

ABSTRACTS

medium were well-defined. In the present experiments, the potential ranges of polarization of a pair of dropping mercury electrodes, over which the two mercury droplets coalesced, were measured as functions of ionic concentrations for various electrolytes. In the case of simple inorganic electrolytes the condition of coalescence obtained was proved to be in quantitative agreement with the Verwey-Overbeek theory, thus indicating that the interaction between sub-microscopic particles of hydrophobic sols is essentially the same as that between macroscopic mercury droplets. While, in the case of sodium citrate solutions two kinds of marked deviations from the theory were observed, which appeared to be due to the specific adsorption of citrate ions and to the formation of protective interfacial films.

Internal Conversion of the 1277keV Transition in ^{22}Ne

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The internal conversion coefficient of the 1277keV transition in ^{22}Ne has been measured using the Siegbahn-Slatis intermediate image beta ray spectrometer. The measured value of $\alpha_c = (6.77 \pm 0.45) \times 10^{-6}$ is in agreement with the theoretical value for a pure E2 transition as calculated by Rose and corrected for the screening effect by Hinman.

Studies on Lactone Formation in Vapor Phase. (I)

Synthesis of γ -Butyrolactone

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Vapor phase catalytic dehydrogenation of 1,4-butanediol to γ -butyrolactone with reduced copper supported on various carriers has been studied. It was found that copper supported on zinc oxide or magnesium oxide was a superior catalyst. In the case of a catalyst consisting of 20% copper and 80% zinc oxide, the yield and space time yield of γ -butyrolactone were 95% and 0.28 at 230~240°C, respectively. No final information was yet available as to the life of the catalyst, but its activity hardly decreased after several hours.
