



One-week hands-on training workshop on
ANALYTICAL ADVANCES IN STUDYING MOLECULES

Under the aegis of

DST-Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI)

Organized by

Department of Chemistry, Birla Institute of Technology & Science Pilani - Pilani Campus



6110
NAB
AUDITORIUM



Program Schedule

Day 1: October 15, 2022

08:00 am – 08:10 am: Welcome and inauguration

08:10 am – 08:20 am: Address by the Chief Guests, Vice Chancellor, BITS Pilani and Director, BITS Pilani, Pilani Campus

08:20 am – 08:30 am: Address by the Head of the Department of Chemistry, BITS Pilani, Pilani Campus: Prof. Indresh Kumar

08:30 am – 08:40 am: Address by the Guest of Honour: Prof. G. R. Chaudhary, Panjab University

08:40 am – 09:00 am: High Tea

Day 1: Session 1: Chair: Prof. S. C. Sivasubramanian, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of 1D ^1H NMR spectroscopy by Prof. Diwan S. Rawat, Delhi University

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Theory, concepts, and applications of 1D NMR spectroscopy of non- ^1H based nuclei by Prof. Ramesh Ramapanicker, Indian Institute of Technology Kanpur

Day 1: Session 2: Moderator: Prof. Prashant U. Manohar, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on 1D NMR spectroscopy by the Chair of Session 1 and Two Resource Persons of Day 1

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, 1D NMR experiments and analysis

05:30 pm – 06:00 pm: Tea

Day 2: October 16, 2022

Day 2: Session 1: Chair: Prof. Dalip Kumar, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of 2D NMR spectroscopy in chemistry by Prof. N. Suryaprakash, Indian Institute of Science, Bangalore

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Theory, concepts, and applications of NMR spectroscopy in biophysics by Prof. P. K. Madhu, Tata Institute of Fundamental Research, Mumbai

Day 2: Session 2: Moderator: Prof. Paritosh Shukla, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on 2D NMR techniques and analysis by the Chair of Session 1 and Two Resource Persons of Day 2

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, 2D NMR experiments and analysis

05:30 pm – 06:00 pm: Tea

Day 3: October 17, 2022

Day 3: Session 1: Chair: Prof. Ajay Kumar Sah, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of High-Performance Liquid Chromatography by Prof. Parasuraman Jaisankar, Indian Institute of Chemical Biology Kolkata

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Theory, concepts, and applications of Gas Chromatography by Prof. R. Ravi Krishna, Indian Institute of Technology Madras

Day 3: Session 2: Moderator: Prof. Rajeev Sakhuja, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on advancements and applications of chromatographic techniques by the Chair of Session 1 and Two Resource Persons of Day 3

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, chromatographic experiments and analysis

05:30 pm – 06:00 pm: Tea

Day 4: October 18, 2022

Day 4: Session 1: Chair: Prof. Anil Kumar, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of mass spectrometry techniques that utilize spray method-based ion sources by Prof. SVK Kumar, Tata Institute of Fundamental Research Mumbai

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Theory, concepts, and applications of mass spectrometry techniques that utilize gas phase method and desorption method-based ion sources by Prof. Soumen Kanti Manna, Saha Institute of Nuclear Physics, Kolkata

Day 4: Session 2: Moderator: Prof. Bharti Khungar, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on advancements and applications of mass spectrometric techniques by the Chair of Session 1 and Two Resource Persons of Day 4

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, mass spectrometric experiments and analysis

05:30 pm – 06:00 pm: Tea

Day 5: October 19, 2022

Day 5: Session 1: Chair: Prof. Ram K. Roy, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of steady-state absorption and fluorescence spectroscopy by Prof. Anindya Dutta, Indian Institute of Technology Bombay

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Theory, concepts, and applications of time-resolved fluorescence spectroscopy by Prof. Sobhan Sen, Jawaharlal Nehru University

Day 5: Session 2: Moderator: Prof. Inamur R. Laskar, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on ultraviolet-visible (UV) and fluorescence techniques and applications by the Chair of Session 1 and Two Resource Persons of Day 5

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, UV and fluorescence experiments, and analysis

05:30 pm – 06:00 pm: Tea

Day 6: October 20, 2022

Day 6: Session 1: Chair: Prof. Saumi Ray, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Theory, concepts, and applications of infrared (IR) spectroscopy by TBD

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk: Theory, concepts, and applications of Raman spectroscopy by Prof. Jyotishman Dasgupta, Tata Institute of Fundamental Research, Mumbai

Day 6: Session 2: Moderator: Prof. Shamik Chakraborty, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on advancements and applications of IR and Raman techniques by the Chair of Session 1 and Two Resource Persons of Day 5

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, IR and Raman experiments, and analysis

05:30 pm – 06:00 pm: Tea

Day 7: October 21, 2022

Day 7: Session 1: Chair: Prof. Madhushree Sarkar, BITS Pilani, Pilani Campus

09:00 am – 10:30 am: Resource person's talk 1: Resource person's talk 1: Theory, concepts, and applications of scanning electron microscopy (SEM) by Dr. Indranath Chakraborty, Indian Institute of Technology Kharagpur

10:30 am – 11:00 am: Tea break

11:00 am – 12:30 pm: Resource person's talk 2: Resource person's talk: Theory, concepts, and applications of transmission electron microscopy (TEM) by Dr. Ahin Roy, Indian Institute of Technology Kharagpur

Day 7: Session 2: Moderator: Prof. Surojit Pande, BITS Pilani, Pilani Campus

12:30 pm – 01:00 pm: Q&A discussion panel on advancements and applications of SEM and TEM by the Chair of Session 1 and Two Resource Persons of Day 7

01:00 pm – 02:30 pm: Lunch break

02:30 pm – 05:30 pm: Hands on training on sample preparation, SEM experiments, and analysis

05:30 pm – 06:00 pm: Tea

06:00 pm – 06:10 pm: Feed back

06:10 pm – 06:30 pm: Valedictory function