

International Summit On Catalysis-Energy and Environment

A report on webinar organized



SUBMITTED BY

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20th July 2020.

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BROCHURE - CATALYSIS-ENERGY AND ENVIRONMENT

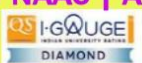


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INSTITUTE OF SCIENCE AND TECHNOLOGY

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SCHOOL OF SCIENCE AND HUMANITIES DEPARTMENT OF CHEMISTRY

Organizes a Six Day Virtual Programme on
International Summit on Catalysis -Energy and Environment
(a colloquium of intellectuals in catalysis)



Dr. K. Bhattacharyya

Scientist F, BARC-Mumbai

Topic: Heterogeneous catalysis-A Mechanistic Perspective for Energy and Environment Process

Date & Time: 9-7-2020 & 4-5 PM (IST)



Prof. Dr. Justin Hargreaves

Professor, School of Chemistry
University of Glasgow, UK.

Topic: Mechanistic Considerations Related to Ammonia Synthesis.

Date & Time: 10-7-2020 & 3-4 PM (IST)



Dr. Theerthagiri Jayaraman

Senior Researcher, Department of Chemistry,
Gyeongsang National University, South Korea

Topic: Development of Electrocatalytic Materials for Energy Applications.

Date & Time: 11-7-2020 & 3-4 PM (IST)



Dr. Rajini P Antony

Scientific officer-D
BARC-Kalpakkam-IGCAR campus.

Topic: Semiconductor based Photoelectrochemistry in Energy and Environmental Applications

Date & Time: 12-7-2020 & 3-4 PM (IST)



Prof. Dr. Vijay Ramani

Distinguished Professor,
McKelvey School of Engineering
Washington University, St. Louis.

Topic: Heterogeneous Electrocatalysts for Solid State Alkaline Electrolyzers

Date & Time: 13-7-2020 & 5-6 PM (IST)



Prof. Dr. Michael Stockenhuber

Professor, School of Engineering,
University of Newcastle, Australia.

Topic: New Catalytic Process Development To Enable Sustainable Energy And Chemicals Production

Date & Time: 14-7-2020 & 10.00 AM-11.00AM (IST)

Convener

Dr. V. Kavitha

Professor,

Department of Chemistry

Coordinator

Dr. J. Karthikeyan

Associate Professor and Head,

Department of Chemistry

- Registration Link: <http://tiny.cc/iscee>
- Free Registration
- e-Certificate for all Participants

Date:
9-14 July, 2020





DEPARTMENT OF CHEMISTRY

International Summit On Catalysis-Energy and Environment

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218	PRIYADHARSINI.M	P.T.Lee Chengalvaraya Naicker Polytechnic college	priyadharsini.mscomph il@gmail.com



REPORT ON “International Summit On Catalysis-Energy and Environment”

A 6- day virtual Seminar on **Catalysis-Energy and Environment** was organized by Department of Chemistry, Sathyabama Institute of Science and Technology from 9th July to 14th July 2020. The main objective of the workshop is to motivate and inspire young researchers, postgraduates, young faculties who aspire to excel in their career in catalysis. Around 250 Chemistry postgraduates, research scholars and faculty across various colleges have participated in the programme. The webinar has commenced with an welcome address by **Dr. V.Kavitha**, Professor, Sathyabama Institute of Science and Technology and the convener of the programme. She has narrated the programme schedule and greeted the participants.

Day 1- 9th July 2020.

The speaker for the First day webinar was, **Dr. Kaustava Bhattacharyya**, delivered a seminar on “**Heterogeneous Catalysis-A Mechanistic Perspective for Energy and Environment**”. In this lecture he has explained on the effect of dopants in the oxide support on the growth of metal nanoclusters; (2) the effects of size and structural flexibility of metal clusters on the binding energy of gas-phase adsorbates and their catalytic activity; (3) the role of surface modifiers, on catalytic activity and selectivity; and (4) the structural and compositional changes of the active surface as a result of strong metal-support interaction. He has opened up on the promising routes to alter the morphology and electronic properties of supported catalysts and to induce the direct dissociation and reaction of molecules bound to the oxide surface. Also, the small size and atomic flexibility of catalyst on gas adsorption and catalytic performance was highlighted in the lecture.

Day 2- 10th July 2020.

The resource person for the second day seminar was, Prof. Justin Hargreaves, delivered a lecture on “**Mechanistic considerations related to ammonia synthesis**”. He has outlined the

development of the Haber Bosch Process was a landmark achievement of the 20th Century. In the lecture he has explained on the possibility of the of metal nitride based catalysts as operational catalysts through the Mars - van Krevelen mechanism wherein the reactive lattice nitrogen is considered in the context of limiting scaling relationships which have been proposed elsewhere. Particular attention was directed towards the role of structure and composition for a range of ternary and quaternary interstitial metal nitrides. A combination of experimental and computational modelling data was presented to support this suggested pathway.

Day 3- 11th July 2020.

The third day seminar was conducted by, **Dr. J. Theerthagiri**, gave an insight into **“Development of Electrocatalytic materials for Energy Applications”**. He delivered on the critical role of electrocatalysts in chemical reduction reactions and the ways in determining the selectivity and activity of CRR. Different types of electrocatalysts like noble metals and their derived compounds, transition metals and their derived compounds, organic polymer, and carbon-based materials are introduced as well as determination of catalytic efficiency in terms of Faradaic efficiency, current density, and onset potential was discussed.

Day 4- 12th July 2020.

The fourth day seminar was delivered by, **Dr. Rajini P.Anthony**, on **“Semiconductor based photoelectrochemistry in Energy and Environment Applications”**. She has explained on the principles and types of Photoelectrocatalysis. With the combination of photocatalysis and electrochemistry, the separation of photogenerated charges are highly effective via external bias. The preparation of efficient photoelectrodes based on the sensitization of mesoscopic semiconductor oxide films and their application to several optical and electrical techniques, provide an insight into the dynamics of charge generation and transport. The development of adequate theoretical models based on experimental data was outlined.

Day 5- 13th July 2020.

The resource person for the fifth day seminar was, **Prof. Vijay Ramani**, delivered a lecture on **“Heterogeneous Electrocatalysts for solid state alkaline electrolyzers”**. He has highlighted on production of hydrogen using electrocatalyst. The major challenge for HER is the sluggish kinetics in alkaline media which has been mitigated by using bifunctional nickel hydroxide and ruthenium oxide as co-catalysts together with Pt as Rotating disk electrode (RDE). The bi-functional catalysts were evaluated in an anion-exchange membrane water electrolyzer operated

with ultrapure water, and outperformed Pt/C by about 0.15 V across the entire current density range. He has explained on the solid-state alkaline water electrolyzer, Membrane electrode assemblies fabricated with Pt/RTO in the cathode and IrO₂ as anode catalyst exhibited a 100-200mV reduction in the cell voltage, when compared to Membrane electrode assemblies fabricated with Pt/C in the cathode.

Day 6-14th July 2020.

The speaker for the sixth day seminar was, **Prof. Michael Stockenhuber** who delivered a lecture on “**New catalytic process development to enable sustainable energy and chemicals production**”. He has described on the significant progresses in the modification of ZSM-5 zeolite with different elements, controllable preparation of nanocrystalline ZSM-5, hierarchical ZSM-5, and composite materials catalysts to achieve high selectivity toward light olefins and improved catalyst lifetime are emphasized. Furthermore, the influences of different factors including the zeolite acidity, location of active sites, Si/Al molar ratio, crystalline size, and pore structure on the light olefin production have been specified. Finally, the existing challenges and perspectives for future research directions of hydrocarbons catalytic cracking reaction are briefly outlined.

The programme was concluded with a **vote of thanks** by **Dr. V.Kavitha**, Professor, Sathyabama Institute of Science and Technology and the convener of Catalysis-Energy and Environment.

SCREENSHOTS



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC | Approved by AICTE










SCHOOL OF SCIENCE AND HUMANITIES

DEPARTMENT OF CHEMISTRY

Organizes a Six Day Virtual Programme on

International Summit on Catalysis -Energy and Environment

(a colloquium of intellectuals in catalysis)

 Dr. K. Bhattacharyya Scientist F, BARC-Mumbai Topic: Heterogeneous catalysis-A Mechanistic Perspective for Energy and Environment Process Date & Time: 9-7-2020 & 4-5 PM (IST)	 Prof. Dr. Justin Hargreaves Professor, School of Chemistry University of Glasgow, UK. Topic: Mechanistic Considerations Related to Ammonia Synthesis. Date & Time: 10-7-2020 & 3-4 PM (IST)
 Dr. Theerthagiri Jayaraman Senior Researcher, Department of Chemistry, Gyeongsang National university, South Korea Topic: Development of Electrocatalytic Materials for Energy Applications. Date & Time: 11-7-2020 & 3-4 PM (IST)	 Dr. Rajini P Antony Scientific officer-D BARC-Kalpakkam-IGCAR campus. Topic: Semiconductor based Photoelectrochemistry in Energy and Environmental Applications Date & Time: 12-7-2020 & 3-4 PM (IST)
 Prof. Dr. Vijay Ramani Distinguished Professor, McKelvey School of Engineering Washington University, St. Louis. Topic: Heterogeneous Electrocatalysts for Solid State Alkaline Electrolyzers Date & Time: 13-7-2020 & 5-6 PM (IST)	 Prof. Dr. Michael Stockenhuber Professor, School of Engineering, University of Newcastle, Australia. Topic: New Catalytic Process Development To Enable Sustainable Energy And Chemicals Production Date & Time: 14-7-2020 & 10.00 AM-11.00AM (IST)
Convener Dr. V. Kavitha Professor, Department of Chemistry	Coordinator Dr. J. Karthikeyan Associate Professor and Head, Department of Chemistry

- Registration Link: <http://tiny.cc/iscee>
- Free Registration
- e-Certificate for all Participants

Date:
9-14 July, 2020





DEPARTMENT OF CHEMISTRY

International Summit On Catalysis-Energy and Environment

FEED BACK

S.No	Name of the Participant	How do you rate the seminar	Any other special remarks
1	Dr.K.SOUJANYA	Excellent	
2	Dr.S.SASIKALA	outsatnding	GOOD ORGANISING COMMITTEE
3	BINISH CJ	outsatnding	
4	Harini.M	outsatnding	
5	G. Havila Divya Dharshini	Excellent	Very informative session sir
6	R.Dheepika	Excellent	
7	Km. Pooja	outsatnding	no
8	Dr.K V CHIDAMBARAM	Excellent	No
9	PRIYADURAJ	outsatnding	Great session
10	Dr. A. UMA DEVI	outsatnding	Highly informative
11	Sureshkumar K	outsatnding	
12	Mr. E. PRAVEEN	Excellent	
13	P.Revathi	outsatnding	Very informative
14	Dr. P. BALAMURUGAN	outsatnding	Nice
15	Agassi T	outsatnding	Useful session
16	Dr.Shaikh Raju Shahabouddin	outsatnding	Best information
17	LOGANATHAN K T	outsatnding	GOOD INITIATIVE
18	Mrs.A.Meharajbegum	outsatnding	Nice session and learning experience
19	Ms. T.S. Kiruthika	Excellent	Informative session
20	T LOHITHA	outsatnding	Useful
21	Harini.M	outsatnding	
22	Muthamilselvi P	outsatnding	Program Organized well.
23	Dr.M.Shanmuganathan	outsatnding	Conduct more webinar
24	REVATHI G	outsatnding	Excellent session
25	Dr .V.Jaikumar	outsatnding	Nicely organized Summit. Keep going
26	Catherine Swetha A	outsatnding	
27	Mr.A.ARUN KUMAR	Excellent	INFORMATIVE SESSION
28	Ms NIVEDITHA GANESH	Excellent	Nil
29	Birendra Nath Mahato	outsatnding	Very informative session
30	Anju Sebastian	outsatnding	informative

31	M. Rajalakshmi	Excellent	Organize is good
32	Dr. P.SHANTHY	outsatnding	Fantastic presentation
33	Divya K S	Excellent	
34	Ms. R.Queen Rexciba	outsatnding	Very good presentation and more informative
35	S.Kutti Rani	Excellent	Nil
36	Dr. Debasree Das	Good	
37	Dr.T.MOHANAPRIYA	outsatnding	Excellent
38	Dr. S. Sunitha	Excellent	Congratulations to the organisers
39	Dr.S.VEERALAKSHMI, Women Sciencist, Anna University, Chennai.	Excellent	Very useful and informative session sir.
40	LAVEENA MARIET VEIGAS	outsatnding	
41	Dr. P. BALAMURUGAN	outsatnding	Nice
42	M. DHANALAKSHMI	outsatnding	Its a useful session
43	Dr.N.Ravisankar	Excellent	Nil
44	Anisa	Excellent	
45	L.Sweatha	Excellent	Very informative session
46	B. Fahima Begam	outsatnding	Good presentation and very good explanation
47	HARIPRIYA. R	outsatnding	Thank you sir. Excellent presentation sir
48	Dr. N.R.RAJAGOPALAN	outsatnding	Excellent
49	A.JEYASEELAN	outsatnding	Over all good
50	D VEDAMANICKAM	Excellent	Very very useful
51	Rishibrind Kumar Upadhyay	outsatnding	Nice session
52	P.Revathi	outsatnding	Very informative
53	Kowsalya munusamy	outsatnding	Very useful session thank you sir
54	P.Revathi	outsatnding	Very informative
55	Sandhiya.M	outsatnding	Excellent webinar
56	A. MARGARET CLEMENCIA	outsatnding	Over all good
57	Dr.K.Parvathi	outsatnding	Highly useful and informative
58	S.SUBHA	outsatnding	EXCELLENT SESSION
59	Dr. P. BALAMURUGAN	outsatnding	Nice
60	G. Havila Divya Dharshini	Excellent	Very informative session sir
61	Dr. SHANTINARAYAN ROUT	outsatnding	THANK YOU ORGANISERS FOR SUCH A SERIES OF NICE TALKS
62	PRIYADHARSINI.M	outsatnding	It was good and informative and useful.
63	VIGNESH K	outsatnding	
64	S.P.Subin David, Anna University, Chennai.	Excellent	Very Informative session.
65	J.GANESH	outsatnding	Thanks Organizers
66	Dr. T.KRITHIGA	outsatnding	
67	Rishibrind Kumar Upadhyay	outsatnding	Nice session
68	Mrs.V.ROJA	outsatnding	No
69	A.JEYASEELAN	outsatnding	Good session
70	S. Gayathri	Excellent	95
71	Dr DEEPA K BABY	Excellent	Nil

72	RAMESH. P	outsatnding	Good
73	K. ASMA AHETH	Excellent	Very useful session
74	DR.N.KANDASAMY	outsatnding	Nice
75	Dr P Chandrasekar	Excellent	Industry oriented safety measure content. Excellent Presentation
76	R Elakkiya	Excellent	Good
77	Dr.S.Nehru, University of Madras, Chennai.	Excellent	
78	Harish N	outsatnding	very good . thanks for organising
79	Dr.M.ELANGO VAN	outsatnding	Very nice and excellent presentation.
80	Mr. K. PRABU	outsatnding	Such a wonderful webinar! Sir, conduct more webinars in future too! Thankyou Sir!
81	Alphonsa Thomas	Excellent	
82	s.kubenthira	outsatnding	that is very valuable session
83	Bhuvaneswari P	Excellent	Informative Presentation
84	Ms.S.SUJA	outsatnding	Good
85	Ms.GOVU RAMANA , Research School, Dept of Chemistry,UCS,Osmania University, Hyderabad	outsatnding	It's good platform to collect new information & thank you for all . Excellent webinar
86	M. M. CHINNATHAMBI	Excellent	Nil
87	Dr. K. CHANDRASEKARAN	outsatnding	EXCELLENT PRESENTATION
88	M.VAANMATHI	Excellent	Excellent
89	J.Tharini	Excellent	
90	Dr.R.HARIHARASUTHAN	outsatnding	VERY INSPIRING SERIES OF LECTURES
91	Rishibrind Kumar Upadhyay	outsatnding	Nice session
92	SABITHA.M	outsatnding	Overall 6 days was really great and informative session,well organized thankyou for the opportunity.
93	Dr. A. THAMINUM ANSARI	Excellent	Well organized webinar which is very useful and informative for us
94	Bhuvaneswari P	Excellent	Informative Presentation
95	THIRUGNANAM S	outsatnding	
96	Dr D NEDUMARAN	Excellent	USEFUL SESSION
97	D VEDAMANICKAM	Excellent	Very very useful
98	SABITHA.M	outsatnding	Overall 6 days was really great thank you for the opportunity
99	Dr. A.THAMINUM ANSARI	Excellent	Very useful and intormative to us
100	Dr. K. CHANDRASEKARAN	outsatnding	
101	Anisa	Excellent	Nothing
102	S. Kanimozhi	Excellent	No
103	Dr Kumar Kumarappan	outsatnding	very good clear presentation. Thanking you sir.Thanks to Sathyabama Deemed University for conducting such wonderful Symposium.
104	Mrs.J.Betsy Ratnabai	outsatnding	
105	Dr.S.NEHRU, Assistant Professor, University of Madras	Excellent	

