

**Effective Vanadium Oxide Catalyst of Fixed Composition****By V. YA. VOL'FSON***L. V. Peesariievsky Institute of Physical Chemistry of the Academy of Sciences of Ukrainian SSR*

Experimental data show that ability of some compounds to reduce vanadium pentoxide in catalytic oxidation processes is attributable to the values of their ionization potentials. This finding enables to predict effective vanadium oxide catalysts of fixed composition and to estimate the ionization potentials of the compounds oxidizable over the catalysts.

**Electronic State of Catalysts in Adsorption and Catalysis****By G. M. KOZOUB, M. T. ROOSOV,  
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A mechanism is proposed for hydrogenation of carbon dioxide over a nickel-chromium catalyst. This is based on the results of measurements at the reaction conditions of the contact potential differences (CPD) of CO<sub>2</sub>, H<sub>2</sub>, and mixtures of these gases. According to this mechanism, the hydrogenation is due to the interaction of CO<sub>2</sub> with the hydrogen chemisorbed on the catalyst surface.

**Hydrogenation of 3-Sulfolene****By A. M. SOKOL'SKAYA, S. M. R'YESHETNEEKOV***S. M. Keerov State University in the City of Kazan'*

Hydrogenation of 3-sulfolene was studied over Pt-, Pd-, and Ni-containing catalysts. Their performance in the reaction was determined. The Pd-containing catalyst was found to be the most active and the Ni-containing catalyst, the most stable.

## LETTERS TO THE EDITOR

**Effect of Excitation of H<sub>2</sub><sup>+</sup> on the Course of Iono-Molecular Reaction, H<sub>2</sub><sup>+</sup> + H<sub>2</sub> → H<sub>3</sub><sup>+</sup> + H****By N. N. TOONEETZKY, G. E. SP'YEJAKOVA***L. Ya. Karpov Physico-Chemical Institute***Effect of Complex Formation in Reactions of Positrons with Inorganic Ions****By V. I. GOLDANSKY, V. G. FEERSOV,  
V. P. SHANTAROVEETCH***Institute of Chemical Physics of the Academy of Sciences of USSR; Institute of Theoretical and Experimental Physics of the Academy of Sciences of USSR***Erratum**

Volume 4, Number 6, in the article by John E. Benson and Michel Boudart entitled, "Hydrogen-Oxygen Titration Method for the Measurement of Supported Platinum Surface Areas," pp. 704-710:

On pp. 707 and 709, Figures 1 and 2 are reversed.