in situ microanalysis

Term used for direct analytical investigation of the microstructural domains of a solid by focused beams of particles and radiation. Analytical characterization includes obtaining information about type, quantity and distribution of the elements, their state of chemical bonding, morphology and crystalline (geometric) and electronic structure of the individual phases. The combination of this information serves as a basis for the property-relevant characterization of solids.

Source:
PAC, 1983, 55, 2023 *(Nomenclature, symbols and units recommended for in situ microanalysis (Provisional))* on page 2024