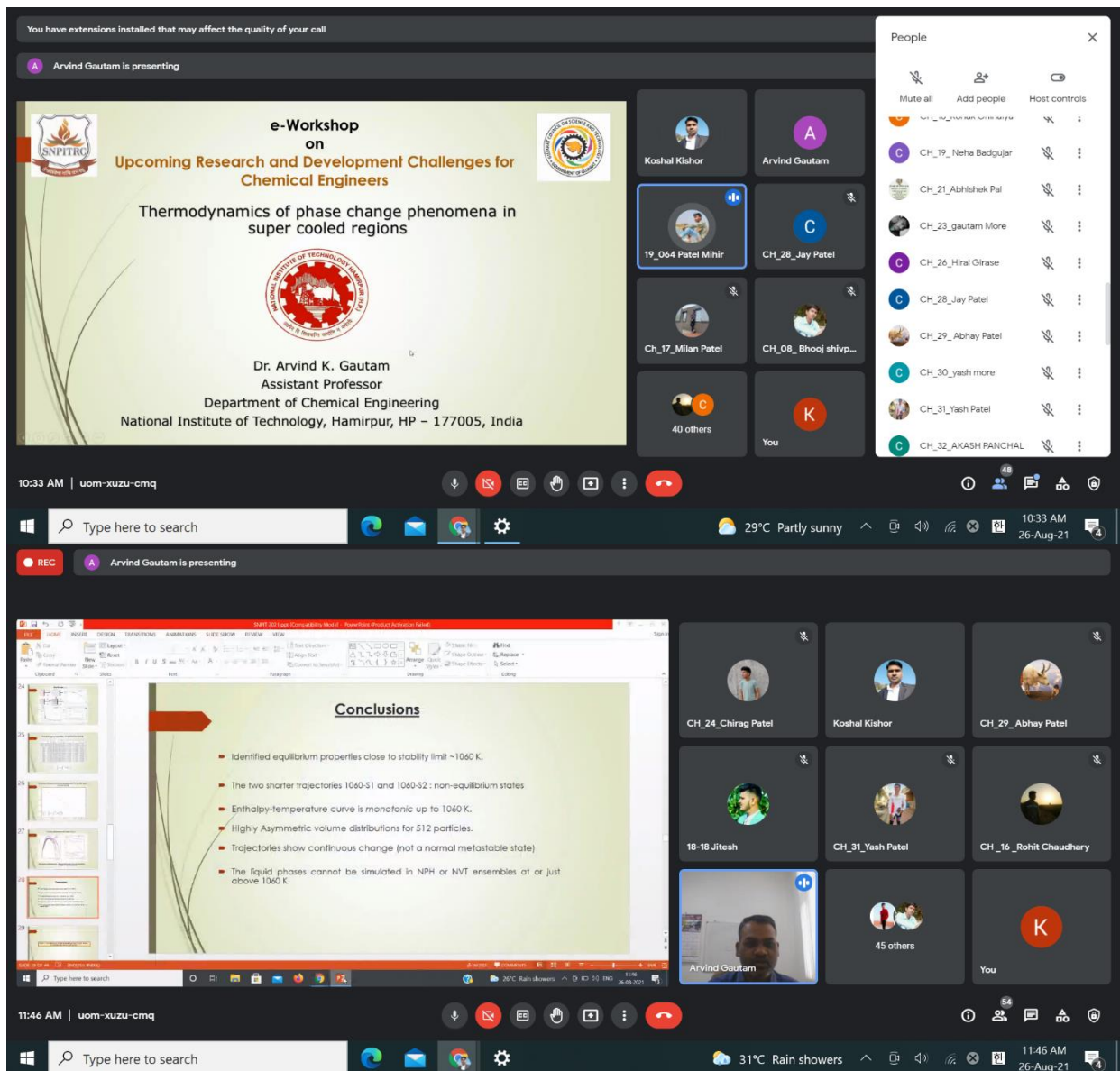
Department of Science & Technology (DST) has been constituted vide General Administration Department G.R. No. DST/2002/398/ITD dated 21st June, 2002 and it has been operational since 01.04.2003. This department mainly looks after the growth and development of new & emerging technology areas and is responsible for formulation and implementation of key policies in this sector in the State of Gujarat. As of now DST has been looking after the various areas of technology in the State.

One of the primary reasons to discuss about Challenges & Opportunities in the Research field of Chemical Engineering is the rapid development & growth of entire world. Due to fast development many lots of energy is required and due to this environment issues are raised. So, by discussing the challenges in the research field of Chemical engineering focusing on Energy, Environment and Water treatment area need to be more advance to overcome various issues for positive growth of nation rapidly. Research in the chemical engineering field seeks to clarify (analyze) and control (manufacture) one or more of the following five basic elements of a system of interest (product, process, or application): the physical, chemical, and/or biological phenomena occurring in the system of interest. The purpose of this workshop to spread awareness and give proper guidance to researchers, academicians, industry persons and various stake holders to work in this area effectively. In this pandemic, this workshop has been organized to open door for researchers to work in various sectors of Chemical engineering field effectively by taking knowledge from experts of the field. For this, two days online national workshop, DST GUJCOST has given sponsorship for successful execution of this event.