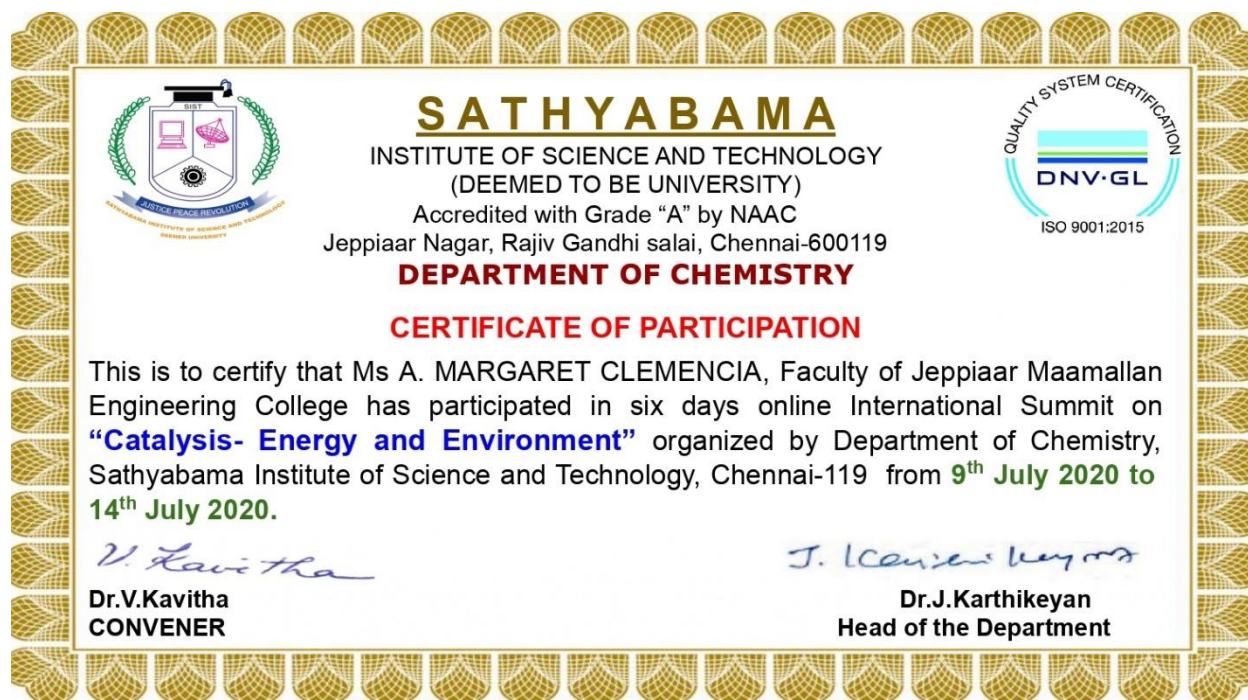
106	Dr.K.RANGANATHAN M.Sc.,M.Phil.,Ph.D	Excellent	This type of programme arrange every six month
107	B.Prabu	outsatnding	Nil
108	Dr.N Bhuvana	outsatnding	Awesome
109	K.V.MYTHILI	outsatnding	No
110	K.V.MYTHILI	outsatnding	No
111	N. Suresh	outsatnding	Nil
112	Swetha sri. R	outsatnding	
113	SANDHIYA C	Excellent	Very useful
114	V.JEEVITHA	Excellent	



DEPARTMENT OF CHEMISTRY

International Summit On Catalysis-Energy and Environment

MODEL CERTIFICATE



SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

SCHOOL OF SCIENCE AND HUMANITIES

DEPARTMENT OF CHEMISTRY

REPORT ON FDP

TITLE OF THE EVENT: 6 DAYS - FACULTY DEVELOPMENT PROGRAMME, Mass Spectrometry and Thermal Analysis Techniques

DATE AND TIME: 13TH JULY 2020 – 18TH JULY 2020, 10.00 am – 12.00 Noon

TYPE OF THE EVENT: Workshop on Virtual Model

PROGRAMME BROCHURE:



SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" By NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.





6 DAYS - FACULTY DEVELOPMENT PROGRAMME
ON
Mass Spectrometry and Thermal Analysis Techniques
Jointly Organized by
Col. Dr. Jeppiaar Research Park, Centre for Ocean Research & Department of Chemistry
In Association with
Ministry of Earth Sciences - Earth Science Technology Cell (MoES-ESTC)
Date: 13 - 18 July, 2020



Patrons:
Dr. Mariazeena Johnson, Chancellor
Dr. Marie Johnson, President
Dr. T. Sasipraba, Vice Chancellor

Organizing Secretary:
Dr. B. Sheela Rani
Director (Research)

Programme Coordinators:
Dr. D. Inbakandan, Head & Scientist E,
Centre for Ocean Research
Dr. J. Karthikeyan, Head & Assoc. Prof
Department of Chemistry
Dr. L. Stanley Abraham, Scientist E,
Centre for Ocean Research

Conveners:
Mr. C. Kumar, Scientist B,
Centre for Ocean Research.
Dr. T. Krithiga, Associate Professor,
Department of Chemistry

Co-Conveners:
Mr. R. Thirugnanasambandam,
Dr. T. Stalin Dhas, Dr. V. Karthick, &
Mr. J. Baalamurugan
Scientist B
Centre for Ocean Research





Application Oriented Talk on GC-MS, Gas Chromatography & Mass Spectrometry
Mr. Dushyanth Hegde, Assistant Manager (Application Support), Toshvin Analytical Pvt Ltd., Bangalore, Date: 13.7.2020; Time: 10 - 12 noon



Liquid Chromatography & Mass Spectrometry (LC-MS) Basic Principle & Interpretation.
Prof. Dr. P. Rajakumar, UGC - BSR Faculty, Dept. of Organic Chemistry, University of Madras
Date: 14.7.2020; Time: 10 - 12 noon



Inductively coupled Plasma Mass Spectrometry (ICP-MS) . Basic Principle & Interpretation.
Dr. T. Y. Suman, Post Doctoral Fellow, Henan Normal University, Xinxiang, China
Date: 15.7.2020; Time: 10 - 12 noon



Matrix-Assisted Laser Desorption/Ionization (MALDI-TOF). Basic Principle & Interpretation.
Prof. Dr. P. Rajakumar, UGC - BSR Faculty, Department of Organic Chemistry, University of Madras. Date: 16.7.2020; Time: 10 - 12 noon



Thermal Analysis & Thermo kinetics (TGA/DTA/DSC) Basic Principle & Interpretation.
Dr. K. Chennakesavulu
Associate Professor, Department of Chemistry
Date: 17. 7.2020 & 18.7.2020; Time: 10 - 12 noon

Registration Fee: Rs. 500 /- (Limited Seats only)
(E- Certificate will be given to the successfully completed participants)
For Registration: <https://bit.ly/2YLqCuk>
Last Date for Registration : 11/07/2020.



Contact: 8220232039
9176672094, 8144504346
kumar.cor@sathyabama.ac.in

PROGRAMME SCHEDULE:

The program schedule comprises of 6 days of invited talk given by Eminent speakers. The program also consists of Interpretation of Mass Spectrometry and Thermal Analytical techniques.

DAY 1:

Date & Time: 13-06-2020 & 10.00 AM – 12.00 NOON

Speaker of the Day: Mr. Dushyanth Hegde, Assistant Manager, Toshvin Analytical Pvt Ltd, Bangalore

Topic: Application Oriented Talk on Gas Chromatography – Mass Spectrometry.

DAY 2:

Date & Time: 14-07-2020 & 10.00 AM – 12.00 NOON

Speaker of the Day Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras

Topic: Liquid Chromatography and Mass Spectrometry (LC-MS) Basic Principle and Interpretation.

DAY 3:

Date & Time: 15-07-2020 & 10.00 AM – 12.00 NOON

Speaker of the Day: Dr. T. Y. Suman, Post-Doctoral Fellow, Henan Normal University, Xinxiang, China

Topic: Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) Basic Principle & Interpretation

DAY 4:

Date & Time: 16-07-2020 & 10.00 AM – 12.00 NOON

Speaker of the Day Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras

Topic: Matrix-Assisted Laser Desorption/Ionization (MALDI-TOF) Basic Principle and Interpretation.

DAY 5 and DAY 6:

Date & Time: 17-07-2020 and 18-07-2020 & 10.00 AM – 12.00 NOON

Speaker of the Day Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry

Topic: Thermal Analysis and Thermokinetics (TGA/DTA/DSC) Basic Principle & Interpretation

SPEAKERS LIST:

1. Mr. Dushyanth Hegde, Assistant Manager, Toshvin Analytical Pvt Ltd, Bangalore
2. Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras
3. Dr. T. Y. Suman, Post-Doctoral Fellow, Henan Normal University, Xinxiang, China
4. Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry, Sathyabama Institute of Science & Technology

CERTIFICATE MODEL:



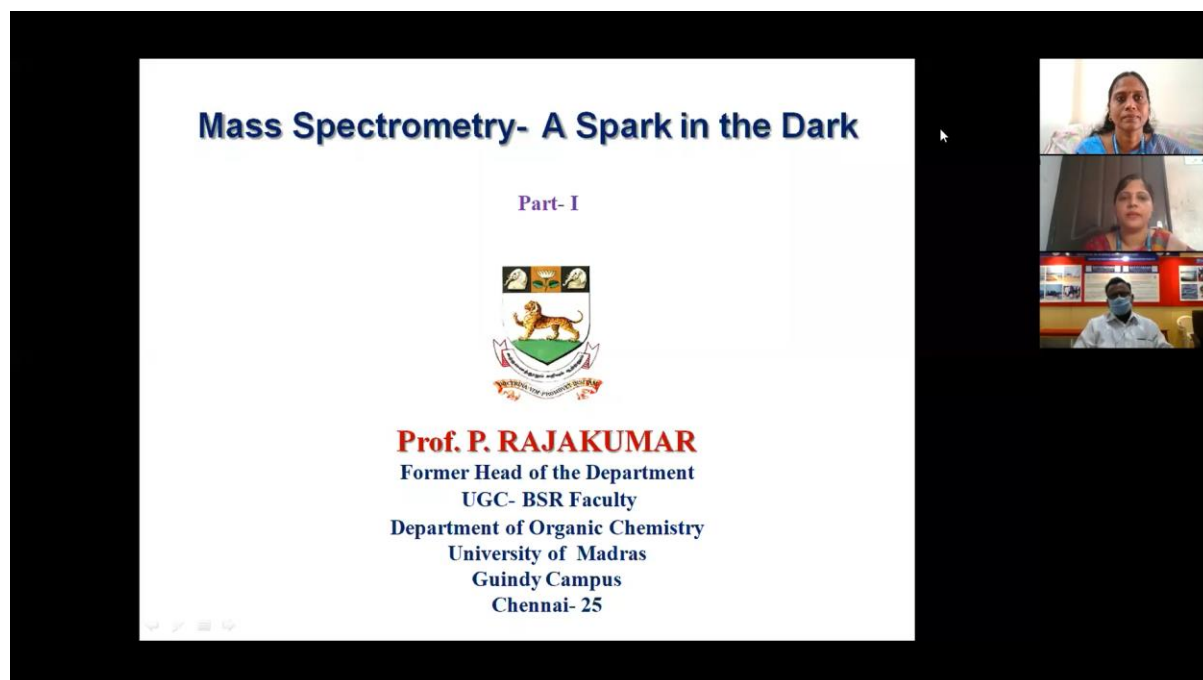
ACTIVITY REPORT:

6 DAYS - FACULTY DEVELOPMENT PROGRAMME, "Mass Spectrometry and Thermal Analysis Techniques" was conducted virtual mode during 13th July 2020 – 18th July 2020 from 10.00 am – 12.00 noon organized by Conveners - Mr. C. Kumar, Scientist B, Ocean Research & Dr. T. Krithiga, Associate Professor, Dept. of Chemistry and Co-conveners – Dr. T. Stalin Dhas, Dr. V. Karthick, Mr. R. Thirugnanasambandam & Mr. J. Baalamurugan– Scientist B, COR. The FDP was Jointly Organized by Col. Dr. Jeppiaar Research Park, Centre for Ocean Research & Department of Chemistry in Association with Ministry of Earth Sciences - Earth Science Technology Cell (MoES-ESTC). The program schedule comprises of 6 days of invited talk given by Eminent speakers – Mr. Dushyanth Hegde, Assistant Manager, Toshvin Analytical Pvt Ltd, Bangalore, Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras, Dr. T. Y. Suman, Post-Doctoral Fellow, Henan Normal University, Xinxiang, China and Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry, Sathyabama Institute of Science & Technology. The program also consists of Interpretation of Mass Spectrometry and Thermal Analytical techniques.

The inaugural address was given by Dr. B. Sheela Rani, Director (Research), Sathyabama Institute of Science and Technology, Organizing Secretary, detailing the program schedule of the event. The Day 1 speech was given by Mr. Dushyanth Hegde, Assistant Manager, Toshvin Analytical Pvt Ltd, Bangalore. The talk was on the topic "Application Oriented Talk on Gas Chromatography – Mass Spectrometry" which elaborately covered the industrial applications and scope of GC - MS. The Day 2 talk was given by Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras on the topic "Liquid Chromatography and Mass Spectrometry (LC-MS) Basic Principle and Interpretation" which detailed the basic concepts and interpretation of LC – MS. The Day 3 speech was given by Dr. T.

Y. Suman, Post-Doctoral Fellow, Henan Normal University, Xinxiang, China on the topic “Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) Basic Principle & Interpretation” which explained in detail the basic concepts and interpretation of ICP - MS. The Day 4 speech was given by Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras on the topic “Matrix-Assisted Laser Desorption/Ionization (MALDI-TOF) Basic Principle and Interpretation” which detailed the principle, basic concepts and interpretation of MALDI-TOF. The Day 5 and Day 6 was handled by Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry, Sathyabama Institute of Science & Technology. It was a clear explanation on “Thermal Analysis and Thermokinetics (TGA/DTA/DSC) Basic Principle & Interpretation”. The speaker has exquisitely conveyed the instrumentation, basic concepts and interpretation of various thermal analytic methods and Thermokinetic studies. The program ended with a Vote of Thanks by Dr. T. Krithiga, Associate Professor, Department of Chemistry, Convener.

PHOTOS:



Retro Diels-Alder fragmentation

Example:

CC1=C(C)C(O)C=CC1
4-terpineol
MW 154

01:17:07 50 00:46:49

**THE DTA/DSC AND IT'S SIGNIFICANCE
THERMOKINETICS OF CALIXARENES**

By
K. CHENNAKESAVULU
 Associate Professor
 Department of Chemistry
 Sathyabama Institute of Science and Technology
 (Deemed to be University)
 Chennai – 600 119

18/07/2020 00:00:00 01:03:02

LIST OF PARTICIPANTS:

A total of 67 participants registered and benefitted from the workshop.

