

DESCRIPTION OF NUCLEAR BINDING ENERGY
BASED ON THE S -MATRIX FORMALISM
AT VARIABLE ELECTRIC AND BARYONIC
CHARGES

M.N. Popushoy

Odesa State Academy of Building and Architecture
(4, *Didrikhson Str.*, Odesa 65029, Ukraine)

S u m m a r y

The results of the S -matrix formalism of the problem of interaction of two nuclear fragments with $J^\pi = \text{const}$ at variable electric charges and reduced mass are generalized to the case of the fission of a complex system into free nucleons. In this case, an approximate linear dependence of the binding energy of nonmagic nuclei A_zQ on the parameter ZA^{-1} is established with regard for the fact that they are isotopes ($Z = \text{const}$), isotones ($A - Z = \text{const}$), isobars ($A = \text{const}$), or nuclei with a fixed neutron excess number ($A - 2Z = \text{const}$).