

REPORT

One day hands on training workshop on “Characterization of Nanomaterials and illustration of Their Innovative Applications”. Date: 27th January 2024.

S.N.	Activity	Particulars
1	Theme	Characterization of Nanomaterials and illustration of Their Innovative Applications
2	Date	27 th Jan. 2024 (one day)
3	Fees/registration charges	Free of cost
4	Venue	Dept. of Physics, The Institute of Science, MUMBAI.
5	Target group	Second and third year B.Sc. Physics students
6	Number of students registered	84
7	Number of beneficiaries	80
8	Topics covered	XRD (X – Ray Diffraction), SEM (Scanning Electron Microscopy), UV Visible Spectroscopy, FTIR(Fourier transform infrared spectroscopy), Electrochemical Water Splitting, Super Capacitor, Electrochromism, Solar Cell
9	Issue of certificates	Certificates were issued to all beneficiaries
10	Convener and Resource person	Prof. A. V. Kadam, The Institute of Science, MUMBAI,
11	Chairpersons	1. Prof. S.B. Kulkarni, I/C Director, Institute of Science, MUMBAI. 2. Prof. Rajaneesh Kamat (VC, Dr. Homi Bhabha State University, Fort, Mumbai)
12	Trainers	1. Suchitra Nirudas Sapakal 2. Aisha Khan 3. Amar Jadhav 4. Sharad Jadhav 5. Puja Deshmukh 6. Pratik Sutar 7. Gopika Rajan 8. Nikhat Shikh 9. Vrushali Jadhav 10. Afreen Mirza 11. Rukhasar Momin 12. Priya Gaikwad 13. Vijay Kule 14. Rohit Patil 15. Kaushal Gavankar 16. Omar Shaikh

One day hands on training workshop on “Characterization of Nanomaterials and illustration of Their Innovative Applications” was organized on 27th January 2024 by Department of Physics, The Institute of Science, Mumbai. The aim of this workshop was to give hands-on training of nano material characterizations (SEM, FTIR, XRD and UV-vis spectroscopy) and its applications (Water splitting. Super capacitor, solar cell and electrochromism) to the under graduate (S.Y. and T.Y. B.Sc. Physics) students of all over Maharashtra.

The workshop was inaugurated by the auspicious hands of chairpersons, Prof. Rajaneesh Kamat (VC, Dr. Homi Bhabha State University, Fort, Mumbai) and Prof. S.B. Kulkarni. Prof. Rajaneesh Kamat in his inaugural speech explained the importance of nanomaterials in today’s technological world. Prof. Kulkarni, in his speech explained the importance of characterization techniques for the accurate analysis of nanomaterials. Prof. R. B. Kale stated the importance of such kind of workshops for the students to encourage them towards research. Prof. Anamika Kadam was the anchor for the inaugural function also she gave the vote of thanks.

After inauguration, the hands on training was started. The students were divide into 6 groups and each group visited to the all characterization as well as application labs one by one. The XRD lab was handled by Ms. Gopika Rajan, Mr. Vijay Kule. The UV-vis spectroscopy explained by Ms. Aisha Khan and Ms. Vrushali Jadhav. The SEM instrument was handled by Mr. Amar Jadhav and Ms. Nikhat Shikh. The FTIR was explained n=by Ms. Aisha Khan and Mr. Rohit Patil. Further, in the application session, Supercapacitor was explained by Ms. Priya Gaikawad, Mr. Pratik Sutar and Mr. Omar Shaikh. The water splitting and electrochromism experiments were demonstrated by Ms. Suchitra Nirudas Sapakal, Ms Puja Deshmukh and Mr. Kaushal Gavankar, The solar cell experiment was shown by Ms. Afreen Mirza nad Ms Rukhasar Momin

At the end of workshop, feedback link was provided to the participants and respaces were recorded. Further, some of the participants gave their valuable feedbacks and certificate s were distributed to all the participants .

Announcement



Dr. Homi Bhabha State University

The Institute of Science

Madam Cama Road 15, Churchgate, Mumbai 400032 (centre with Potential for Excellence & NAAC reaccredited 'A' Grade)

DEPARTMENT OF PHYSICS

Under DST-SERB Scientific Social Responsibility
In Association with IQAC centre & School Connect Committee
Organizing

Certificate Oriented Workshop for Graduate Students On

Characterization of Nanomaterials and illustration of Their Innovative Applications

Day and Date: Saturday, 27th January 2024, From 10.00 a.m. to 5.00 p.m.