S.No	Name of the Participant	Institution/University
1	A. KISTAN	Annamalai University
2	B. SUBASH	Women's Christian College
3	K. ARULVANI	Dhivya college of education

4	K.Rajesh	JP College of arts and science,Ayikudi, Tenkasi
5	M THAMEEM ANSARI	Karpagam Institute of Technology
6	Mrs.V.ROJA	Government Arts College for Men, Krishnagiri
7	R. Sasikala	Periyar Arts College, Cuddalore
8	S. Mathiya	ANNAMALAI UNIVERSITY
9	A. Alfind Paul Frit	Thiru Kolanjiappar Government Arts College, Vridhachalam-606001, Tamilnadu
10	A. ARSHYA FATHIMA	Voorhees College. Vellore
11	A. CHANDRA MOHAN	Bharathiar University
12	A. GOMATHI	PRESIDENCY COLLEGE CHENNAI
13	A. MARGARET CLEMENCIA	Sathyabama Institute of Science and Technology
14	A. MUTHU KUMAR	Sathyabama Institute of Science and Technology
15	A. UMA DEVI	Sathyabama Institute of science and technology
16	A.AROKIYARAJ	Kalaimahal College of Arts and Science
17	A.ARSHYA FATHIMA	SADAKATHULLAH APPA COLLEGE AUTONOMOUS
18	A.ARUN	GOPALAN COLLEGE OF ENGINEERING AND MANAGEMENT
19	A.CHARLES	PSN College of Engineering Technology, Tirunelveli
20	A.GOMATHI	Vtht
21	A.JEYASEELAN	Annai Violet Arts and Science College
22	A.Margaret Clemencia	MUTHURANGAM GOVT.ARTS COLLEGE, VELLORE
23	A.Muthukrishnaraj	J.N.College, Pasighat, Arunachal Pradesh
24	Abdul Hafiz	ASSISTANT PROFESSOR
25	Agassi T	St. Mary's College (Autonomous), Thoothukudi
26	Ajikumar A	DEPARTMENT OF PHYSICS, THIAGARAJAR COLLEGE, MADURAI -09
27	Alex prasath	Bharath Institute of Higher education and research , BIST, Bharath University Chennai-73
28	Ambika M	St. Joseph's college of Engineering
29	Anand C	Government College for Men Kurnool Andhra Pradesh India
30	Anbazhakan K	A.P.C. Mahalaxmi College for Women, Thoothukudi
31	ANITHA A	Dr. Ambedkar Government Arts College Vyasarpadi Chennai-39 Tamilnadu India
32	Arindam Ghosh	Dr. Ambedkar Government Arts College Vyasarpadi Chennai-39
33	ARUL MARY	SRMIST, Ramapuram Campus
34	AVVARU PRAVEEN KUMAR	Rajapalayam Rajus College
35	B. Baskar	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, RAMAPURAM CAMPUS
36	B. Mary Dayana	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS
37	B. SUBASH	SRI K.G.S ARTS COLLEGE
38	B.SELVAKUMAR	JEPPIAAR INSTITUTE OF TECHNOLOGY
39	Baalamurugan Jayaraman	St. Joseph's College of Engineering, Chennai -119.
40	BABY SRI PRATHA G	SRI MEENAKSHI GOVERNMENT ARTS COLLEGE FOR WOMEN(A)
41	BALAMURUGAN. P	KLE's Basavaprabhu Kore Arts, Science and Commerce College Chikodi

42	Banani Mukhopadhyay	St Antony's College of Arts and Sciences for women, Dindigul
43	BHARATHILENIN V	ERODE ARTS AND SCIENCE COLLEGE (AUTONOMOUS), RANGAMPALAYAM -638009
44	Bhuvaneswari P	St. Joseph's college of engineering
45	C. Amuthambigai	Adama Science and Technology University
46	C. KANAGA	VELAMMAL VIDHYASHRAM
47	C. Rajalakshmi	DMI- St. John the Baptist University, Mangochi, Malawi
48	C. SUGUNA	A.V.C.College(Autonomous)
49	C.Shiyamala	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM
50	Caleb Noble Chandar S	SRM Institute of Science and Technology, Ramapuram Campus, Chennai-89
51	CR. Minitha	T BML COLLEGE.PORAYAR
52	D NEDUMARAN	Department of Chemistry, Thiru Kolanjiappar Government Arts College, Vridhachalam-606001
53	D VENKATESAN	KALAIMAHAL COLLEGE OF ARTS AND SCIENCE
54	D Venkatesan	A.P.C.Mahalaxmi College for Women
55	D. Lavanya	Thiru Kolanjiappar Government Arts College, Vriddhachalam.
56	D.SATHYA	THIRU KOLANJIAPPAR GOVT.ARTS COLLEGE,VRIDDHACHALAM
57	Dr M THAMEEM ANSARI	Sathyabama Institute of Science and Technology
58	Dr N Y MAHARANI	L R G Govt Arts College for Women Tiruppur
59	Dr N.Ramjeyanthi	P.T.Lee Chengalvaraya Naicker college of engineering and technology
60	Dr. A. Alfind Paul Frit	Annamalai University
61	Dr. A. CHANDRA MOHAN	WOMEN'S CHRISTIAN COLLEGE
62	Dr. A. THAMINUM ANSARI	The Madura college ,madurai
63	Dr. Alakesh Phukan	Arumugam Pillai Seethai Ammal College
64	Dr. B J R S N SWAMY	PSN College of Engineering &Technology, Tirunelveli
65	Dr. C. Zozimus Divya Lobo	St. Joseph's College of Engineering, Chennai 119
66	Dr. D. SARAVANAKKUMAR	Kings College of Engineering
67	Dr. G. Mathubala	SRI MEENAKSHI GOVT.ARTS.COLLEGE FOR WOMEN(A0

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

SCHOOL OF SCIENCE AND HUMANITIES

DEPARTMENT OF CHEMISTRY

REPORT ON FDP

TITLE OF THE EVENT: 5 DAYS - FACULTY DEVELOPMENT PROGRAMME, Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques

DATE AND TIME: 15TH JUNE 2020 – 19TH JUNE 2020, 10.00 am – 12.00 Noon

TYPE OF THE EVENT: Workshop on Virtual Model

PROGRAMME BROCHURE:



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" By NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.



5 DAYS - FACULTY DEVELOPMENT PROGRAMME
Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques
Jointly Organized by
Col. Dr. Jeppiaar Research Park, Centre for Ocean Research & Department of Chemistry
In Association with
Ministry Of Earth Sciences - Earth Science Technology Cell (MoES-ESTC)
Date: 15 - 19 June, 2020

 Nuclear Magnetic Resonance (NMR) Basic Principle & Interpretation. Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras Date: 15.06.2020; Time: 10 – 12.30 noon	Fourier-transform infrared spectroscopy (FTIR) Basic Principle & Interpretation. Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Department of Organic Chemistry, University of Madras. Date: 16.06.2020; Time: 10 – 11.00 am
 Ultraviolet-Visible Spectroscopy (UV-Vis) Basic Principle & Interpretation. Dr. K. Chennakesavulu Associate Professor, Department of Chemistry Date: 17.06.2020; Time: 10 – 11.00 am	Registration Fee: Rs. 500 /- (Limited Seats - Registered participants will be intimated through Email) For Registration: https://bit.ly/2XbJAJH Last Date for Registration: 12/06/2020.
 Thermogravimetric analysis (TGA) Basic Principle & Interpretation. Dr. R. Vasantharaja ICAR - Project fellow, Centre for Ocean Research Date: 18.06.2020; Time: 10 – 11.00 am	Who can apply? Faculty members from science and engineering discipline are eligible to apply. E- CERTIFICATE WILL BE ISSUED UPON SUCCESSFUL COMPLETION OF THE COURSE
 Gas Chromatography & Mass Spectrometry (GC-MS) . Basic Principle & Interpretation. Mr. C. Kumar Scientist B, Centre for Ocean Research Date: 19.06.2020; Time: 10 – 11.00 am	 

Organizing Secretary:
Dr. B. Sheela Rani, Director (Research), Sathyabama Institute of Science and Technology

Programme Coordinators:
Dr. D. Inbakandan, Head & Scientist E, Centre for Ocean Research
Dr. J. Karthikeyan, Head & Associate Professor, Department of Chemistry
Dr. V. Ganeshkumar, Scientist E, Centre for Ocean Research

Convener:
Mr. C. Kumar, Scientist B, Centre for Ocean Research.
Dr. T. Krithiga, Associate Professor, Department of Chemistry

Co-Conveners:
Dr. T. Stalin Dhas, Dr. V. Karthick, Mr. R. Thirugnanasambandam & Mr. J. Baalamurugan
Scientist B, Centre for Ocean Research.

Contact: 8220232039
9176672094, 8144504346
kumar.cor@sathyabama.ac.in

PROGRAMME SCHEDULE:

The program schedule comprises of 5 days of invited talk given by Eminent speakers. The program also consists of Interpretation of spectroscopic techniques.

DAY 1:

Date & Time: 15-06-2020 & 10.00 AM – 12.30 PM

Speaker of the Day: Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras

Topic: Nuclear Magnetic Resonance (NMR) Basic Principle & Interpretation.

DAY 2:

Date & Time: 16-06-2020 & 10.00 AM – 11.00 AM

Speaker of the Day Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras

Topic: Fourier-transform infrared spectroscopy (FTIR) . Basic Principle & Interpretation.

DAY 3:

Date & Time: 17-06-2020 & 10.00 AM – 11.00 AM

Speaker of the Day Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry

Topic: Ultraviolet–Visible Spectroscopy (UV–Vis) Basic Principle & Interpretation

DAY 4:

Date & Time: 18-06-2020 & 10.00 AM – 11.00 AM

Speaker of the Day: Dr. R. Vasantharaja, ICAR - Project fellow, Centre for Ocean Research

Topic: Thermogravimetric analysis (TGA) Basic Principle & Interpretation.

DAY 5:

Date & Time: 19-06-2020 & 10.00 AM – 11.00 AM

Speaker of the Day: Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology

Topic: Gas Chromatography & Mass Spectrometry (GC-MS) . Basic Principle & Interpretation.

SPEAKERS LIST:

1. Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras
2. Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry, Sathyabama Institute of Science & Technology
3. Dr. R. Vasantharaja, ICAR - Project fellow, Centre for Ocean Research, Sathyabama Institute of Science & Technology
4. Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology

CERTIFICATE MODEL:



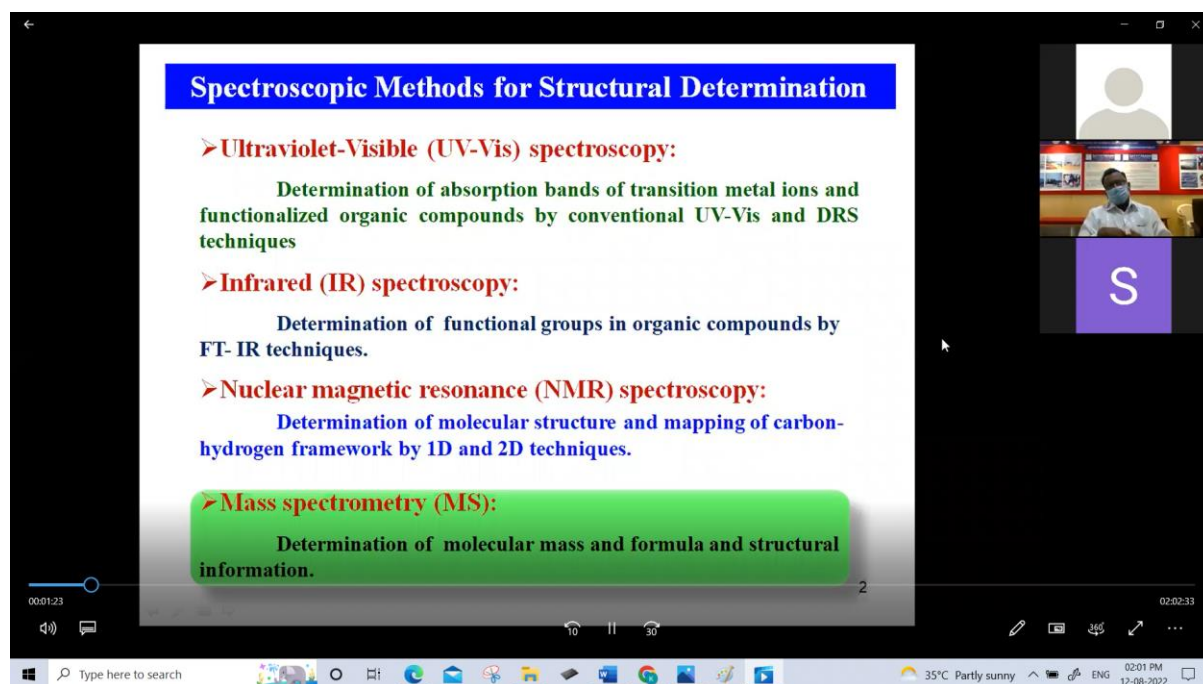
ACTIVITY REPORT:

5 DAYS - FACULTY DEVELOPMENT PROGRAMME, "Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques" was conducted during 15th June 2020 – 19th June 2020 from 10.00 am – 12.00 noon organized by Conveners - Mr. C. Kumar, Scientist B, Ocean Research & Dr. T. Krithiga, Associate Professor, Dept. of Chemistry and Co-conveners – Dr. T. Stalin Dhas, Dr. V. Karthick, Mr. R. Thirugnanasambandam & Mr. J. Baalamurugan– Scientist B, COR. The FDP was Jointly Organized by Col. Dr. Jeppiaar Research Park, Centre for Ocean Research & Department of Chemistry In Association with Ministry Of Earth Sciences - Earth Science Technology Cell (MoES-ESTC). The program schedule comprises of 5 days of invited talk given by Eminent speakers – Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras, Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry, Sathyabama Institute of Science & Technology, Dr. R. Vasantharaja, ICAR - Project fellow, Centre for Ocean Research, Sathyabama Institute of Science & Technology, Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiaar Research Park, Sathyabama Institute of Science & Technology. The program also consists of Interpretation of spectroscopic techniques.

The inaugural address was given by Dr. B. Sheela Rani, Director (Research), Sathyabama Institute of Science and Technology, Organizing Secretary, detailing the program schedule of the event. The Day 1 speech was given by Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras. The talk was on the topic "Nuclear Magnetic Resonance (NMR) Basic Principle & Interpretation" which elaborately covered the basic concepts and interpretation of the NMR spectroscopy. The Day 2 talk was given by Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras on the topic "Fourier-transform infrared spectroscopy (FTIR) . Basic Principle & Interpretation" which detailed the basic concepts and interpretation of FTIR spectroscopy. The Day 3 speech was given by Dr. K. Chennakesavulu, Associate Professor, Department of Chemistry,

Sathyabama Institute of Science & Technology on the topic “Ultraviolet–Visible Spectroscopy (UV–Vis) Basic Principle & Interpretation” which explained in detail the basic concepts and interpretation of UV-Vis spectroscopy. The Day 4 speech was given by Dr. R. Vasantharaja, ICAR - Project fellow, Centre for Ocean Research, Sathyabama Institute of Science & Technology on the topic “Thermogravimetric analysis (TGA) Basic Principle & Interpretation” which explained in detail the basic concepts and interpretation of TGA method. The Day 5 was handled by Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology. It was a clear explanation on “Gas Chromatography & Mass Spectrometry (GC-MS) Basic Principle & Interpretation”. The speaker has exquisitely conveyed the instrumentation, basic concepts and interpretation of GC-MS. The program ended with a Vote of Thanks by Dr. D. Inbakandan, Head & Scientist E, Centre for Ocean Research.

