

calculate the activation energy for radical formation (60 kcal/mole). This energy proved equal to the C-N bond strength in benzylamine. The rate of the (heterogeneous) recombination of NH_2 radicals on glass is also given.

Chemisorption of Free Radicals on a Semiconducting Adsorbent

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The potential difference technique was used to determine the work function of a polycrystalline ZnO film in the presence of free alkyl radicals. The steady-state concentration of the latter around the adsorbent did not exceed 10^9 radicals/cm². The chemisorption of the radicals affects the work function of the ZnO. Under these conditions, radicals, rather than molecular fragments resulting

from the photolysis, produce the changes in potential difference.

A No-Gradient Reactor for Studies on the Kinetics of Pressure Reactions

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The author presents a new variant of the no-gradient reactor. This reactor is designed for studies over a wide temperature (up to 500°C) and pressure (to 300 atm) range. This reactor differs from existing ones in that, at high temperatures and pressures, a small turbine (driven by a canned rotor) and a diffuser produce a directed circulation of the gas (or liquid) through the catalyst bed. The reactor was tested in the rearrangement of cyclohexane.