

CY-605 Advanced Chromatography and Mass Spectrometry

Advanced theoretical treatment of chromatographic separation and the underlying distribution and adsorption equilibria. Instrumentation and theoretical concept for chromatographic separation with selective detectors. Molecular mechanism and theory of analyte-column interactions for liquid and gas chromatography, the theory of ionization, fragmentation, mass separation, detection and data-analysis for all kind of mass spectrometers and ionization techniques in common use coupled to gas chromatography, liquid chromatography and capillary electrophoresis.

Theoretical knowledge will be strengthening by laboratory exercises including liquid chromatographic separation and mass spectrometric detection of nanoclusters.