SCS Academy
Schweizerische Chemische Gesellschaft (SCG)

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Micro- and Nano-Scale Chemical Analysis using Raman Spectroscopy [SP-15] NEU

Goal

This Raman course will provide fundamental knowledge about the linear, non-linear, and near-field Raman spectroscopy methods. Specifically, the following techniques will be covered: confocal Raman spectroscopy, resonance Raman spectroscopy, stimulated Raman spectroscopy, and tip-enhanced Raman spectroscopy. The focus of this course will be on the fundamental principles of these major Raman spectroscopy techniques and their applications in non-destructive and label-free chemical analysis at the micro- and nano-scales.

Target Group

Laboratory technicians, chemists, laboratory and group leaders, PhD students in chemical, biological and material sciences

No special prior knowledge of Raman spectroscopy is necessary.

Contents

The following topics will be covered:

– Principle of Raman spectroscopy

- Raman spectroscopy techniques: Principles and instrumentation

Linear Raman: Spontaneous Raman spectroscopy and Resonance Raman spectroscopy

Non-linear Raman: Stimulated Raman spectroscopy

Near-field Raman: Tip-enhanced Raman spectroscopy

- Practical applications and examples from academic research and industry

- Laboratory demonstration of micro- and nano-scale Raman measurements

- Analysis and interpretation of hyperspectral Raman data

Implementation / method of working

Morning session: Interactive classroom lectures covering principles, instrumentation, and applications of Raman spectroscopy techniques. Lecture notes will be provided.

Afternoon session: Laboratory demonstration of micro and nano-scale Raman measurements, Raman data analysis exercises

Event Properties

Event Date	25.10.2024 09:00 - 25.10.2024 17:00
Capacity	15

Registered	5
Available place	10
Individual Price	
Kurssprache	English
Location	