

## **20.DETERMINATION OF CROSS SECTIONS OF POLYMER RADIATION DEPLETION BY PARTICULAR ELEMENTS FROM THE ION BEAM ANALYSIS DATA**

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Process of depletion of polymer substance by various elements under external irradiation is considered. For determination of depletion cross sections, an expression is derived in terms of measurable emission yields, generated by an analyzing fast ion beam on the initial and irradiated samples. We discuss application of the obtained expression for two special cases: a) a spatially homogeneous external irradiation fluence within the area of ion beam analysis; b) an inhomogeneous fluence, when the depletion is caused by the same analyzing ion beam. With the spectrometry of elastically scattered protons, cross section of oxygen depletion in polyimide under irradiation by 1.6 MeV protons has been measured.