PATRONS

- ❖ Prof. Rajanish Kamat (Hon'ble Vice Chancellor of HBSU)
- ❖ Prof. S.B. Kulkarni (Director)
- ❖ Prof. Rohidas B. Kale (HOD of Physics)
- ❖ Prof. Anamika V. Kadam (Convenor)

Inaugural talk by

Prof. Rajanish Kamat (Hon'ble Vice chancellor of HBSU)

Explore

Characterisation Techniques

- > XRD (X - Ray Diffraction)
- > SEM (Scanning Electron Microscopy)
- > UV Visible Spectroscopy
- > FTIR (Fourier transform infrared spectroscopy)

Applications Of Nanomaterials

- > Electrochemical Water Splitting
- > Super Capacitor
- > Electrochromism
- > Solar Cell

Free
Registration

Registration link: <https://forms.gle/D7wrN2x5qC1Uuq2P17>

Join WhatsApp group:

<https://chat.whatsapp.com/JxVcTUPVRP1EbpP03x8qq8>

Help Desk: 9623262507, 9324469131

Registration will be closed on 24 January 2024

Eligibility: SYBSC AND TYBSC (PHYSICS)
Students from all the Colleges are Welcome

Kindly Note: Limited seats are available; selection will be based on first come first serve basis. So, hurry up!

Open your mind to the field of nanoscience Applications

Glimpses of Workshop



INAUGURAL FUNCTION



Registration Desk



Hands on Training



Characterisations



Applications



Felicitation ceremony



Certificate
distribution



Timetable and groups

One-day Certificate Oriented Workshop for Graduate Students on
Characterization of Nanomaterials and illustration of Their Innovative Applications

Schedule

Day: Saturday, Date: 27th January 2024

Time	Program
10:00 am -10:25 am	Registration and distribution of kit
10.30 am to 11.15 am	Inauguration ceremony Talk by Prof. Rajanish Kamat (Hon'ble Voice chancellor of HBSU)
11.15 am to 11.30 am	Tea Break
11.30 am to 12.00 pm	Instrument-1
12.00 pm to 12.30 pm	Instrument-2
12.30 pm to 01.00 pm	Instrument-3
01.00 pm to 2.00 pm	Lunch Break
2.00 pm to 2.30 pm	Instrument-4
2.30 pm to 3.00 pm	Instrument-5
3.00 pm to 3.30 pm	Instrument-6
3.30 pm to 3.45 pm	Tea Break
3.45 pm to 4.15 pm	Felicitation ceremony (Feedback and certificate distribution)

Group wise time table

Instrument Time	XRD+UV	SEM	FTIR	Water+ Electrochromic	Super capacitor	Solar Cell
11.30 am to 12.00 pm	G-1	G-2	G-3	G-4	G-5	G-6
12.00 pm to 12.30 pm	G-6	G-1	G-2	G-3	G-4	G-5
12.30 pm to 01.00 pm	G-5	G-6	G-1	G-2	G-3	G-4
LUNCH BREAK (1.00 pm – 2.00 pm)						
2.00 pm to 2.30 pm	G-4	G-5	G-6	G-1	G-2	G-3
2.30 pm to 3.00 pm	G-3	G-4	G-5	G-6	G-1	G-2
3.00 pm to 3.30 pm	G-2	G-3	G-4	G-5	G-6	G-1

Batches

G1	1-14
G2	15-28
G3	29-42
G4	43-56
G5	57-69
G6	70-83

Details of Batches

G1 Batch	
1	Aakash Gaitwad
2	Aashish dipak rajeshirke
3	Aditee Pradeep Basurkar
4	Aditi Hanumant Tawde
5	Aditi Prasad Sakhare
6	Aditya Jagendra Solanki
7	AmalKrushna Dvakaran Chozhiyattil
8	Anand Twari
9	Aniket Akhilesh Twari
10	Ansh Arun Shinde