In inaugural session, Dr Miral has addressed all audience by giving departmental introduction. Event Coordinator Dr. Koshal K. Singh has given event introduction and main aim & objectives of workshop. Event co-coordinator Dr. Chandra Bhushan T. Pal and Prof. Vishal Shah handled all sessions both days by giving speaker introduction and handling question-answer sessions throughout workshop. More than 50 participants have joined session from students, staff and industry person with active involvement. All sessions were on different field of Chemical Engineering and ended with good question-answer session.



Photographs Taken during Inaugural Session in presence of several participants, and all Event Coordinators



Photographs Taken during First Session of Dr. Arvind Gautam, Assistant Professor NIT Hamirpur, 26/08/2021

Nutan Paliwal is presenting

India's energy anchor

ओरका जी एल
ONGC

Gas sweetening troubleshooting: troubleshooting and optimization

Nutan Rajesh Paliwal*
Executive Engineer (Production), Oil and Natural Gas Corporation Limited,
Hazira Plant, Hazira, Surat, Gujarat, India 394518.
paliwal_nutan@ongc.co.in; +91-9427504579

meet.google.com is sharing your screen. Stop sharing Hide

Turn off camera (ctrl + e)

1:41 PM | uom-xuzu-cmq

Type here to search

31°C Light rain

1:41 PM 26-Aug-21

Nutan Paliwal is presenting

ओरका जी एल
ONGC

Geographic Location of the Hazira plant

Gulf of Cambay

Afghanistan

Pakistan

INDIA

Mumbai High Field

Hazira

Arabian Sea

Bay of Bengal

ONGC Hazira plant is a largest gas processing plant in India cap. 45MMSCMD

1:42 PM | uom-xuzu-cmq

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31°C Light rain

1:42 PM 26-Aug-21


Photographs Taken during Second Session of Mr. Nutan Rajesh Paliwal, Executive Engineer, ONGC, Hazira, Surat, 26/08/2021

3:05 PM | uom-xuzu-cmq

SANJAYKUMAR SHRIVASTAV is presenting

An Expert Talk On

CATALYTIC TRANSFORMATION OF BIO-DERIVED FURANS TO FUEL ADDITIVES AND VALUE ADDED CHEMICALS



Speaker: Dr. Sanjay Kumar Srivastava
Assistant Professor
Chemical Engineering Department
Government Engineering College, Valsad

UNDER THE BANNER OF
S. N. PATEL INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE, UMRAKH

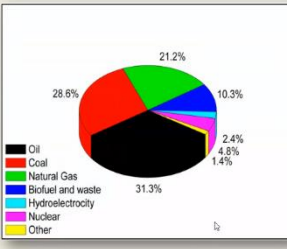
DST GUJCOST FUNDED ONLINE WORKSHOP ON "RECENT CHALLENGES FOR CHEMICAL ENGINEERS"

Presented by Dr. S. K. Srivastava, Assistant Professor, Chemical Engineering, GEC Valsad

3:05 PM 31°C Partly sunny 26-Aug-21

Origin of the problem/Motivation

- Almost 82% of initial energy demand for our civilization greatly depends on fossil fuels & fossil derived fuels & chemicals
- This increase in demand is due to Increase in the world's population and living standard
- Environment pollutant emissions, global warming, climate change
- Above rationales necessitate the development of new, renewable and sustainable springs for the production of fuels and valuable chemicals



[IEA, 2020]

3:05 PM | uom-xuzu-cmq

31°C Partly sunny 26-Aug-21

Photographs Taken during Third Session of Dr. Sanjay K. Shrivastava, Asst. Prof, GEC, Valsad 26/08/2021

REC Puspanjali Sahu is presenting

Alloy formation indicates inter-diffusion of atoms between nanoparticles

11:03 AM | uom-xuzu-cmq

Type here to search

You are signed in as ram | uom-xuzu-cmq (2021-08-26 at 11:03 AM) | Meet - uom-xuzu-cmq | Surat (ST) to Vadodara Jn (BRC) |

meet.google.com/uom-xuzu-cmq

Apps | VBT Captive Portal | Gmail | YouTube | Maps | WhatsApp | SNPT & RC | Reading list

REC Puspanjali Sahu is presenting

Control over size of nanoparticles (NPs)

X-ray crystal structure of the $Au_{100}(p-MBA)_{44} NC$

S insert itself in Au-Au bond

Science 2007, 318 (5849), 430-433.

