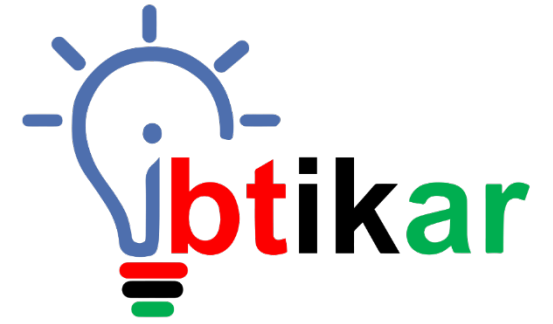


BOĞAZIÇI UNIVERSITY
Advanced Technologies
Research & Development Center
By N. Zeynep ATAY GÖK



Co-funded by the
Erasmus+ Programme
of the European Union



AFM (Atomic force microscopy)

Atomic force microscopy or scanning force microscopy is a very-high-resolution type of scanning probe microscopy, with demonstrated resolution on the order of fractions of a nanometer, more than 1000 times better than the optical diffraction limit.



ESEM (scanning electron microscopy)

FEI-Philips XL30 ESEM-FEG offers high resolution imaging as well as low kV imaging for non-coated or insulating materials. A solid state backscattered electron detector (BSE) enables average atomic number imaging and EDS detector allows semi-quantitative X-ray analysis including light element detection.



Nano-PSA/Zeta

PARTICLE SIZE ANALYSIS

Typical Applications

- Proteins/complexes/DNA
- Polymer Latexes
- Pharmaceutical Preparations
- Oil/Water and Water/Oil Emulsions
- Paints and Pigments
- Inks and Toners
- Cosmetic Formulations

ZETA POTENTIAL OPTION

Zeta potential is a measure of surface charge and is an excellent indicator of relative stability.



NMR



The Varian Mercury-VX 400 MHz BB is available for challenging projects involving natural products, proteins, complex synthetic molecules, inorganic compounds and materials studies.



XRD (X-Ray diffraction analysis)

Applications Programs

Phase identification through search/match

Quantitative analysis by RIR

Lattice parameter refinement

Profile fitting

Powder pattern analysis



XPS (X-ray photoelectron spectroscopy)



X-ray photoelectron spectroscopy (XPS) is a quantitative analysis technique of the surface composition, which is capable of providing atomic and molecular information regarding the surface of the material. It is used to examine core-levels and subsequently to study the composition and electrostatic states of the surface region of a sample by energy-disperse analysis of the emitted core photoelectrons.



RAMAN

Applicable to:	
Life Sciences	Chemical Sciences
Cells	Pharmaceuticals
Tissue	Polymers
Microorganisms	Chemicals
Materials Science	Earth Sciences
Carbon and nanotechnology	Geology
Semiconductors	Gemmology
Photovoltaics	Analytical Sciences
Catalysis	Art and heritage
	Forensics
	Contamination