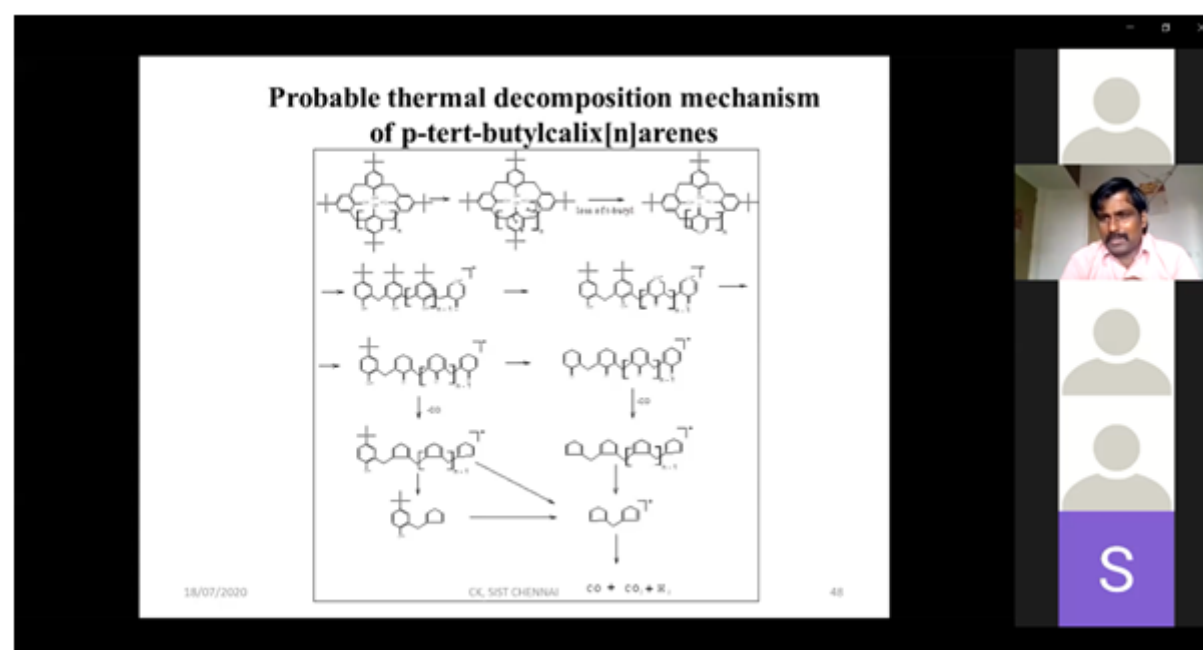
PHOTOS:



Spectroscopic Methods for Structural Determination

- **Ultraviolet-Visible (UV-Vis) spectroscopy:**
Determination of absorption bands of transition metal ions and functionalized organic compounds by conventional UV-Vis and DRS techniques
- **Infrared (IR) spectroscopy:**
Determination of functional groups in organic compounds by FT-IR techniques.
- **Nuclear magnetic resonance (NMR) spectroscopy:**
Determination of molecular structure and mapping of carbon-hydrogen framework by 1D and 2D techniques.
- **Mass spectrometry (MS):**
Determination of molecular mass and formula and structural information.

00:01:23 02:02:33



Probable thermal decomposition mechanism of p-tert-butylcalix[n]arenes

The diagram illustrates the thermal decomposition mechanism of p-tert-butylcalix[n]arenes. It shows the initial structure of the calixarene, followed by the loss of a tert-butyl group to form a radical intermediate. This intermediate undergoes further fragmentation, leading to the formation of a cyclohexadienyl radical and a phenyl radical. The cyclohexadienyl radical then fragments to produce a cyclohexadiene molecule and a phenyl radical. The phenyl radical further fragments to produce a phenyl radical and a phenyl radical, which eventually leads to the formation of a phenyl radical and a phenyl radical. The final products are CO, CO₂, and H₂.

18/07/2020 CK, SIRT CHENNAI 48

S.No	Name of the Participant	Institution/University
1	Dr. G. MURUGAN	St. Joseph's college of Engineering
2	Dr. GUDI SUDHAKAR	Government College for Men Kurnool Andhra Pradesh India
3	Dr. H.KOHILA SUBATHRA CHRISTY	A.P.C. Mahalaxmi College for Women, Thoothukudi
4	Dr. K. CHANDRASEKARAN	Dr. Ambedkar Government Arts College Vyasarpadi Chennai-39 Tamilnadu India
5	Dr. K.chandrasekaran	Dr. Ambedkar Government Arts College Vyasarpadi Chennai-39
6	Dr. M . Riswan Ahamed	SRMIST, Ramapuram Campus
7	Dr. M. RAJA	Rajapalayam Rajus College
8	Dr. M. RISWAN AHAMED	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, RAMAPURAM CAMPUS
9	Dr. N. BALASUBRAMANIAN	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM CAMPUS
10	DR. N. BALASUNDARI	SRI K.G.S ARTS COLLEGE
11	Dr. N. Bhuvana	JEPPIAAR INSTITUTE OF TECHNOLOGY
12	Dr. P. Saravanan	St. Joseph's College of Engineering, Chennai -119.
13	Dr. P.Shanthy	SRI MEENAKSHI GOVERNMENT ARTS COLLEGE FOR WOMEN(A)
14	Dr. Ramanna R	KLE's Basavaprabhu Kore Arts, Science and Commerce College Chikodi
15	Dr. S. GOWRI	St Antony's College of Arts and Sciences for women, Dindigul
16	Dr. S. RAJALAKSHMI	ERODE ARTS AND SCIENCE COLLEGE (AUTONOMOUS), RANGAMPALAYAM -638009
17	Dr. S. Suresh	St. Joseph's college of engineering
18	Dr. T. GURUMURTHI	Adama Science and Technology University
19	Dr. T.S. FRANKLIN RAJESH	VELAMMAL VIDHYASHRAM
20	DR. Y. JASMALA JOY	DMI- St. John the Baptist University, Mangochi, Malawi
21	Dr.A.AROKIYARAJ	A.V.C.College(Autonomous)
22	Dr.A.ARUN	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY RAMAPURAM
23	Dr.A.Muthukrishnaraj	SRM Institute of Science and Technology, Ramapuram Campus, Chennai-89
24	Dr.B.Kavitha	T BML COLLEGE.PORAYAR
25	Dr.C.SHIYAMALA	Department of Chemistry, Thiru Kolanjiappar Government Arts College, Vriddhachalam-606001
26	Dr.D.SATHYA	KALAIMAHAL COLLEGE OF ARTS AND SCIENCE
27	Dr.D.Shanmuga Priya	A.P.C.Mahalaxmi College for Women
28	Dr.ELANGO VAN M	Thiru Kolanjiappar Government Arts College, Vriddhachalam.
29	Dr.G.MANIKANDAN	THIRU KOLANJIAPPAR GOVT.ARTS COLLEGE,VRIDDHACHALAM
30	Dr.J.Aravind kumar	Sathyabama Institute of Science and Technology
31	Dr.K.Parvathi	L R G Govt Arts College for Women Tiruppur
32	Dr.K.RANGANATHAN M.Sc.,M.Phil.,Ph.D	P.T.Lee Chengalvaraya Naicker college of engineering and technology
33	Dr.K.SAILEELA	Annamalai University
34	Dr.M.Esther Leena Preethi	WOMEN'S CHRISTIAN COLLEGE
35	Dr.M.kavitha	The Madura college ,madurai
36	Dr.M.Ramachandran	Arumugam Pillai Seethai Ammal College

37	Dr.N Ramjeyanthi	PSN College of Engineering &Technology, Tirunelveli
38	Dr.N.R. RAJAGOPALAN	St. Joseph's College of Engineering, Chennai 119
39	Dr.P.Saravanan	Kings College of Engineering
40	Dr.P.SHANTHY	SRI MEENAKSHI GOVT.ARTS.COLLEGE FOR WOMEN(AO
41	Dr.R.HARIHARASUTHAN	S.A.ENGINEERING COLLEGE
42	Dr.R.Selvaraju	Feat Annamalai University Annamalai nagar
43	Dr.S.Kalaivani	ANNAMALAI UNIVERSITY
44	Dr.S.Mithira	Periyar Gov Arts College
45	Dr.S.Sasikala	Vivekananda college of arts and science for women sirkali
46	Dr.S.Sunitha	Sathyabama Instiute if Science and Technology
47	Dr.T.S.Renuga Devi	Women's Christian College,Chennai
48	Dr.Vedavallisairaj	Annai therasa arts and science college
49	E PRAVEEN	The Gandhigram Rural Institute Deemed to be University, Gandhigram
50	E. KAYALVIZHI NANGAI	K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY
51	E. PRAVEEN	The Gandhigram Rural Institute Deemed to be University, Gandhigram
52	G. Havila Divya Dharshini	Sathyabama Institute of Science and Technology
53	G. Manikandan	Thiru Kolanjiappar Government Arts College, Vriddhachalam
54	G. MURUGAN	St. Joseph's college of Engineering
55	G.Kavitha	Loyola-ICAM college of Engineering and Technology
56	G.lakshmi devi	St.joseph's degree college
57	G.Suganya	K.Ramakrishnan College of Technology
58	GAAYATHRI.M	GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE
59	GANESAN. K	St. Joseph College Of Engineering
60	GAYATHRI KARTHICK	PSBB MILLENNIUM SCHOOL,OMR-CHENNAI
61	GAYATHRI V	Gandhigram rural institute - Deemed to be university
62	GEETHA.B	University of Madras
63	GINO D J	NANJIL CATHOLIC COLLEGE OF ARTS AND SCIENCE, KALIYAKKAVILAI
64	Gomathi. V	Sathyabama university
65	GUDI SUDHAKAR	Government College for Men KURNOOL Andhra Pradesh India
66	H Marshan Robert	Women's Christian College Nagercoil
67	H.KOHILA SUBATHRA CHRISTY	A.P.C.Mahalaxmi College for Women, Thoothukudi
68	Himani Pandey	ITM Universe, Vadodara
69	Hussen Maseed	University of Hyderabad
70	IZZAT FATHIMA S	GOVERNMENT COLLEGE OF TECHNOLOGY, COIMBATORE
71	J. SHARMILA	St. Joseph's College of Engineering, OMR ,Chennai
72	J.GANESH	Government Arts College for Men, Krishnagiri
73	Jagadish Kumar G.	SRM Institute of Science & Technology
74	John Peter I	The Gandhigram Rural Institute-DU
75	JOSEPHINE G	ST.JOSEPH'S COLLEGE,TRICHY-2
76	K S POORNAVAISHNAVI	Shri Sakthikailassh Women's college
77	K. ARULVANI	Thiru Kolanjiappar Government Arts College
78	K. Berlin Asha	Lady Doak College
79	K. JAYAMOORTHY	St. Joseph's College of Engineering

80	K. Rajesh	Academy of Maritime Education and Training
81	K. Ramya	Annamacharya Institute of Technology and Sciences, Tirupati
82	K. V. MYTHILI	Government Arts College for Men, Krishnagiri
83	K. VIJAI ANAND	Sathyabama Institute of Science and Technology, Chennai
84	K. Jayaprakash	Annamalai University
85	K. Jayaprakash	Annamalai University
86	K. Parvathi	L R G Govt Arts College for Women Tiruppur
87	K. RANGANATHAN M.Sc., M.Phil., Ph.D	P.T. Lee Chengalvaraya Naicker college of engineering and technology
88	K. Suvathika	Arifa Institute of Technology
89	K. V. MYTHILI	Government Arts College for Men, Krishnagiri
90	Kannan P.K.	Indian Institute of Technology Hyderabad
91	KAVIKUMAR S	Periyar Maniammai Institute of Science & Technology (Deemed to be University)
92	Khan Rehan Budhan Khan Pathan	Yeshwant College Of Bioinformatics And Biotechnology, Parbhani
93	Kiruthika TS	Presidency college, (Autonomous), Chennai-05
94	Krishna Kumar sen	Vits engineering college satna mp
95	L. Kanniappan	R.V. Government Arts College, Chengalpattu



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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Accredited with Grade "A" By NAAC

Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India



5 DAYS - FACULTY DEVELOPMENT PROGRAMME

Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques

Jointly Organized by

Col. Dr. Jeppiaar Research Park, Centre for Ocean Research & Department of Chemistry

In Association with

Ministry Of Earth Sciences - Earth Science Technology Cell (MoES-ESTC)

Date: 15 - 19 June, 2020

PROGRAMME FEEDBACK

1. This faculty development program was designed in such a way to get a wide knowledge on instrumentation and interpretation. Field experts from outside were invited to deliver guest lecture as well as the scientists at our centre.
2. Program was conducted at one forenoon session for all 5 days (10 am onwards)
3. Registration fee for the program was Rs. 500/-. Over 450 participants were registered to attend the program. But the program was limited to 100 participants and 96 participants confirmed their participation.
4. An average of 85 participants attended each session every day (through zoom)
5. Around 82 institutions were participated which includes National Institutes, State and Central Universities, Government Colleges, Autonomous Institutes, Deemed Universities and NGOs.
6. Participants extended their wishes and suggestions through feedback forms.
7. The program was successfully completed with the support of management of Sathyabama institute of science & technology, Director Research and faculty of centre for ocean research and department of chemistry.





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5 DAYS - FACULTY DEVELOPMENT PROGRAMME

Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques

Jointly Organized by

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In Association with

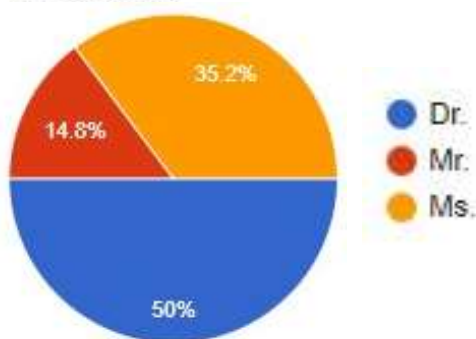
Ministry Of Earth Sciences - Earth Science Technology Cell (MoES-ESTC)

Date: 15 - 19 June, 2020

Feedback

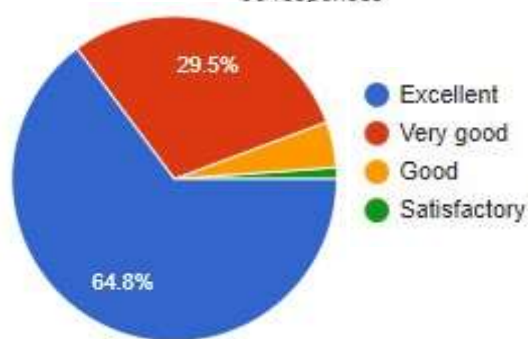
Title

88 responses



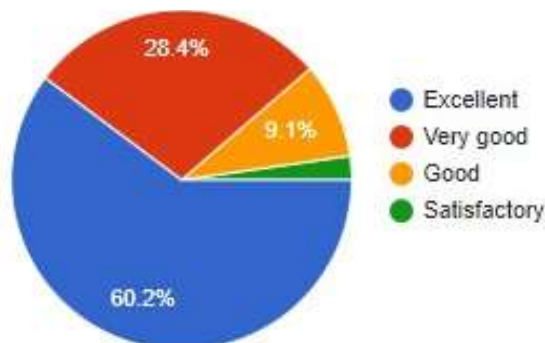
Overall FDP?

88 responses



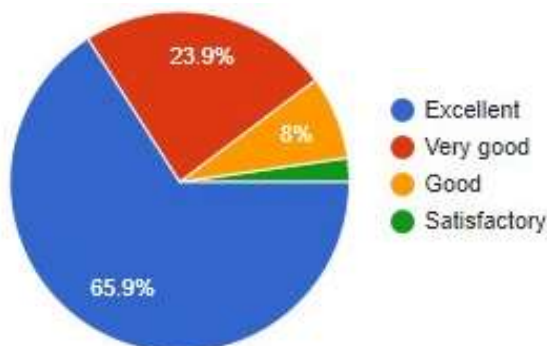
How likely do you enjoy Prof Dr Rajakumar Lecture (NMR)?

88 responses



How likely do you enjoy Prof Dr Rajakumar Lecture (FTIR and Mass Spectrometry)?

88 responses





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INSTITUTE OF SCIENCE AND TECHNOLOGY

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Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119, Tamil Nadu, India.



5 DAYS - FACULTY DEVELOPMENT PROGRAMME

Online Course on Methodology & Data Interpretation of Analytical Instrumentation Techniques

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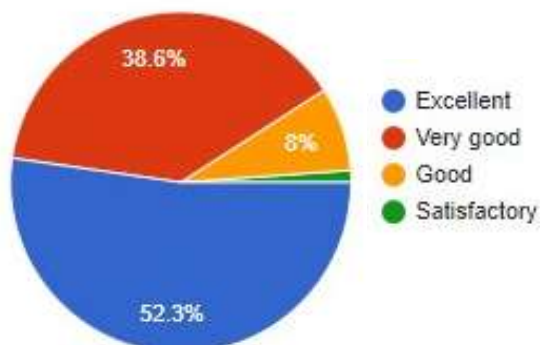
Ministry Of Earth Sciences - Earth Science Technology Cell (MoES-ESTC)

Date: 15 - 19 June, 2020

Feedback

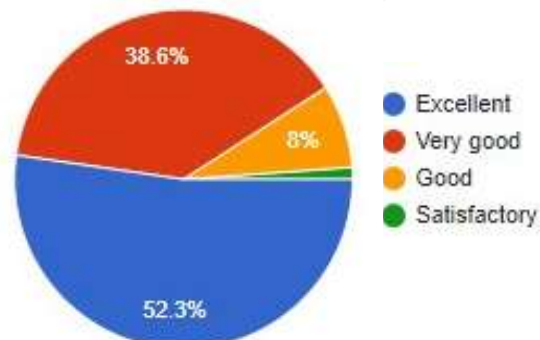
How likely do you enjoy Dr K Chennakesavulu Lecture (UV-Vis)?