11	Anurag R. Yadav
12	Arya Hanmant Pisal
13	Atharva Sandeep Raut
14	Avush Ghadigoankar

G2 Batch

15	Azhar husain Raeen
16	Bainty Kaur Chugh
17	Borade Nitin Dnyande
18	Chandrika Naikar
19	Churi Atharva Lalit
20	Dange Sanket Shridhar
21	Devraj dadu mane
22	Divya roopisingh rajpurohit
23	Esha Harisharan Jha
24	Gauri Ajit Rane
25	Jalvi chinmay vivek
26	Kewat Deepak Bindravan
27	Kumbhar Aditya Ajay
28	Magar Samiksha Sunil Leela

G3 Batch

29	Mansi Rajurkar
30	Maulik Sameer Dixit
31	Medage Soham Mahadev
32	Michelle Doota
33	Mishra Abhishek Manoj
34	Mukesh Ramesh Jaiswar
35	Naeemur Rehman Shaikh
36	Nalage Vishakha Satish
37	Niraj Ramesh Vaknis
38	Omkar Mahendra Kamble
39	Prathamesh Narayan Rumade
40	Pratik Umesh Desale
41	Priyanka Ashok Patil
42	Privanshu Arunajay Singh

G4 Batch

43	Omkar Sangar
44	Reeta chausbey chandrabhan
45	Ritika Surendra Yadav
46	Sachin Sunil Jaiswar
47	Sachinkumar Jayprakash
48	Sahil Abhiram Rout
49	Sahil Santosh Pawade
50	Samarth patil
51	Sanskriti Amar Khare

52	Satvik santosh kamble
53	Sayali Santosh Chalse
54	Sayyad Nahida Anjum
55	Shaikh Humayrah Ibrahim
56	Shaikh muskan salim

G5 Batch

57	Shinde Rutuja Ramesh
58	Shravani Anil Jadhav
59	Shreya Narendra Gharat
60	Shreyash Rajesh Meher
61	Shubham Masurkar
62	Shweta Suresh Kumar Naikar
63	SOHAM SANJAY TANDEL
64	Sonam Girish Kumar Singh
65	Srushti Tushar kothawale
66	Suvash Kailas Bhatkar
67	Suyesha Devendra Sakhare
68	Swapnarani Swarup Jena
69	Swayam Santosh Tirlokar

G6 Batch

70	sved mohd kashif
71	Tithee Parab
72	TIWARI PALAK PRAVESH
73	Vaibhav patidar
74	Varun Vinayak Phatak
75	Vedant Shiram Mahadik
76	Vikas Umesh Gaud
77	Vinayak Mohan Bhamushali
78	Yadav Aman Lalji
79	Yadav Priyanka Virendra
80	Yadav Sachin munnilal
81	Yadav somesh shivshankar
82	Yash Mahesh Shinde
83	Nalawade Megha Hanumant

Attendance

Kshitija Pravin Chavan

Ksham

	G1 Batch	Sign
1	Aakash Gaikwad	<i>[Signature]</i>
2	Aashish dipak rajeshirke	<i>[Signature]</i>
3	Aditee Pradeep Basutkar	<i>[Signature]</i>
4	Aditi Hanumant Tawde	<i>[Signature]</i>
5	Aditi Prasad Sakhare	<i>[Signature]</i>
6	Aditya Jagendra Solanki	<i>[Signature]</i>
7	Amalkrishna Divakaran Chozhiyattil	<i>[Signature]</i>
8	Anand Tiwari	<i>[Signature]</i>
• 9	Aniket Akhilesh Tiwari	<i>[Signature]</i>
10	Ansh Arun Shinde	<i>[Signature]</i>
11	Anurag R. Yadav	<i>[Signature]</i>
• 12	Arya Hanmant Pisal	<i>[Signature]</i>
• 13	Atharva Sandeep Raut	<i>[Signature]</i>
14	Ayush Ghadigoankar	<i>[Signature]</i>
	G2 Batch	
15	Azhar husain Raeen	<i>[Signature]</i>
16	Bainty Kaur Chugh	<i>[Signature]</i>
• 17	Borude Nitin Dnyandev	<i>[Signature]</i>
18	Chandrika Naikar	<i>[Signature]</i>
19	Churi Atharva Lalit	<i>[Signature]</i>
20	Dange Sanket Shridhar	<i>[Signature]</i>
• 21	Devraj dadu mane	<i>[Signature]</i>
22	Divya roopsingh rajpurohit	<i>[Signature]</i>
• 23	Esha Harisharan Jha	<i>[Signature]</i>
24	Gauri Ajit Rane	<i>[Signature]</i>
25	Jalvi chinmay vivek	<i>[Signature]</i>
26	Kewat Deepak Bindravan	<i>[Signature]</i>
• 27	Kumbhar Aditya Ajay	<i>[Signature]</i>
28	Magar Samiksha Sunil Leela	<i>[Signature]</i>

