ABSTRACTS OF ARTICLES FILED AT VINITI*

FORMULATION OF EQUATIONS FOR THE DISTORTED WAVES METHOD IN CHEMICAL REACTION KINETICS

V. G. Dvali and R. R. Dogonadze

UDC 541.13

A calculation has been made for the mutual polarizability of reagents within the framework of the distorted waves method for non-adiabatic reactions. Expressions have been obtained for the "re-normalized" surfaces of the reaction potential energy channels and the exchange integral.

Original article filed at VINITI (No. 404-76), February 11, 1976.

CALCULATION OF THE PROBABILITY OF AN ELEMENTARY ACT BY THE MATRIX DENSITY METHOD

M. A. Vorotyntsev, V. G. Dvali,
R. R. Dogonadze, and A. M. Kuznetsov

UDC 541.13

A method has been developed for calculating the velocity constants of chemical reactions taking place in a condensed phase and based on the use of the matrix densities of the reagents and reaction products. The method developed may be used for calculating the probability of transfer between two multidimensional potential energy surfaces having an arbitrary, for example, non-harmonic shape. A transition equation and a factor of symmetry were obtained.

Original article filed at VINITI (No. 405-76), February 11, 1976.

ELECTROCHEMICAL ASPECTS OF THERMOGALVANIC CELLS

III. TEMPERATURE DEPENDENCE OF THE CURRENT OF THERMOGALVANIC CELLS ON NICKEL IN AN ACID SULFATE ELECTROLYTE

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UDC 541.13

Results are given from a quantitative analysis of the temperature changes of thermogalvanic cell currents formed on nickel in a deaerated solution of 0.1 N H_2SO_4 + 0.9 N Na_2SO_4 in the temperature range 298-363°K. On the basis of general assumptions of electrochemical kinetics and data

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