88 responses



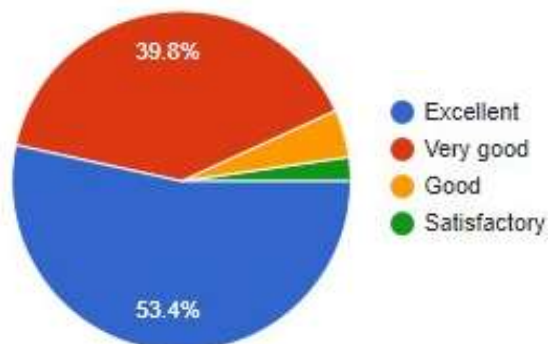
How likely do you enjoy Dr R Vasantharaja Lecture (TGA)?

88 responses



How likely do you enjoy Mr C Kumar Lecture (GC-MS)?

88 responses





SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
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Department of Chemistry
In Association with
Department of Chemistry
INDIAN INSTITUTE OF TECHNOLOGY, MADRAS



Organising Faculty Development Programme on "Modern Trends and Current Research in Chemistry"

Dates : 08.07.2020 to 13.07.2020 & Time 10:30 AM to 12:00 Noon | Zoom Meeting



Analysis of Electrochemical systems -
Challenges and Opportunities
Prof. Dr. M.V. SANKARANARAYANAN
Dept. of Chemistry, IITM
Date: 08.07.2020
Time: 10:30 am - 12:00 noon



Asymmetric synthesis of Chiral alcohols
Prof. Dr. G. SEKAR
Dept. of Chemistry, IITM
Date: 11.07.2020
Time: 10:30 am - 12:00 noon



Pericyclic reactions and cycloaddition reactions
Prof. Dr. S. SANKARARAMAN
Dept. of Chemistry, IITM
Date: 09.07.2020
Time: 10:30 am - 12:00 noon



Laser and spectroscopic tools in gas phase chemistry
Date: 12.07.2020 Time: 10:30 am - 12:00 noon
Combustion chemistry behind reflected shock waves
Date: 13.07.2020 Time: 10:30 am - 12:00 noon
Prof. Dr. B. RAJAKUMAR
Dept. of Chemistry, IITM



High-resolution molecular vibrational spectroscopy
Prof. K. MANGALASUNDER
Head Dept. of Chemistry, IITM
Date: 10.07.2020
Time: 10:30 am - 12:00 noon

For Registration : <https://tinyurl.com/y774ttum>

Contact : krithiga.chemistry@sathyabama.ac.in

PATRONS



Dr. MARIADITHA JOHNSON
CHANCELLOR



Dr. MARIE JOHNSON
PRESIDENT



Dr. T. SASIPRABA
VICE CHANCELLOR

CONVENERS

Dr. S. Suresha, Department of Chemistry,
Sathyabama Institute of Science and Technology

Dr. T. Krithiga, Department of Chemistry,
Sathyabama Institute of Science and Technology

Programme Co-ordinator

Dr. J. Karthikeyan,
Head, Department of Chemistry
Sathyabama Institute of Science and Technology



No Registration Fee



E-Certificate will be
provided



Zoom Meeting

Report on FDP

- Name of the Seminar: Modern Trends and Current Research in Chemistry
- Place where the event was held: Virtual Mode (Sathyabama Institute of Science and Technology, Sholinganallur, Chennai – 119)
- Dates/Period of the event: 08-13th July, 2020
- Section/Division/Group conducting the event: Department of Chemistry, Sathyabama University, Sholinganallur, Chennai - 119
- In Association with – Indian Institute of Technology, Madras.

Scientific Programme of the event :

This FDP covers a collection of topics that reflect the diversity of modern trends in chemistry and nuances in chemistry. It presents leading-edge research from some of the brightest and most well-known scientists from around the world. Contributions range from new methods to novel applications of existing methods to give participants an understanding of the material and/or structural behavior of new and advanced systems. The FDP offers a broad scope of new research for academics, researchers, and engineering professionals, which has potential for applications in several disciplines of engineering and science. In this aspect a six day FDP on **“Modern trends and Research in Chemistry”** was organized by the Department of Chemistry, Sathyabama Institute of Science and Technology in collaboration with IIT Madras, to have a new science forum in recent developments in chemistry on **8th-13th July 2020**. The participants are faculties from various colleges and Research Institutes, Students and Scientists. Around 150 participants were attended this programme till the end. We have provided the Zoom platform to attend this program and all the necessary arrangements were made properly on time to carry out event on a successful manner.

The inaugural address was delivered by Dr. S. Sunitha, Convener, about the FDP and Speakers in a brief manner followed by Dr. S. Sasi Prabha, Vice Chancellor, SIST, spoke about the importance of FDP and invited all the IIT speakers on behalf of SIST.

Prof. M.V. Sangaranarayanan, Department of Chemistry, IIT Madras, delivered a talk on “Analysis of Electrochemical Systems- Challenges and Opportunities” on the first day of FDP. The talk comprises of various redox systems, electrochemical reactions and cyclic voltammetry. This was highly useful for the researchers pursuing research in electrochemistry and photo voltaic cells.

Prof. S. Sankararaman, Department of Chemistry, IIT Madras, delivered a talk on “Pericyclic Reactions and Cycloaddition Reactions” on the Second day of FDP. He spoke about various

asymmetric reactions, Cyclo [2+2], Cyclo [2+4] addition reactions which is useful for the students as well as research scholars to face GATE, NET, CSIR exams.

Prof. K. Mangalasunder, Head, Department of Chemistry, IIT Madras, delivered a talk on “High Resolution Molecular Rovibrational Spectroscopy” on the Third day of FDP. He delivered a basic fundamentals about rotational and vibrational spectroscopy. He taught the participants to use selection rules for various molecules and derived an expression for moment of inertia.

Prof. G. Sekar, Department of Chemistry, IIT Madras, delivered a talk on “Asymmetric Synthesis of Chiral Alcohols” on the Fourth day of FDP. He explained a simple way to synthesize chiral alcohols using asymmetric way and also shared his laboratory research experience during his FDP programme.

Prof. B. Rajakumar, Department of Chemistry, IIT Madras, delivered a talk on “Laser and Spectroscopic Tools in Gasphase Chemistry” on the Fifth day of FDP. He has shown his newly constructed gas phase chemistry lab and speaks about various types of lasers used by his research scholars. Particularly, he has mentioned about Nd:YAG laser for synthesizing various nanomaterials.

Prof. B. Rajakumar, Department of Chemistry, IIT Madras, delivered a talk on “Combustion Chemistry behind reflected Shock Waves” on the Sixth day of FDP. He explained atmospheric chemistry through combustion process and shown the various types of radicals formed on the atmospheric layer. He also explained the rate of kinetic mechanism for these molecules and shown some vibrational modes for these molecules.

Atlast, the event was ended with Vote of Thanks and collected feedback from the participants for all the six days of the programme.

Dr. S. Sunitha and Dr. T. Krithiga, Department of Chemistry, SIST, as a convenors of this FDP sincerely thanked all the Speakers for their effortless contribution and also the participants for their untiring participation for all these days.

Last but not the least, this programme would have not been successful without the help of department head, Dr.J. Karthikeyan and also all the faculty members for their participation inspite of their busy schedule.

A special thanks was mentioned to Prof. B. Rajakumar, Department of Chemistry, IIT Madras, for arranging all the speakers from his own department to make this six day FDP in a great successful manner.

Recording... You are viewing Rajakumar Balla's screen View Options 00:23:44

THE RESEARCH IN OUR LABORATORY AT A GLANCE

Laboratory of Atmospheric and Combustion Processes

Atmospheric Processes

Combustion Processes

Experimental and Computational studies

Dr. T. KRITHIGA
Dr. S. SUNITHA
Rajakumar Balla
Dr. Y. SASIKUMAR
Dr. AMRITA PAL

Unmute Stop Video Security Participants 23 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Apps Leave

Zoom Meeting You are viewing Rajakumar Balla's screen View Options 00:38:58

Photo-Chemical SMOG

A day before the lockdown

During the lockdown

Before lockdown

Start of the lockdown

After one month of the lockdown

Rajakumar Balla

Unmute Start Video Security Participants 35 Chat Share Screen Pause/Stop Recording Breakout Rooms Reactions Apps Leave

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01-08-2022

List of participants

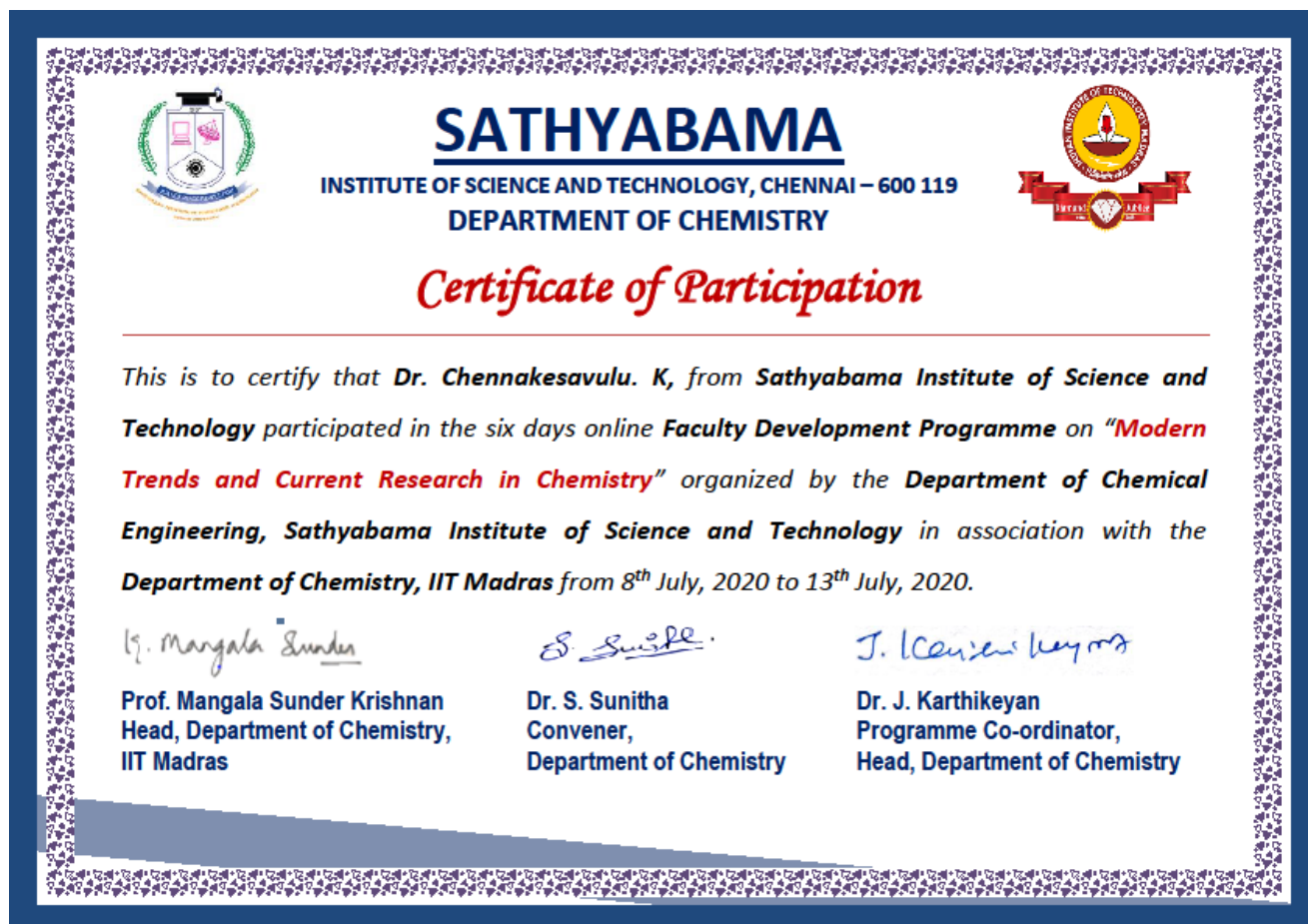
S.No	Salutation	Name of the Participant	Institute
1	Mr	Agassi T	Sathyabama Institute Of Science And Technology
2	Dr	R Komalavalli	Queen Mary's College Chennai
3	Mr	K.Amirthaganesan	Avc College
4	Ms	Anindita Bhatta	North Eastern Hill University, Shillong
5	Dr	Dr.J.Aravind Kumar	Sathyabama Institute Of Science And Technology
6	Dr	Archana Dixit	Juhari Devi Girl's P G College, Kanpur
7	Mr	Baalamurugan Jayaraman	Sathyabama Institute Of Science And Technology
8	Mr	P.Pal Murugan	James College Of Education
9	Dr	K.Balaji	Voorhees College
10	Dr	Kavitha Ramdas	Nizam College, Osmania University, Hyderabad
11	Dr	Dr.H.Benita Sherine	Periyar Evr College (A), Try-23.
12	Ms	Mrs.J.Betsy Ratnabai	St.John's College, Palayamkottai
13	Mr	Birendra Nath Mahato	Sathyabama Institute Of Science And Technology
14	Dr	Dr.P.Buela Nesa Kumari P	Ponjesly College Of Engineering Nagercoil
15	Dr	Caleb Noble Chandar S	Voorhees College (Thiruvalluvar University)
16	Dr	T. Shanmugapriya	Bharathi Women's College, Chennai-600108
17	Dr	C.Deepa	Bharathi Women's College, Chennai-108
18	Dr	Dr. K. Chandrasekaran	Dr. Ambedkar Government Arts College Vyasarpadi Chennai-39
19	Ms	G.Suganya	K.Ramakrishnan College Of Technology
20	Dr	S. Rajalakshmi	Erode Arts And Science College (Autonomous), Rangampalayam - 638009, Erode District
21	Dr	Dr.M.Chitra	Chellammal Women's College
22	Dr	C. Vijayaraj	Thiru. Vi. Ka. Govt. Arts College, Thiruvarur
23	Dr	Dr.C.Shiyamala	Thiru Kolanjiappar Government Arts College, Vridhachalam-606001
24	Dr	V.Sivakumar	Sri Vasavi College, Erode-638316/Bharathiar University
25	Dr	Dr.K.Shoba	Dkm College For Women(Autonomous)
26	Dr	Dr. N. David Wilson	New Government Degree College
27	Ms	M Dhanalakshmi	Government College Of Engineering Srirangam, Trichy-12
28	Ms	A.Revathi	Kongu Engineering College
29	Ms	Jayachitra S	S A Engineering College
30	Dr	Dinesh Anandrao Pund	Shree R R Lahoti Science College, Morshi
31	Dr	Dr Rajeshwar Rao Aerva	Mai Nefhi College Of Science, Mai Nefhi, Eritrea
32	Dr	Dr B Sridevi	Presidency College
33	Dr	Dr. P. Balamurugan	Annamalai University
34	Dr	Dr.R.Hariharasuthan	S.A.Engineering College Poonamalle Avadi Main Road Chennai-77
35	Dr	N.Kandasamy	Government Polytechnic College, Vanavasi, Salem-636457
36	Ms	E. Kayalvizhi Nangai	K. Ramakrishnan College Of Technology
37	Dr	P.Rajesh	Govt Arts College Coimbatore
38	Dr	D.Lakshmanan	Shemford Futuristic School