	G3 Batch	Sign
29	Mansi Rajurkar	
30	Maulik Sameer Dixit	
31	Medage Sohan Mahadev	
32	Michelle Deosta	
33	Mishra Abhishek Manoj	
34	Mukesh Ramesh Jaiswar	
✓ 35	Naeemur Rehman Shaikh	
36	Nalage Vishakha Satish	
37	Niraj Ramesh Vaknis	
38	Omkar Mahendra Kamble	
39	Prathamesh Narayan Rumade	
40	Pratik Umesh Desale	
41	Priyanka Ashok Patil	
42	Priyanshu Arunjay Singh	
	G4 Batch	
43	Omkar Sangar	
✓ 44	Reeta chaubey chandraban	
45	Ritika Surendra Yadav	
46	Sachin Sunil Jaiswar	
✓ 47	Sachinkumar Jayprakash	
48	Sahil Abhiram Rout	
49	Sahil Santosh Pawade	
50	Samarth patil	
51	Sanskruiti Amar Khare	
52	Satvik santosh kamble	
53	Sayali Santosh Chalse	
54	Sayyad Nahida Anjum	
55	Shaikh Humayrah Ibrahim	
56	Shaikh muskan salim	

- 29] Mansi Nitin Rajurkar
- 30] Shubham Masurkar - B.N. Bandodkar College Thane.
Msc II (Madhlekare Sir)
9967620026
- 31] Preet Kumar - IFS- 9958779474 Preet

Sodhan Rajendra chaurasiya		Sign
G5 Batch		
57	Shinde Rutuja Ramesh	Rshinde
58	Shravani Anil Jadhav	forhan
59	Shreya Narendra Gharat	shreya
60	Shreyash Rajesh Meher	Meher
61	Shubham Masurkar	Shubham
62	Shweta Suresh Kumar Naikar	Shweta
63	SOHAM SANJAY TANDEL	
64	Sonam Girish Kumar Singh	Sonam
65	Srushti Tushar kothawale	Srushti
66	Suyash Kailas Bhatkar	Suyash
67	Suyesha Devendra Sakhare	Suyesha
68	Swapnarani Swarup Jena	Swapna
69	Swayam Santosh Tirlotkar	Swayam
G6 Batch		
70	syed mohd kashif	Kashif
71	Tithee Parab	Tithee
72	TIWARI PALAK PRAVESH	Palak
73	Vaibhav patidar	Present
74	Varun Vinayak Phatak	Varun
75	Vedant Shriram Mahadik	Mahadik
76	Vikas Umesh Gaud	Vikas
77	Vinayak Mohan Bhanushali	Vinayak
78	Yadav Aman Lalji	Yadav Aman
79	Yadav Priyanka Virendra	Priyanka
80	Yadav Sachin munnital	Sachin
81	Yadav somesh shivshankar	Somesh
82	Yash Mahesh Shinde	Yash
83	Nalawade Megha Hanumant	Megha

Feedback

Feedback Form for One-Day Cer

Questions Responses Settings

Responses cannot be edited

Feedback Form for Certificate-Oriented One day hands-on training Workshop on Nanomaterials Characterization and Innovative Applications

Date: 27/01/2024
Time: 10:00 AM to 5:00 PM

* Indicates required question

Name of Participant *

Shinde Rutuja Ranesh

Gender *

Male
 Female

Name of College/Institute/University *

Yashwantrao Chavan Institute of Science Satara

Mobile Number *

9523441207

How would you rate the relevance and depth of the workshop content? *

Excellent
 Good
 Average
 Fair

How would you rate the effectiveness of the instructor(s) in delivering the content? *

Excellent
 Good
 Average
 Fair

How satisfied are you with the overall organization of the workshop? *

Very Satisfied
 Satisfied
 Neutral

Feedback Form for One-Day Cer

Questions Responses Settings

Responses cannot be edited

Feedback Form for Certificate-Oriented One day hands-on training Workshop on Nanomaterials Characterization and Innovative Applications