Etching of Au atoms by S


Langmuir 2005, 21 (5), 1668-1671

11:02 AM | uom-xuzu-cmq

Photographs Taken during Fourth Session of Dr. Puspanjali Sahu, Senior Project Associate, IMMT-CSIR Bhuvneshwar, 27/8/2021

Pen Eraser Text

Process Intensification: An Indispensable Tool for the Future Chemical and Allied Industries



Dr. G. C. Jadeja
Assistant Professor
Department of Chemical Engineering
S. V. National Institute of Technology Surat

Talk delivered at DST GUJCOST FUNDED Two Days Online Workshop on
"Upcoming Research and Development Challenges for Chemical Engineers"
at SNPTIRC, Umrakhi on 27/08/2024

1 / 202 >

G.C. Jadeja is presenting





19-17 ...



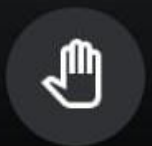
CH₄...



You



CH₂₂others



In a RPB, a centrifugal force (5-100 g) is induced by rotating a doughnut shaped packing, as shown in Fig.

The liquid stream is sprayed by the liquid distributor at the center of the RPB.

In high gravity field, the liquid is disintegrated into tiny droplets so that vast contact area is generated to enhance the mass transfer.

Rotating Packed Bed for a gas-liquid system

G.C. Jadeja is presenting

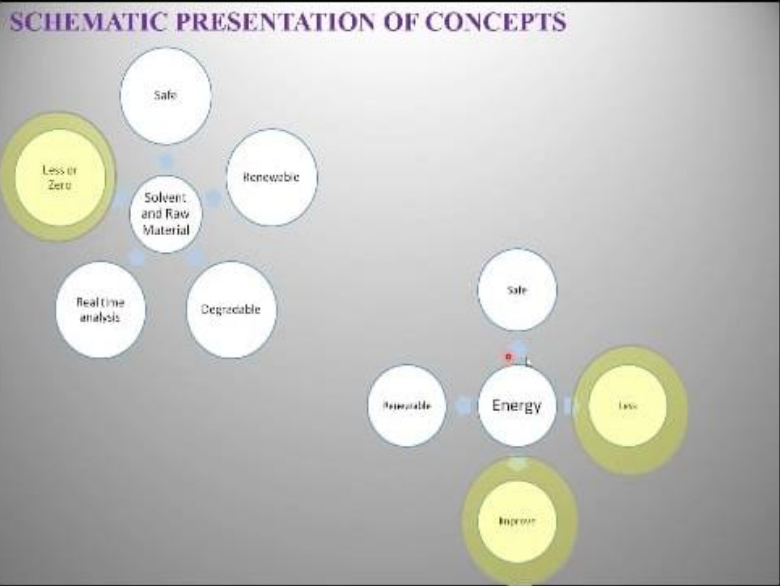
Vrutik

20_05...

You

CH29 others...

Photographs Taken during Fifth Session of Dr. GC Jadeja, Asst. Prof, SVNIT Surat, 27/8/2021



Dr. Meghal A. Desai is presenting



Dr. Me... ⋮

CH_14_ ⋮

You

CH203_othersr...



Cost Materials
Risk & Hazard Reducing Energy
Waste Non-renewables
Fig. 1.1-5 "Reducing": The heart of Green Chemistry.

THANK YOU

Knowledge Experience Creativity

Dr. Meghal A. Desai is presenting

Dr. Me... CH_14_ You CH_18_othersr...

Photographs Taken during Sixth Session of Dr. Meghal A. Desai, Associate Prof., SVNIT, Surat, Umrakh, 27/8/2021

On the second day, during valedictory session Dr. Ram Chandra Chaurasia addressed all participants. Event coordinator **Dr. Koshal K. Singh** conveyed vote of thanks to DST GUJCOST, SNPIT & RC & Vidyabharti Trust Institution. Dr. Chandra Bhusan T. Pal and Prof. Vishal Shah conveyed vote of thanks and workshop announced closed.

For the grand success of event Vidyabharti Trust Members, Principal Dr. Piyush Jain, Administrative Dr. Akshay Gupta, all department heads and DST Gujcost officials congratulated Institute.

ANNEXURE

SAMPLE CERTIFICATE OF PARTICIPANTS



S. N. Patel Institute of Technology & Research Centre
(A Vidyabharti Trust Institution)



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Certificate of Participation

This is to certify that

has participated in
GUJCOST, DST, Government of Gujarat Sponsored
Two Days Online National Workshop on
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Organised by Chemical Engineering Department,
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Dr. Koshal K. Singh
Coordinator
SNPIT&RC, UMRAXH

Dr. Piyush S. Jain
Principal
SNPIT&RC, UMRAXH