39	Ms	Geetha.B	University Of Madras
40	Ms	P.S.Geetha Malini	Quaid-E-Millath Govt., College For Women
41	Dr	Dr.R.Thamil Magal	University College Of Engineering Panruti
42	Ms	M. Hari Priya	Ipgdcw Nampally Hyderabad
43	Ms	G. Havila Divya Dharshini	Sathyabama Institute Of Science And Technology
44	Dr	R.Epshiba	Thiruthangal Nadar College
45	Dr	S.Henry Pandian	Pope's College Sawyer Puram
46	Mr	Hrishikesh Talukdar	Gauhati University, Guwahati
47	Dr	Jagadish Kumar G.	Srm Institute Of Science & Technology
48	Dr	P.Jeyanthi	Queen Mary's College, Chennai
49	Ms	Kakoli Malakar	North Eastern Hill University
50	Mr	Kavikumar S	Periyar Maniammai Institute Of Science & Technology (Deemed To Be University)
51	Ms	G.Kavitha	Loyola-Icam College Of Engineering And Technology
52	Dr	K. Manvizhi	Anand Institute Of Technology
53	Dr	K.Ranganathan M.Sc., M.Phil., Ph.D	P.T.Lee Chengalvaraya Naicker College Of Engineering And Technology
54	Mr	S.Kubenthira	Sathyabama Institute Of Science And Technology
55	Dr	M. Kiruthika	Arignar Anna Government Arts College, Musiri
56	Ms	D. Lavanya	Sathyabama Institute Of Science And Technology
57	Ms	Ms.M.Mangalam	Rajah Serafoji Government College Thanjavur
58	Ms	A. Margaret Clemencia	Jeppiaar Maamallan Engineering College
59	Dr	P.Maria Pushpam	Pioneer Kumaraswamy College
60	Dr	Dr.P.Muthamilselvi	Srm Institute Of Science And Technology
61	Ms	M.Sabitha	Government College Of Technology, Coimbatore
62	Dr	Dr A. Dayanand	Government City College
63	Ms	P.S.Deepa Lakshmi	Dr.Mgr Educational And Research Institute
64	Dr	N. Bhuvana	Jeppiaar Institute Of Technology
65	Dr	Dr D Nedumaran	Presidency College Autonomous Chennai
66	Dr	Nithiya Narayanan	Muthayammal College Of Arts And Science (A Unit Of Vanetra Group), Rasipuram, Namakkal
67	Ms	Nivetha B	Jerusalem College Of Engineering, Chennai
68	Mr	P Praveen Kumar	Jntuh College Of Engineering Sultanpur
69	Ms	Padma. M	Bharathi Women's College (A), Chennai 600108
70	Dr	K.Parvathi	L R G Govt Arts College For Women Tiruppur
71	Dr	Dr. K. N. Porchelvi	Agurchand Manmull Jain College
72	Mr	Priteshkumar Rajeshbhai Patel	Sat Kaival College Of Pharmacy, Sarsa
73	Ms	K.Priyadarshini	Jeppiaar Engineering College
74	Dr	Priyanka Pathak	Vikrant Group Of Institutions Indore
75	Dr	D.Shanmuga Priya	A.P.C.Mahalalaxmi College For Women
76	Ms	G. Bhuvaneswari	C. Kandaswami Naidu College For Women Cuddalore
77	Dr	P.S. Kannan	Kings Engineering College, Chennai
78	Dr	Dr. V. Pushpanathan	Kings Engineering College

79	Dr	K. Rajathi	Government Arts College, Tiruvannamalai
80	Dr	A.Rajeswari	Fatima College, Madurai
81	Ms	V Rajarajeswari	Irt Polytechnic College, Chromepet, Chennai
82	Mr	Ramesh Prabu. B	Psg College Of Arts And Science, Cbe
83	Mr	Ravichandiran P	Roever College Of Engineering And Technology
84	Mr	M Ravi Kishore	Sree Vidyanikethan Engineering College
85	Dr	Ravisankar Narayanan	Veltech Dr.Rr&Dr.Sr Deemed To Be University
86	Ms	R.Dheepika	Sathyabama Institute Of Science And Technology
87	Ms	P.Revathi	St.Antony's College Of Arts And Sciences For Women
88	Ms	Mrs.V.Roja	Sathyabama Institute Of Science And Technology
89	Dr	Dr.S.B.Riswan Ali	Annamalai University
90	Ms	Lakshmi V	Jeppiaar Engineering College
91	Dr	J. Samseya	Annai Hajira Women's College, Tirunelveli
92	Ms	V.O.Sangeetha	S.A.Engineering College
93	Dr	Dr.S.Daniel Deva Sangeeth	Voorhees College, Vellore
94	Dr	Dr.S.Sasikala	Vivekananda College Of Arts And Science For Women,Sirkali.
95	Mr	A.Jeyaseelan	Anna University, University College Of Engineering-Dindigul
96	Ms	D.Sonia	Bon Secours College For Women, Thanjavur.
97	Ms	Thamarai Selvi M	K. Ramakrishnan College Of Engineering
98	Mr	Senthil K	Sathyabama Institute Of Science And Technology
99	Ms	A.Gomathi	R.V.Govt.Arts College Chengalpattu
100	Dr	Sivarajasekar N	Kumaraguru College Of Technology
101	Ms	T.S. Kiruthika	Presidency College (Autonomous), Chennai-05
102	Ms	Chintakindi Sushma Rani	Vivekananda Ug & Pg College
103	Dr	Sougata Sinha	Nalanda College Of Engineering Chandi
104	Dr	Sridharan M	Rv College Of Engineering
105	Dr	Dr.T.Santhi	Lrg Government Arts College For Women,Tiruppur-04
106	Dr	Dr.R.Stephan	Government Arts College, Ariyalur-Dt.
107	Ms	Thiriveni.P	Bharathi Women's College, Chennai-108
108	Dr	N.Suganthi	Lrg Govt Arts College For Women/ Bharathiar University
109	Dr	Nazima Sultana	Tezpur University
110	Dr	Dr. A.Thaminum Ansari	Muthurangam Govt.Arts College, Vellore.2
111	Mr	Thirugnanam S	Jeppiaar Maamallan Engineering College
112	Dr	S.Titus	Jeppiaar Engineering College
113	Dr	Uttam Thapa	University Of Science And Technology Meghalaya
114	Mr	Vaghela Ghanshyam	Dr.Subhash Technical Campus Junagadh
115	Ms	Vasantham Amrutha	Govt.City College Nayapul Hyderabad
116	Ms	Vedna Dixit	Dayanand Women's Training College Csjm University Kanpur Uttar Pradesh India
117	Mr	Vignesh K	Sathyabama Institute Of Science And Technology
118	Ms	R.Vijila Mary	Irt Polytechnic College, Chrompet, Chennai-44
119	Dr	Dr Vimalashanmugam K	Tamilnadu Government Polytechnic College, Madurai

120	Mr	Yogesh Sambhana	Vignan's Institute Of Information Technology(A)
121	Mr	G. Yuvaraj	Kings Engineering College
122	Ms	Anitha A	Mit Campus, Anna University, Chennai
123	Dr	E.Babu	Tamilnadu Government Polytechnic College, Madurai
124	Ms	Bhuvaneswari P	Jp College Of Arts And Science, Ayikudi, Tenkasi
125	Ms	N.Vanitha	Srm Institute Of Science And Technology
126	Dr	Dr.T.Deborah Paripuranam	Nadar Saraswathi College Of Arts & Science
127	Ms	V.Dharani	Bharathiar University
128	Dr	Dr.S.Ananthi	Nirmala College For Women, Coimbatore
129	Dr	A.Ravi	Government Arts College Tiruvannamalai
130	Dr	P.Saravanan	Kings College Of Engineering
131	Mr	D. Venkateshwarrao	Govt Degree College Hayathnagar
132	Mr	E.Ezhilraj	Government Arts College For Men Nandanam Chennai 35 Tamilnadu
133	Ms	B. Fahima Begam	Sathyabama Institute Of Science And Technology
134	Dr	P. Gopinath	Alpha College Of Engineering
135	Mr	Gourango Chandra Mishra	Grm: Training And Coaching Solutions
136	Dr	Dr. Y. Jasmala Joy	Dmi- St. John The Baptist University, Mangochi, Malawi
137	Dr	Jeya S	Meenakshi College For Women, Autonomous,Kodambakkam, Chennai-24
138	Ms	S.Subha	Thai Moogambigai Polytechnic College
139	Mr	B.Krishna Prasad	Government Model Degree College Yellareddy
140	Dr	Mamta Chahar	Nalanda College Of Engineering
141	Ms	Mrs. Mandvi Namdeo (Assistant Professor)	P.N.S. College Bilaspur
142	Mr	P.Manikandan	Bharathiyar University Coimbatore
143	Dr	Dr.M.Elangovan	Thiru Kolanjiappar Government Arts College, Vriddhachalam.
144	Ms	Nida Aslam	Rasphil Academy
145	Dr	Dr.P.Nithya	Bharathi Women's College, Chennai
146	Ms	Priyadurai	Dr Mgr Educational And Research Institute
147	Dr	Dr K Elumalai	Government Arts College For Men Nandanam Chennai-35 Tamilnadu
148	Mr	S.M.Prakash	St. Joseph's College Of Engineering
149	Ms	Prof. N. Punitha	Dept. Of Chemistry, Rajah Serfoji Government College (A), Thanjavur - 05.
150	Mr	Reddivari Muniramaiah	Nitw
151	Mr	Prof A. Adaikkalaraj	St.Joseph's College, Trichy
152	Dr	N.R. Rajagopalan	St.Joseph's College Of Engineering
153	Dr	Dr.S.Jansirani,Professor In Economics	Vistas,Pallavaram,Chennai
154	Ms	Rashmi Tewari	Mumbai
155	Mr	K M Sahulhameed	P U M School Perundurai East
156	Dr	Dr.V.Selvaraj	University College Of Engineering , Villupuram
157	Ms	Sheebamercy D	Bharathair University
158	Mr	Kamble Santosh Madhukarrao	M. S. P. Mandals Shri Shivaji College, Parbhani.
159	Ms	B.Soundarya	Bon Secours College For Women

160	Dr	S.Sreedevi	Bharathi Women's College, Chennai
161	Ms	Swapna M.	Govt.Arts College, Coimbatore
162	Ms	M .Akila	Naina Mohamed College Of Arts And Science , Rajendrapuram
163	Dr	V.Valarmathi	Vellalar College For Women (Autonomous), Erode
164	Ms	Vani Bs	Mount Carmel College Bangalore
165	Dr	Kannan V	Annamalai Polytechnic College, Chettinad
166	Mr	Yaduraj Thakare	Maharashtra Institute Of Technology Aurangabad
167	Dr	Dr. K. Vijai Anand	Sathyabama Institute Of Science And Technology, Chennai
168	Dr	A. Sheik Mideen	Sathyabama Institute Of Science And Technology, Chennai
169	Dr	S. Supriya	Sathyabama Institute Of Science And Technology, Chennai
170	Dr	V. Kavitha	Sathyabama Institute Of Science And Technology, Chennai
171	Dr	K. Chennakesavulu	Sathyabama Institute Of Science And Technology, Chennai
172	Ms	X. Janet Sabina	Stella Maris College For Women
173	Dr	Ganesh Kumar	Sathyabama Institute Of Science And Technology





SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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DEPARTMENT OF CHEMISTRY

in association with

CSIR – CENTRAL LEATHER RESEARCH INSTITUTE, CHENNAI

Organizes **Six Days Faculty Development Programme on**

"ENERGY AND ENVIRONMENT – TOWARDS SUSTAINABILITY" Date : 03 – 08 August, 2020



Prof. S. Kanmani

Professor & Director

Centre for Environmental Studies, Anna University

Topic: Cleaner Production and Waste Minimisation in Industries for Energy and Environment Sustainability

Date/Time: 03-08-2020 / 4.00 - 5.00 pm (IST)



Prof. Kothandaraman Ramanujam, FRSC

Associate Professor, Department of Chemistry

Indian Institute of Technology Madras

Topic: Promising Renewable Energy Storage Options for Sustainable Development in India

Date/Time: 06-08-2020 / 4.00 - 5.00 pm (IST)



Dr. P. Shanmugam

Senior Principal Scientist and Head

Environmental Science Lab, CSIR-CLRI

Topic: Bio-CNG Plants in India Fuelling Automobiles using Industrial and Municipal Organic Solid Waste

Date/Time: 04-08-2020 / 4.00 - 5.00 pm (IST)



Dr. B. Muthuraaman

Assistant Professor and Head i/c

Department of Energy

University of Madras

Topic: Advanced Materials for Energy Devices

Date/Time: 07-08-2020 / 4.00 - 5.00 pm (IST)



Dr. N. R. Sasirekha

Assistant Professor

Department of Crystallography and Biophysics

University of Madras

Topic: Reforming of Methane for Hydrogen and Syngas Production

Date/Time: 05-08-2020 / 4.00 - 5.00 pm (IST)



Dr. G. Sekaran

Adjunct Professor, SRMIST University, Ramapuram

Formerly Chief Scientist & Cluster Chairman

Environmental Technology Division, CSIR-CLRI

Topic: n*-Nanoporous Activated Carbon for Management of Wastewater Discharged from Domestic Sector and Leather Sector

Date/Time: 08-08-2020 / 4.00 - 5.00 pm (IST)

CONVENERS

Dr. S. Supriya

Associate Professor

Department of Chemistry

Sathyabama Institute of Science and Technology

Dr. S. Swarnalatha

Senior Scientist

Environmental Science Lab

CSIR-CLRI

COORDINATOR

Dr. J. Karthikeyan

Associate Professor and Head

Department of Chemistry

Sathyabama Institute of Science and Technology

Registration Link : <https://forms.gle/7rfZFzHt9Vj7Xau6> **Platform :** ZOOM

No Registration Fee

E-Certificate for the participants

Report on FDP

- Name of the Seminar: **Energy and Environment – Towards Sustainability**
- Place where the event was held: **ONLINE (Sathyabama University, Sholinganallur, Chennai – 119)**
- Dates/Period of the event: **03-08th August, 2020**
- Section/Division/Group conducting the event: **Department of Chemistry, Sathyabama University, Sholinganallur, Chennai - 119**
- In Association with – Central Leather Research Institute (CLRI), Chennai.

Scientific Programme of the event :

Demand for energy and protection of the environment should go hand in hand. Realization of dreams should not be achieved by depleting or damaging the environment and the natural resources. Hence, sustainable development is the need of the hour and in that aspect all human being should be aware of the importance of the natural resources and the outcome of the damages caused to the environment through human activities in the form of extracting and depleting the resources. For energy sufficiency and environment protection, sustainable development should be practised in all sectors. In order to spread awareness about the sustainable development, a FDP on “**Energy and Environment – Towards Sustainability**” was organized by the Department of Chemistry, Sathyabama University in association with CLRI, Chennai from **03-08th August 2020**. Faculty and Research scholars from various city colleges were invited for the programme and all the necessary arrangements were made for them to attend the programme online.

The inaugural address was given by Dr. S. Supriya, Convener, regarding the topics to be covered and about the speakers in general followed by Day one speech by Dr. S. Kanmani, Professor and Director of Centre for Environmental Studies, Anna University. The topic delivered by the speaker was “Cleaner Production and Waste Minimization in industries for Energy and Environment Sustainability”. The talk was on various aspects of energy generation and utilization through sustainable methods, particularly for industries. The second day speech was given by Dr. P. Shanmugam, Senior principal Scientist and Head, Environmental Science Lab, CSIR-CLRI on the topic “Bio-CNG Plants in India Fuelling Automobiles using Industrial and Municipal Organic Solid Waste”. The speaker explained elaborately on the energy efficient conversion methods which can be utilized for the generation of biofuels. His video clippings and recent advancements made in setting up of waste processing units under the umbrella of CLRI gave a virtual tour of the unit locations installed in various parts of the country. Dr. N. R. Sasirekha, Assistant Professor, Department of Crystallography and Biophysics, University of Madras gave a speech on “Reforming of Methane for Hydrogen and Syngas Production” on the third day of the programme. The speaker explained about the different methods of hydrogen and Syngas production by various methods and from different sources. On the fourth day, Dr. Kothandaraman Ramanujam, FRSC, Associate Professor, Department of Chemistry, IIT-Madras gave a talk on “Promising Renewable Energy Storage Options for Sustainable Development in India”. His talk on Renewable energy storage methods and devices rendered a detailed analysis on different aspects of energy storage methods and efficient energy storage materials. On the fifth day of the programme, Dr. B. Muthuraaman, Assistant Professor, Department of Energy, University of Madras, gave a talk on “Advanced Materials for Energy Devices”. His talk gave an

indepth knowledge on energy efficient materials used in storage devices. On the sixth day of the programme, Dr. G. Sekaran, Adjunct Professor, SRMIST University and formerly Cheif Scientist and Cluster Chairman, Environmental Technology Division, CSIR-CLRI gave a talk on “n*-Nanoporous Activated Carbon for Management of Wastewater Discharged from Domestic Sector and Leather Sector”. His speech analysed the importance of usage of Activated Carbon for pollution control of wastewaters generated from various industrial segments.

Finally, the programme was concluded by a thank giving note for the participants and the speakers.

Feedback from the students were very much positive and have appreciated the way of conducting the programme.