Date: 27/01/2024
Time: 10:00 AM to 5:00 PM

* Indicates required question

Name of Participant *

Swapan Santosh Trivarkar

Gender *

Male
 Female

Name of College/Institute/University *

D.G. Ruparel College of Arts, Science and Commerce

Mobile Number *

9321483501

How would you rate the relevance and depth of the workshop content? *

Excellent
 Good
 Average
 Fair

How would you rate the effectiveness of the instructor(s) in delivering the content? *

Excellent
 Good
 Average
 Fair

How satisfied are you with the overall organization of the workshop? *

Very Satisfied
 Satisfied
 Neutral

How would you rate the hands-on/practical sessions? *

Excellent
 Good
 Average

Feedback Form for One-Day Cer ☆

Questions Responses Settings

Responses cannot be edited

Feedback Form for Certificate-Oriented One day hands-on training Workshop on Nanomaterials Characterization and Innovative Applications

Date: 27/01/2024
Time: 10:00 AM to 5:00 PM

* Indicates required question

Name of Participant *
Anurag R. Yadav

Gender *
 Male
 Female

Name of College/Institute/University *
Ramnarain Ruia Autonomous College

Mobile Number *
7715980715

How would you rate the relevance and depth of the workshop content? *

Excellent
 Good
 Average
 Fair

How would you rate the effectiveness of the instructor(s) in delivering the content? *

Excellent
 Good
 Average
 Fair

How satisfied are you with the overall organization of the workshop? *

Very Satisfied
 Satisfied
 Neutral

How would you rate the hands-on/practical sessions? *

Excellent
 Good
 Average

Feedback Form for One-Day Cer ☆

Questions Responses Settings

2 of 63

Responses cannot be edited

Feedback Form for Certificate-Oriented One day hands-on training Workshop on Nanomaterials Characterization and Innovative Applications

Date: 27/01/2024
Time: 10:00 AM to 5:00 PM

* Indicates required question

Name of Participant *
Mishra Athishah Manoj

Gender *
 Male
 Female

Name of College/Institute/University *
SSR college of Arts, Commerce and Science

Mobile Number *
9974711521

How would you rate the relevance and depth of the workshop content? *

Excellent
 Good
 Average
 Fair

How would you rate the effectiveness of the instructor(s) in delivering the content? *

Excellent
 Good
 Average
 Fair

How satisfied are you with the overall organization of the workshop? *

Very Satisfied
 Satisfied
 Neutral

Questions Responses **63** Settings

Summary Question Individual

Name of Participant
63 responses

Mishra Abhishek Manoj
Shinde Rutuja Ramesh
Sachin Kumar
Reeta Chaubey chandrabhan
Suyesha Devendra Sakhare
Naeemur Rehman Shaikh
Medage Sohan Mahadev

Gender
63 responses

Gender	Percentage
Male	60.3%
Female	39.7%

Name of College/Institute/University
63 responses

Wilson College
Yashwantrao chavan institute of science satara
Ramnarain Ruia Autonomous College
Patkar varde college
Patkar Varde College
IOS
SSR college of Arts, Commerce and Science

Mobile Number
63 responses

07507770474
9974711521
9503441207
8652710745
8850037929
8999774151

Feedback Form for One-Day Cer ☆

Questions Responses **63** Settings

8692061863

How would you rate the relevance and depth of the workshop content?
63 responses

Rating	Percentage
Excellent	77.8%
Good	22.2%
Average	0%
Fair	0%

How would you rate the effectiveness of the instructor(s) in delivering the content?
63 responses

Rating	Percentage
Excellent	74.6%
Good	23.8%
Average	1.6%
Fair	0%

How satisfied are you with the overall organization of the workshop?
63 responses

Rating	Percentage
Very Satisfied	71.4%
Satisfied	27%
Neutral	1.6%

How would you rate the hands-on/practical sessions
63 responses

Rating	Percentage
Excellent	65.1%
Good	30.2%
Average	4.7%
Fair	0%

How would you rate the facilities (venue, food, equipment, etc.) provided for the workshop?
63 responses

Rating	Percentage
Excellent	72%
Good	23.8%
Average	4.2%
Fair	0%

Please provide any specific suggestions or comments on how we can improve future