

# Masterclass on Gas Sorption Techniques

## Physisorption & Chemisorption Seminar & Workshop

### 25 & 26 March 2025

Join us for a comprehensive **FREE** 2 day seminar & workshop at our Luton office (can opt to join day 1 and/or day 2) dedicated to exploring two pivotal techniques in surface chemistry and material science: physisorption and chemisorption.

Day 1: will focus on physisorption (theory and hands-on)

Day 2: will focus on chemisorption (theory and hands-on)

The seminar and workshop combines theoretical insights with hands-on experience to provide a well-rounded understanding of these essential methods. Participants will gain valuable skills in both physisorption and chemisorption, including practical lab techniques and data analysis.

#### Key takeaways:

- ▶ Fundamentals of physisorption and chemisorption: Understand the differences between physisorption and chemisorption, including how surface interactions are measured and interpreted. Explore the roles of physisorption in material science and chemisorption in catalytic studies.
- ▶ Instrument operation: Acquire hands-on experience in preparing samples, degassing and conducting measurements for both physisorption and chemisorption.
- ▶ Software handling: Learn to navigate the software's features for data analysis, report generation, and leveraging tools to derive meaningful insights from your experiments.
- ▶ Data Interpretation: Learn to analyse gas sorption and isotherms and chemisorption data. This session will guide you through interpreting data as well as understanding and applying various data analysis methods to enhance your research outcomes.
- ▶ Troubleshooting and best practices: Gain practical advice on overcoming issues and learn how various industries and research fields utilise these techniques to address real-world problems.

#### Who Should attend:

- ▶ Researchers and scientists in material science, chemistry and related fields.
- ▶ Industry professionals involved in surface analysis and material characterisation.
- ▶ Laboratory technicians and quality control specialists.

Places will be limited to ensure a good ratio of delegates to tutors during the workshop. To reserve your place, please complete the following form and email to: [info.gb@anton-paar.com](mailto:info.gb@anton-paar.com).

#### Workshop Programme 25 March 2025

09:30 h	Registration & Coffee on arrival
09:45 h	Introduction to physisorption
10:00 h	Physisorption with the NOVA (BET & Porosity) and Autosorb (Advanced BET & Porosity)
10:45 h	Short break
11:00 h	Lab hands-on: Sample prep, degassing, measurement set up
12:30 h	Lunch
13:15 h	Interpreting gas sorption isotherms
14:00 h	Software hands-on: Physisorption data analysis
14:45 h	Short break
15:15 h	Lab Hands-on: Best practice and data treatment
16:30 h	Application presentation and Q&A
17:15 h	Finished for the day

#### Workshop Programme 26 March 2025

09:30 h	Registration & Coffee on arrival
09:45 h	Introduction to chemisorption
10:15 h	Static chemisorption
11:00 h	Short break
11:30 h	Dynamic chemisorption
12:30 h	Lunch
13:15 h	Lab hands-on: Sample prep, chemisorption measurement setup
14:45 h	Software hands-on: Chemisorption data analysis
15:40 h	Short break
16:00 h	Application presentation and Q&A
17:00 h	Thank you and safe travels

## Meet the team



**Dr Nishil Malde** is our UK Product Manager for X-Ray, Surface Area & Porosity and Mechanical Surface Characterisation. Nishil has over 25 years of experience in technical instrument sales and application support, including 11 years at Anton Paar. With a PhD in Physics from Imperial College London, Nishil is a recognised expert in materials characterisation. His passion lies in guiding our customers to innovative solutions for their material analysis needs.



**Dr. Ornov Maulik** is an Application Specialist at Anton Paar GmbH, specialising in the gas adsorption product portfolio. With over seven years of experience at Anton Paar, he has developed expertise in material characterisation techniques, offering technical support and comprehensive training sessions across EMEA region. His role involves assisting researchers and industry professionals optimising material analysis processes, ensuring accurate and reliable characterisation results. He holds a Ph.D. in Metallurgical and Materials Engineering from MNIT, India and has previously worked with a range of analytical tools to characterise diverse material types. His extensive knowledge in material analysis enables him to support research and industrial applications effectively.



Email to: [info.gb@anton-paar.com](mailto:info.gb@anton-paar.com)

Please tick the day or days you would like to attend.

Day 1 ☐

Day 2 ☐

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Postcode: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

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