We sincerely thank CLRI for the association in conducting the FDP. Our heartfelt thank to all the participants and the organizers for their constant encouragement and support rendered in making the programme a grand success.

We also extend our thanks to all the volunteers who actively engaged in running the programme in an effective manner.

FDP Recording- Day 1

Water Pollution



http://www.google.co.in/imgres?imgurl=http://farm4.static.flickr.com/3628/3477380612_61f2035b71.jpg&imgrefurl=http://www.flickr.com/photos/nwhittlock/3477380612/&usq=__JEX_fxV1gBK6H3xHZuN7Glm1wwE=&h=500&w=333&sz=199&hl=en&start=189&tbnid=4LV1Y-mv_yG

kanmani sellappa



17:03







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7/14/2022



Energy from the sun

- Photosynthesis → bio mass – bio fuels
 - Efficiency < 1%
- Solar heat:
 - Heating of water (domestic): Efficiency $\leq 70\%$
 - Electricity: Concentrated Solar Power (CSP), turbines etc: Efficiency $\leq 20\%$
- Solar Electricity (solar cells)
 - Direct conversion: Efficiency $\leq 20\%$



COMMON PROBLEM: STORAGE !



DR MUTHURAAMAN ...



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

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awards with sincere gratitude this
CERTIFICATE OF APPRECIATION

to

Dr. B. MUTHURAAMAN

for imparting his valuable knowledge as a

Guest Speaker

in the six days online Faculty Development Programme on "ENERGY AND ENVIRONMENT – TOWARDS SUSTAINABILITY" organized by the Department of Chemistry, Sathyabama Institute of Science and Technology in association with CSIR – CENTRAL LEATHER RESEARCH INSTITUTE (CSIR - CLRI), Chennai on 7th August, 2020.

Authorised Signatory
Dr. S. Supriya
Convener

Authorised Signatory
Dr. S. Swarnalatha
Convener
CSIR-CLRI

Authorised Signatory
Dr. J. Karthikeyan
Programme Co-ordinator
Head, Department of Chemistry

EETS – List of Participants

S. No	Name of the Participant	Affiliation
1	N.VINAYAGAMOORTHY	SRI RAMACHANDRA INSTITUTE OF HIGHER EDUCATION AND RESEARCH (DEEMED TO UNIVERSITY),CHENNAI
2	M.RENUKADEVI	PACHAIYAPPAS COLLEGE FOR MEN, KANCHIPURAM
3	V.SENTHILKUMAR	SRM TRP ENGINEERING COLLEGE
4	DIVYA P	THIAGARAJAR COLLEGE OF ENGINEERING
5	HIMANI PANDEY	ITM UNIVERSE, VADODARA
6	G. HAVILA DIVYA DHARSHINI	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
7	R.DHEEPIKA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
8	C. ZOZIMUS DIVYA LOBO	ST. MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI
9	G. SUJATHA	COLLEGE OF FOOD AND DAIRY TECHNOLOGY, KODUVELI, CHENNAI
10	E.KAYALVIZHI NANGAI	K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY
11	K.RANGANATHAN	P.T.LEE CHENGALVARAYA NAICKER COLLEGE OF ENGINEERING AND TECHNOLOGY
12	V NAGESWARA RAO	RAGA TECHINCAL ASSOCIATES
13	JOTHIESWARI M	CSIR-CENTRAL LEATHER RESEARCH INSTITUTE
14	M.RENUKADEVI	PACHAIYAPPAS COLLEGE FOR MEN, KANCHIPURAM
15	RAKHEE B	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
16	A.JEYASEELAN	ANNA UNIVERSITY, UNIVERSITY COLLEGE OF ENGINEERING-DINDIGUL
17	DAVID S	KUMARAGURU COLLEGE OF TECHNOLOGY
18	THIRUGNANAM S	JEPPIAAR MAAMALLAN ENGINEERING COLLEGE
19	N.ARUMUGASAMY	THE M.D.T.HINDU COLLEGE, TIRUNELVELI-627010.
20	A.THAMINUM ANSARI	MUTHURANGAM GOVT.ARTS COLLEGE, VELLORE.2
21	A. MARGARET CLEMENCIA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
22	SHABDENDU PATHAK	ADANI PORTS & SEZ LTD.
23	VIGNESH K	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
24	S SUNDARAPANDIYAN	CSIR-CENTRAL LEATHER RESEARCH INSTITUTE
25	P.MUTHAMILSELVI	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
26	G.KAVITHA	LOYOLA-ICAM COLLEGE OF ENGINEERING AND TECHNOLOGY
27	SUNDARESAN S	SRM TRP ENGINEERING COLLEGE
28	N. BHUVANA	JEPPIAAR INSTITUTE OF TECHNOLOGY
29	RAMADEVI PABBINEEDI	CSIR-CENTRAL LEATHER RESEARCH INSTITUTE(CLRI)

30	UMA R	AAA COLLEGE OF ENGINEERING & 31TECHNOLOGY
31	B. FAHIMA BEGAM	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
32	K.PRIYADHARSHINI	SRM TRP ENGINEERING COLLEGE
33	THOTHADRI GANESH	ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY
34	S.KUBENTHIRA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
35	G.SUGANYA	K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY
36	GAYATHRI.D	IFET COLLEGE OF ENGINEERING
37	R.NAGALAKSHMI	AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY
38	DINESH R	THIAGARAJAR COLLEGE OF ENGINEERING
39	E.KAYALVIZHI NANGAI	K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY
40	A. ALFIND PAUL FRIT	VEL TECH HIGH TECH DR. RANGARAJAN DR. SAKUNTHALA ENGINEERING COLLEGE
41	NEERAJ SHARMA	KRISHNA ENGINEERING COLLEGE, BHILAI
42	K.CHANDRASEKARAN	DR. AMBEDKAR GOVERNMENT ARTS COLLEGE VYASARPADI CHENNAI-39
43	VIJAI LAXMI SHARMA	SBS GIRLS PG COLLEGE, JAIPUR
44	P KANTHASAMY	CSIR-CLRI
45	S.NEHRU	UNIVERSITY OF MADRAS, CHENNAI
46	D.SHANMUGA PRIYA	A.P.C.MAHALALAXMI COLLEGE FOR WOMEN
47	MANOHARAN N	BHARATHIDASAN UNIVERSITY'
48	S.P. SUBIN DAVID	ANNA UNIVERSITY, CHENNAI
49	A.THABIBA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
50	M.PUSHPAVALLI	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
51	SHANKARANARAYANAN	GCE
52	MS. AISWARYA KANNAN	SRM TRP ENGINEERING COLLEGE
53	S. SARAVANAN	K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY
54	B.VIJAYAKUMAR	VEL TECH HIGH TECH DR.RR DR.SR ENGG. COLLEGE
55	PRATHYUSHA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
56	DIPALI P. JASUDKAR	KDKCE, NAGPUR
57	AGASSI T	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
58	S.VEERALAKSHMI	ANNA UNIVERSITY, CHENNAI
59	MS.PRIYAUDRAIRAJ	DR MGR EDUCATIONAL AND RESEARCH INSTITUTE
60	M.GEETHA	NARASU'S SARATHY INSTITUTE OF TECHNOLOGY
61	VAIJANATH U DESHMUKH	NEERI NAGPUR
62	A.RAMACHANDRAN	GOVERNMENT COLLEGE OF ENGINEERING, SALEM-11
63	T. KRITHIGA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

64	S. SUNITHA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
65	K. CHENNAKESAVULU	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
66	A. SHEIK MIDEEN	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
67	V. KAVITHA	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
68	V. ROJA SHANTHI	SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
69	P. BALAMURUGAN	ANNAMALAI UNIVERSITY
70	U.SATHYA	CSIR-CLRI

SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

SCHOOL OF SCIENCE AND HUMANITIES

DEPARTMENT OF CHEMISTRY

REPORT ON WORKSHOP

TITLE OF THE EVENT: Three days Workshop on “Interpretation of Gas Chromatography (WINGC-2020)”

DATE AND TIME: 27th FEB 2020 – 29th FEB 2020, 9.00 am – 3.00 pm

TYPE OF THE EVENT: Workshop in Campus. Venue: Col. Dr. Jeppiaar Research Park

PROGRAMME BROCHURE:

REGISTRATION	
Students / Research Scholars	: Rs. 2000
Academician / Industrial Participants	: Rs. 3000

REGISTRATION FORM	
"WINGC-2020" 27 th -29 th February 2020	
Name of the Participant :	
Gender :	
Designation :	
Department/ Institute :	
Address for Communication:	
E-mail/ Fax :	
Mobile No/Phone No :	
Cash :	
Demand Draft No :	
Name of the Bank and Date :	
Signature of the Candidate	Signature of the Head/Supervisor
Place:	
Date:	

For Further Details Contact

Mr. C.Kumar Scientist B, Centre for Ocean Research Email: kumar.co@sathyabama.ac.in Mobile: 8220232039	Dr. T.Krithiga Associate Professor Department of Chemistry Email: krithiga.chemistry@sathyabama.ac.in Mobile: 9176672094
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Sathyabama Institute of Science and Technology
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119

**SATHYABAMA**
INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
Accredited with Grade "A" By NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai – 600 119, Tamil Nadu, India



Workshop on Interpretation of Gas Chromatography
"WINGC-2020"
27th-29th FEBRUARY 2020



Jointly Organized by
Department of Chemistry
and
Centre for Ocean Research
in Association With
 **Toshvin Analytical Pvt. Ltd, Chennai.**

ABOUT WINGC-2020	
Gas Chromatography–Mass Spectrometry (GC-MS) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) both are Major analytical method to identify, quantify and to analyze the organic/inorganic components present in the given test sample even in a negligible quantity. They have a wide range of applications in the fields of Pharmaceutical industry, Forensic field, Pesticide analysis, Environmental pollutant detection and analysis, Water quality analysis, identification of unknown samples and toxicology studies etc.	
This three days training program includes all the techniques involved in the analysis of test samples.	
• Guest lectures on the chosen topics by eminent personalities. • Industry experts will give more in depth guidelines to handle the equipments. • Hands-on training on Sample preparation, Column packing, Solvent Selection, Method development, Tuning and calibration, Peak integration and result generation etc. • Interpretation of results and export of spectra to publication quality will be discussed.	
This valuable 3 days workshop will lead you to the wide range of opportunities in numerous fields.	

PROGRAM SCHEDULE	
27 th February 2020	
08:00 – 09:00am Registration 09:00 – 10:00am Inauguration	
10:00 – 10:15am Tea Break	
10:30 – 12:30am	Lecturer on Mass Spectrometry and its interpretation
12:30 – 01:30pm	Lunch Break
01:30 – 03:00pm	Principle and Applications of ICP-MS
28 th February 2020	
09:00am – 03:00pm	Batch I GCMS - Hands on Training with interpretation of Organic Compounds
12:15 – 01:00pm	Lunch Break
29 th February 2020	
09:00 – 02:00pm	Batch II GCMS - Hands on Training with interpretation of Organic Compounds
12:15 – 01:00pm	Lunch Break
02:00 – 03:00pm	Valedictory Function & Certificate Distribution

PATRONS	
Dr. Marie Johnson President	Dr. Mariazeena Johnson Chancellor
Dr. S.Sundar Manoharan Vice-Chancellor Sathyabama Institute of Science and Technology	
Organizing Secretary	
Dr. B.Sheela Rani Director (Research)	
Conveners	
Dr. J.Karthikeyan Head & Associate Professor	Mr. C.Kumar Scientist B,
Dr. T.Krithiga Associate Professor, Department of Chemistry	Mr. R.Thirugnanasambandam Scientist B, Centre for Ocean Research
Co-Conveners	
Dr. D.Inbakandan Head & Scientist E Centre for Ocean Research	Dr. V.Ganesh Kumar Scientist E Centre for Ocean Research
Organizing Committee Members	
Centre for Ocean Research	Department of Chemistry
Dr. L. Stanley Abraham, Scientist E	Dr. A. Sheik Mideen, Professor
Dr. K. Govindaraju, Scientist E	Dr. V. Kavitha, Professor
Dr. V. Parameswaran, Scientist D	Dr. S. Supriya, Associate Professor
Dr. M. Ravi, Scientist C	Dr. S. Sunitha, Assistant Professor
Dr. T. Stalin Dhas, Scientist B	Dr. K. Chennakesavelu, Associate Professor
Dr. V. Karthick, Scientist B	
Mr. J. Baalamurugan, Scientist B	

PROGRAMME SCHEDULE:

The program schedule comprises of one day of invited talk given by Eminent speakers. The program also consists of 2 days of Hands-on Training on GC-MS and ICP-MS and Instrument Operation & Demonstration.

REGISTRATION: 8.00 AM – 9.00 AM

INAUGURATION: 9.00 AM – 10.00 AM

DAY 1: SESSION 1:

Date & Time: 27-02-2020 & 10.30 AM – 12.30 PM

Speaker of the Day: Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras

Topic: Mass spectrometry and its interpretation

DAY 1: SESSION 2:

Date & Time: 27-02-2020 & 1.30 PM – 3.00 PM

Speaker of the Day: Dr. S. Vijayalakshmi, Head, ACS, ACSD, IGCAR, Kalpakkam

Topic: Principle and Applications of ICP-MS

DAY 2 AND DAY 3:

Date & Time: 28-02-2020 AND 29-02-2020 & 9.00 AM – 3.00 PM & Batch I & II

Speaker of the Day:

Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology

Topic: GC-MS Hands on Training with interpretation of Organic Compounds

Mr. Suman, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology

Topic: ICP-MS Hands on Training with interpretation of Inorganic Compounds

SPEAKERS LIST:

1. Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras
2. Dr. S. Vijayalakshmi, Head, ACS, ACSD, IGCAR, Kalpakkam
3. Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology
4. Mr. Suman, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology

CERTIFICATE MODEL:



ACTIVITY REPORT:

Three Days workshop on "Interpretation of Gas Chromatography (WINGC-2020) was conducted during 27th Feb 2020 – 29th Feb 2020 from 9.00 am – 3.00 pm organized by Conveners – Dr. J. Karthikeyan, Head, Dept. of Chemistry, Mr. C. Kumar, Scientist B, COR, Dr. T. Krithiga, Associate Professor, Dept. of Chemistry & Mr. R. Thirugnanasambandam, Scientist B, COR and Co-conveners – Dr. Inbakandan, Head & Scientist E, COR & Dr. Ganesh Kumar Scientist E, COR. The program schedule comprises of one day of invited talk given by Eminent speakers – Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras and Dr. S. Vijayalakshmi, Head, ACS, ACSO, IGCAR, Kalpakkam. The program also consists of 2 days of Hands-on Training on GC-MS and ICP-MS and Instrument Operation & Demonstration by Mr. Kumar, Scientist-B, Centre for Ocean Research, Col. Dr. Jeppiaar Research Park and Mr. Suman, Scientist - B, Center for Ocean Research Jeppiaar Research Park, Sathyabama Institute of Science & Technology.

The Registration of participants was organized from 8.00 AM – 9.00 AM followed by the Inauguration. The inaugural address was given by Dr. B. Sheela Rani, Director (Research), Sathyabama Institute of Science and Technology, Organizing Secretary, detailing the program schedule of the event. The

Speakers of the Day 1 Prof. Dr. P. Rajakumar and Dr. S. Vijayalakshmi was honoured by Certificate and Memento by by Dr. B. Sheela Rani. The inauguration is followed by tea break. The Day 1 Session 1 speech was given by Prof. Dr. P. Rajakumar, UGC – BSR Faculty, Dept. of Organic Chemistry, University of Madras. The talk was on the topic “Mass spectrometry and its interpretation” which elaborately covered the basic concepts and interpretation of Mass Spectrometry. The Day 1 Session 2 talk was given by Dr. S. Vijayalakshmi, Head, ACS, ACSD, IGCAR, Kalpakkam on the topic “Principle and Applications of ICP-MS” which detailed the principle, basic concepts and interpretation of inductively coupled Plasma – Mass Spectrometry. The Day 3 and day 4 was handled by Mr. C. Kumar, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology and Mr. Suman, Scientist - B, Center for Ocean Research Jeppiar Research Park, Sathyabama Institute of Science & Technology. It was a clear explanation on “Hands-on Training on GC-MS” and “Hands on Training on ICP-MS” followed by “Instrument Operation & Demonstration”. This was done as two batches (Batch I and Batch II). The program ended with a Vote of Thanks by Dr. Inbakandan, Head & Scientist E, Center for Ocean Research.

