

Program Schedule

Seven Days of Workshop

on

ABCs of Infra-Red Spectroscopy, Nuclear Magnetic Resonance Spectroscopy, Electron Paramagnetic Resonance Spectroscopy, and Gaussian (ABCs-2022)

1-8 August 2022

Venue: Conference Hall,
Department of Chemistry, Manipur University

Day 1 : 1 August 2022 (Monday)

9:00 AM – 9:30 AM : Registration and Tea

9:30 AM – 10:05 AM : Inaugural Programme

High Tea (10:05 AM – 10:30 PM)

Day 1: 1 August 2022 (Monday)

Technical Session 1: Lectures on NMR Spectroscopy – I

Venue: Conference Hall, Department of Chemistry, MU

10:30 AM – 11:30 AM : L01 **Principles of NMR and Chemical Shifts**

Prof. Laitonjam Warjeet Singh, MU

11:30 AM – 12:30 PM : L02 **Theoretical Background of NMR**

Prof. Homendra Naorem, MU

12:30 PM – 1:30 PM : L03 **Instrumentation of NMR Spectrometer**

Dr. Chandi Charan Malakar, NIT Manipur

Lunch Break (1:30 PM – 2:30 PM)

Technical Session 2: Hands-on Training on NMR Spectroscopy – I

Venues: Conference Hall & Instrument Room 1, Department of Chemistry, MU

2:30 PM – 5:00 PM : H01 Instructor: Dr. Keisham Surjit Singh, MU

Technical Support:

1. Dr. Th. Prasanta Singh
2. Dr. Lokendrajit Nahakpam

Day 2 : 2 August 2022 (Tuesday)

Technical Session 3: Lectures on NMR Spectroscopy – II

Venue: Conference Hall, Department of Chemistry, MU

9:30 AM – 10:30 AM : L04

NMR in Organic Synthesis

Prof. O. Mukherjee Singh, MU

10:30 AM – 11:30 AM : L05

Applications of NMR in Natural Products

Prof. L. Warjeet Singh, MU

11:30 AM – 12:30 PM : L06

Applications of ^1H & ^{13}C NMR for Characterization of Azo-Carboxylate Ligands and their Organometallic Compounds

Dr. Keisham Surjit Singh, MU

Lunch Break (12:30 PM – 2:00 PM)

Technical Session 4: Hands-on Training on NMR Spectroscopy – II

Venues: Conference Hall & Instrument Room 1, Department of Chemistry, MU

2:00 PM – 5:00 PM : H02 Instructor: Dr. Keisham Surjit Singh, MU

Technical Support:

1. Dr. Th. Prasanta Singh
2. Dr. Lokendrajit Nahakpam

Day 3 : 3 August 2022 (Wednesday)

Technical Session 5: Lectures on IR Spectroscopy – I

Venue: Conference Hall, Department of Chemistry, MU

9:30 AM – 10:30 AM : L07

Vibrational Spectroscopy

Dr. Thongam Gomti Devi, MU

10:30 AM – 11:30 PM	: L08	Instrumentation of IR Spectrophotometer Dr. Thongam Joymati Devi, MU
11:30 PM – 12:30 PM	: L09	Structural Elucidation of Compounds Dr. Nagarajan S., NIT Manipur

Lunch Break (12:30 PM – 2:00 PM)

Technical Session 6: Hands-on Training on IR Spectroscopy – I

Venues: Conference Hall & Instrument Room 1, Department of Chemistry, MU

2:30 PM – 5:00 PM	: H03	Instructor: Dr. Thongam Joymati Devi, MU Technical Support: 1. Dr. Lokendrajit Nahakpam 2. Ms. Ng. Florence
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Day 4 : 4 August 2022 (Thursday)

Technical Session 7: Lectures on EPR Spectroscopy – I

Venue: Conference Hall, Department of Chemistry, MU

9:30 AM – 11:00 AM	: L10	Electron Spin Resonance (ESR) Spectroscopy Prof. R. K. Lonibala, MU
11:00 AM – 12:30 AM	: L11	Instrumentation of EPR Spectrometer Dr. Mithun Roy, NIT Manipur

Lunch Break (12:30 PM – 2:00 PM)

Technical Session 8: Hands-on Training on EPR Spectroscopy – I

Venues: Conference Hall & EPR Room, Department of Chemistry, MU

2:00 PM – 5:00 PM	: H04	Instructor: Prof. R. K. Hemakumar Singh, MU Technical Support: 1. Dr. N. Shantibala Devi
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Day 5 : 5 August 2022 (Friday)

Technical Session 9: Lectures on EPR Spectroscopy – II

Venue: Conference Hall, Department of Chemistry, MU

9:30 AM – 11:00 AM	: L12	Applications of ESR Spectroscopy
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11:00 AM – 12:30 AM : L13 Prof. R. K. Bhubon Singh, MU
Applications of EPR
Prof. Nongmaithem Rajen Singh, MU

Lunch Break (12:30 PM – 2:00 PM)

Technical Session 10: Hands-on Training on EPR Spectroscopy – II
Venues: Conference Hall & EPR Room, Department of Chemistry, MU
2:00 PM – 5:00 PM : H05 Instructor: Prof. R. K. Hemakumar Singh, MU
Technical Support:
1. Dr. N. Shantibala Devi

Day 6 : 6 August 2022 (Saturday)

Technical Session 11: Lectures on Gaussian – I
Venue: Conference Hall, Department of Chemistry, MU
9:30 AM – 11:00 AM : L14 **Theoretical Formulation of Electronic Structure Theory**
Dr. Shagolsem Lenin Singh, NIT Manipur
11:00 AM – 12:30 AM : L15 **Creation of Gaussian Input Files**
Dr. Francis A. S. Chipem, MU

Lunch Break (12:30 PM – 2:00 PM)

Technical Session 12: Hands-on Training on Gaussian – I
Venues: Computer Laboratory, Department of Computer Science, MU
2:00 PM – 5:00 PM : H06 Instructor & Technical Support: Dr. Francis A. S. Chipem, MU

Day 7 : 8 August 2022 (Monday)

Technical Session 13: Lectures on Gaussian – II
Venue: Conference Hall, Department of Chemistry, MU
9:30 AM – 11:00 AM : L16 **Analysis of Gaussian Output Files**
Dr. Francis A. S. Chipem, MU
11:00 AM – 12:30 AM : L17 **Applications of Gaussian in Physical, Chemical & Biological Research**
Dr. Thongam Gomti Devi, MU

Lunch Break (12:30 PM – 1:30 PM)

Technical Session 14: Hands-on Training on Gaussian – II

Venues: Computer Laboratory, Department of Computer Science, MU

1:30 PM – 4:30 PM : H07 Instructor & Technical Support: Dr. Thongam Gomti Devi, MU

Tea Break (4:30 PM – 4:45 PM)

4:45 PM – 5:15 PM : Valedictory Function