

INFLUENCE OF THE CONCENTRATION
DEPENDENCE OF THE DIFFUSION
COEFFICIENT ON THE STATIONARY MASS
TRANSFER IN A PLANE-PARALLEL LAYER

Yu. V. Kulyk, V. M. Sysoev

Taras Shevchenko Kyiv National University,
Faculty of Physics
(6, Academician Glushkov Prosp., Kyiv 03022, Ukraine)

S u m m a r y

Using the equations of nonequilibrium thermodynamics, the closed system of differential equations which describes a diffusion in solutions of nonelectrolytes under specific 'osmotic' conditions in a plane-parallel layer (membrane) is deduced. The profiles of the concentration distribution in the membrane are derived, and the dependences of the diffusing substance flows on the concentration for the ideal and regular binary solutions are calculated.