PHOTOS:







LIST OF PARTICIPANTS:

A total of 19 participants registered and benefitted from the workshop.

S.No	Name of the Participant	Institution/University
1	S RADHIKA	Thiruthangal Nadar College
2	S. Ambalatharasu	Kings College of Engineering
3	S. GOWRI	St Antony's College of Arts and Sciences for women, Dindigul
4	S. MATHIYA	LADY DOAK COLLEGE
5	S. SUSMITHA	Mother Teresa University /St Antony college of arts and science for women dindigul
6	S.Afshan Anjum	St.Joseph's Degree College, Kurnool.
7	S.Kalaiyarasi	Kongu Arts and Science College (Autonomous), Nanjanapuram, Erode
8	S.Kutti Rani	BSA crescent Institute of science and technology
9	S.M.PRAKASH	St. JOSEPH'S COLLEGE OF ENGINEERING
10	S.P. Balamurugan	Annamalai University
11	S.Sasikala	Vivekananda college of arts and science for women sirkali
12	S.Savitha	St.Joseph's college of engineering
13	S.SUBHA	THAI MOOGAMBIGAI POLYTECHNIC COLLEGE
14	SABITHA M	Government College of Technology, Coimbatore
15	Saikumari N	RMK College of Engineering and Technology
16	Samarpita Das	Dream Institute of Technology
17	SARANYA.A	University of Madras, Guindy campus
18	Shaikh Raju Shahabouddin	SGBS College Purna Dist Parbhani Maharashtra
19	Shanthi. K	DMI college of Engineering



INVITATION



WORKSHOP ON INTERPRETATION OF INSTRUMENTAL METHODS (WIIM-2020)

(UV-VIS, FTIR, BET Surface Area, Particle Size Distribution,
Zeta Potential, Contact Angle, XRF and FESEM)

to be held on 6th - 10th January 2020

organized by

DEPARTMENT OF CHEMISTRY

&

**INTERNATIONAL RESEARCH CENTRE
SATHYABAMA INSTITUTE OF SCIENCE
AND TECHNOLOGY**

(Deemed to be University)

&

in association with



**CSIR-NATIONAL METALLURGICAL
LABORATORY MADRAS CENTRE**

CSIR Madras Complex, Taramani
Chennai – 600 113

WHO CAN BENEFIT

Scientists, Faculty Members, Postdoctoral Fellow, Research Scholars, Students from Science and Engineering branches (Minerals / Metallurgy / Chemical/ Civil / Polymer / Materials Science / Organic / Analytical / Industrial / Physical / Surface Chemistry), Quality Control, Research and Development and wishing to improve their professional skills and handling the analytical instruments and interpretation of their results.

OUTLINE OF THE WORKSHOP

- Theory related to instrumental methods of analysis
- UV-Visible and FTIR demo experiments and interpretation of results
- Interpretation of BET- Adsorption isotherms, Pore Size distribution curves
- Interpretation of Particle Size distribution - Zeta Potential measurements
- Interpretation of Contact angle and Surface energy measurement
- XRF and its significance
- Electron Microscopy and its applications

ABOUT SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

Sathyabama Institute of Science and Technology is a pioneer in Engineering Education and was established with the aim of providing quality higher education in the areas of Engineering, Science and Technology on par with International standards. It persistently seeks and adopts innovative methods to improve the quality of higher education. The University has been accredited by National Assessment and Accreditation Council (NAAC) and ISO 9001: 2008 Certification for Professional Quality Management Practices. The Institute offers 31 undergraduate programmes and 27 postgraduate programmes in diverse fields of education. State of the art Library, International Research Centre and an exclusive Research & Development Centre provide rich experience of learning and thereby fulfilling students' thirst for success. The University has undertaken various Sponsored and collaborative research and development projects funded by national organizations such as Indian Space Research Organization (ISRO), Department of Science and Technology (DST), Indira Gandhi Centre for Atomic Research (IGCAR), Defence Research and Development Organization (DRDO), Department of Bio-Technology (DBT), Ministry of Environment and Forests (MoEF), Board of Research in Nuclear Sciences (BRNS) etc. The university holds great promise to expand the applications of space technology, benefiting the common man and enriching the quality of life. A step towards achieving this, the university is successfully conducting non formal education programmes through 18 Village Resources Centre (VRCs) all over the state of Tamil Nadu. The research activity is progressive and proactive with 265 funded projects worth of around Rs.63.5 Crores, which has been sanctioned by various national organizations.

ABOUT CSIR-NATIONAL METALLURGICAL LABORATORY

National Metallurgical Laboratory (CSIR-NML) is a premier laboratory within the ambit of Council of Scientific and Industrial Research (CSIR), New Delhi, a statutory body under Government of India. CSIR National Metallurgical Laboratory Madras Centre (NML-MC) an extension Centre of CSIR NML, over the years has undertaken several R&D projects in the areas of mineral beneficiation, micro-structural characterization and failure analysis of various industrial components. The Centre has developed flow sheets for the beneficiation of ferrous and non-ferrous, industrial minerals which include limestone, feldspar, barites etc. In recent years, the Centre has made significant contributions to the development of column flotation technology for Indian mineral industry. Commercial flotation columns were commissioned for the beneficiation of sillimanite and barite. Over the years the centre has developed expertise and state-of-the-art facilities to carry out material characterization and metallurgical failure investigations for various engineering industries like power and automobile sector. The centre is actively working towards developing value added products from mineral/mine wastes and also provides services for characterization of tiles, paver blocks and natural building stones.

List of Advisory Committee

1. Dr. D. D. Sarma, Indian Institute of Science, Bangalore
2. Dr. Goutam De, Institute of Nano Science & Technology Habitat Centre, Mohali
3. Dr. P. K. Das, Indian Institute of Science, Bangalore
4. Dr. M. T. Karuppiah, Ministry of Environment, Forests & Climate Change, Delhi
5. Dr. S. Balasubramanian, Retd. Professor, University of Madras , Chennai
6. Dr. K. Ravichandran, University of Madras, Chennai
7. Dr. M.V. Shankar, Yogi Vemana University, Kadapa
8. Dr. A. K. Sahu, CSIR-CECRI, Chennai
9. Dr. M. Muthukumar, Central University of Kerala, Kasargod
10. Dr. K. Pandian, University of Madras, Chennai
11. Dr. B. S. Murty, IIT Hyderabad, Hyderabad
12. Dr. G. Bhaskar Raju, Retd. Chief Scientist, CSIR-NML Madras Centre
13. Dr. D. S. Rao, CSIR-IMMT, Bhuvanesar
14. Dr. S. Sundar Manoharan, Sathyabama Institute of Science and Technology, Chennai
15. Dr. T. Sasipraba, Sathyabama Institute of Science and Technology, Chennai
16. Dr. T. V. Vijaya kumar, CSIR-NML, Chennai
17. Dr. T. Narasimhaswamy, CSIR-CLRI, Chennai
18. Dr. M. Murugananthan, PSG Tech, Coimbatore
19. Dr. C. Sasikumar, MNIT, Bhopal
20. Dr. V. Jayathirtha Rao, CSIR-IICT, Hyderabad
21. Dr. J. Sreeramulu, SK University, Anantapur

Registration Fee Details:

Category	Till 05/11/2019	After 05/11/2019
PG Students	2000/-	3000/-
Research Scholars – JRF / SRF / RA / Project Assistants / Ph.D Students)	3000/-	4000/-
Faculty Members/Scientists/Post Doc.	3000/-	4000/-
Participants from Industry	4000/-	5000/-

Intimation to selected Participants: Selected participants will be intimated through E-mail or SMS. Mode of payment details will be given to selected participants only.

Accommodation: First come first serve basis and will be arranged at free of cost in the university hostels for participants.

Organizing Secretary

Dr. T. SASIPRABA
Pro-Vice Chancellor
Sathyabama Institute of Science and
Technology (Deemed to be University)
Chennai - 600 119

CONVENERS:

Dr. K. CHENNAKESAVULU
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CSIR-NML Madras Centre
Ph: 9144 22542077
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Organizing Secretary

Dr. T. V. VIJAYA KUMAR
Scientist-In-Charge
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CO-CONVENERS:

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CSIR-NML Madras Centre
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wiimsbu2020@gmail.com
Dr. J. KARTHIKEYAN
Associate Professor
Dept. of Chemistry, SIST

TENTATIVE SCHEDULE

PARTICIPANTS: THREE BATCHES

I BATCH – 1 TO 60 PARTICIPANTS

II BATCH - 60 TO 120 PARTICIPANTS

III BATCH – 121 TO 180 PARTICIPANTS

6 TH JANUARY 2020	7 TH JANUARY 2020	8 TH JANUARY 2020	9 TH JANUARY 2020	10 TH JANUARY 2020
INAGURATION AT SATHYABAMA				
LECTURES COMMON FOR ALL THREE BATCHES I BATCH II BATCH III BATCH	I BATCH SCHEDULE: 9 A.M TO 5.00PM CSIR-NML MADRAS CENTRE	II BATCH SCHEDULE: 9 A.M TO 5.00PM CSIR-NML MADRAS CENTRE	III BATCH SCHEDULE: 9.00 TO 5.00 PM CSIR-NML MADRAS CENTRE	III BATCH SCHEDULE: 9 TO 3 LECTURES AT SATHYABAMA OR CSIR NML
SCHEDULE: 8 A.M TO 5.00PM	II BATCH SCHEDULE: LECTURES AND SATHYABAMA FACILITIES	I BATCH SCHEDULE: 9 A.M TO 5.00PM LECTURES AND SATHYABAMA FACILITIES		
	III BATCH SCHEDULE: 9.00 TO 5.00 PM LECTURES AND SATHYABAMA FACILITIES	III BATCH SCHEDULE: 10.00 TO 4.00 PM VISIT TO MAHABALIPURAM OR KANCHIPURAM		
		FEED BACK SECTION		
OVER ALL REQUIREMENT	1 BUS 8.00 TO 9.30 SATHYABAMA TO CSIR 1 BUS 5.00PM CSIR TO SATHYABAMA	1 BUS 8.00 TO 9.30 SATHYABAMA TO CSIR 1 BUS 4.00 PM CSIR TO SATHYABAMA	1 BUS 8.00 TO 9.30 SATHYABAMA TO CSIR 1 BUS 5.00 PM CSIR TO SATHYABAMA	1 BUS 8.00 TO 9.30 SATHYABAMA TO CSIR 1 BUS 5.00 PM CSIR TO SATHYABAMA
	1 BUS FULL FOR PARTICIPANT TO VISIT MAHABALIPURAM FROM 9.00 TO 5.00 PM			

PROGRAMME SCHEDULE - WIIM-2020

Venue: University Auditorium

6TH JANUARY 2020, MONDAY: REGISTRATION (08.00 A.M - 09.30 A.M)
Inaugural Function (9.30 A.M - 10.30 A.M) Chief Guest Addressing
(10.30 to 11.00 Photo session & Tea Break) (11.00 A.M-12.00 A.M)
Role PSD, Surface Area and Contact Angle in Surface Engineering Chief Guest's Invited Talk Dr. Goutam De, INST, Mohali, India
Invited talk (12.00 A.M to 1.00 P.M) D. K. SHARMA (MICROMERITICS) Managing Director, Kunash Instruments Pvt. Ltd. Mumbai
Lunch (1.00PM to 2.00PM)
Invited talk (02.00 to 3.00 P.M) Dr. S. Sundar Manoharan Vice-Chancellor Sathyabama Institute of Science and Technology (Deemed to be University) Chennai.
(3.00 P.M to 4.00 P.M) Invited Lecture Dr. Y. Jaya Prakash Rao Osmania University
Invited talk (4.00 P.M to 5.00 P.M) Introduction Facilities Available at CSIR-NML and SIST, Chennai Dr. T. V. Vijaya Kumar Dr. K. Chennakesavulu
Break (5.00 to 5.30 P.M.)
PARTICIPANT INTERACTION & DISCUSSION 5.30 to 7.00 PM

7TH JANUARY 2020, TUESDAY Invited talk (09.00 A.M - 10.00 A.M) Demo on Particle Size, Pycnometer by Dr. Ranjeeth Singh Kunash Instruments Pvt. Ltd
10.00 A.M to 10.15 A.M. (Tea Break) 10.15 to 11.15 AM Invited talk on Microscopy – Instrumentation – Interpretation of Results Dr. D. S. Rao, Senior Scientist, CSIR-IMMT, Bhuvaneswar
11.15 to 12.00 AM Lecture on XRF
(12.00 AM to 1.00 P.M) Invited talk Dr. Khurana Orbit Research Pvt. Ltd, New Delhi
(Lunch 1.00PM to 2.00 PM)
Invited talk (2.00 P.M to 3.00 P.M) Dr. Y. Jaya Prakash Rao Osmania University
Invited talk (3.00 P.M to 4.00 P.M) UV-VIS, FTIR & FESEM Demo Dr. D. S. Rao, CSIR-IMMT & Dr. Y. Jaya Prakash Rao, Osmania University
Invited talk (04.00 to 5.00 P.M) Lecture on Thermo kinetics and its application by Dr. Sasikumar, MNIT, Bhopal
PARTICIPANT INTERACTION & DISCUSSION 5.30 to 7.00 PM

8TH JANUARY 2020, WEDNES DAY Invited talk (09.00 A.M – 10.00 A.M) Dr. G. Bhaskar Raju Lecture on Zetapotential measurements and it's application
10.15 to 11.15AM Microscopy – Instrumentation – Interpretation of Results Dr. D. S. Rao, Senior Scientist, CSIR-IMMT, Bhubaneswar
Session –IX (11.15 to 12.00 P.M) Lecture on XRF
(11.15 AM to 12.15 P.M) Session-XI Contact Angle, Surface Tension, Surface Energy By Dr. C. Sasikumar
(Lunch 1.00PM to 2.00 PM) LUNCH BREAK
Session –IV (2.00 P.M to 3.00 P.M) Dr. Y. Jaya Prakash Rao Osmania University
Session –IV (3.00 P.M to 5.00 P.M) UV-VIS, FTIR & FESEM Demo Dr. D. S. Rao, CSIR-IMMT & Dr. Y. Jaya Prakash Rao, Osmania University

10 TH JANUARY 2020, FRIDAY Session -X (09.00 A.M – 10.00 A.M) Dr. G. Bhaskar Raju Lecture on Zetapotential measurements and it's application
10.00 A.M to 10.15 A.M. (Tea Break) 10.15 to 11.15 AM Dr. M. Muthukumar, Central University of Kerala, Kerala.
11.15 AM to 12.00 A.M. Dr. J. Sreeramulu, S.K. D. UNIV. Anantapur
Session –XIII (1.00 P.M to 2.00 P.M) Invited Lecture –XIII FEED BACK Session And Valedictory Function
(Lunch 12.00PM to 1.00 PM) LUNCH BREAK

WORKSHOP ON INTERPRETATION OF INSTRUMENTAL METHODS (WIIM-2020)



(UV-VIS, FTIR, BET Surface Area,
Particle Size Distribution, Zeta Potential Measurement,
Contact Angle Measurement, XRF and FESEM)

06th – 10th January 2020

organized by

Department of Chemistry & International Research Centre
SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY
(Deemed to be University)



in association with

CSIR-NATIONAL METALLURGICAL LABORATORY
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This is to certify that

Dr./Mr./Ms. T. KRITHIGA, ASSOCIATE PROFESSOR,
DEPARTMENT OF CHEMISTRY
SATHYABAMA INSTITUTE OF SCIENCE & TECHNOLOGY

has participated in the five day Workshop on Interpretation of Instrumental Methods (WIIM-2020) organized by Department of Chemistry & International Research Centre, Sathyabama Institute of Science and Technology (Deemed to be University) in association with CSIR-National Metallurgical Laboratory Madras Centre, CSIR Madras Complex during 06th – 10th, January, 2020.

Dr. T. V. VIJAYA KUMAR

Organizing Secretary WIIM-2020
Scientist-In-Charge, CSIR-NML MC

K. Chennakesavulu

Dr. K. CHENNAKESAVULU
Convener WIIM-2020, SIST

Dr. T. SASIPRABA

Organizing Secretary WIIM-2020
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N. Vasumathi

Mrs. N. VASUMATHI
Convener WIIM-2020, CSIR-NML MC