Thus the effect of the powder is to change the pH of the medium, and the platinum electrode records this change, and not the potential of the powder. The same applies when the powdered substance is moderately soluble but has no redox properties (for example barium hydroxide). The potential of the platinum electrode in saturated barium hydroxide solution and in the presence of the precipitate corresponds to the potential of the electrode at the same pH value. On the other hand, if the powdered substance is partly soluble and exhibits redox properties (for example V_2O_5), the platinum electrode measures the redox potential of the system.

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SUMMARY

1. The possibility of measuring the potentials of semiconductor powders used as catalysts and adsorbents has been studied.
2. The reaction between a powdered non-metallic substance and solution leads to a change in the pH of the medium or to the formation of a redox system, so that a platinum electrode in contact with the powder records only these changes.
3. Tomassi's claim that direct contact between a platinum electrode and a dispersed semiconductor catalyst or adsorbent makes it possible to measure the potential of the latter is erroneous.

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OBITUARY



KIRILL ALEKSEEVICH GOL'BERT

The eminent physical chemist Candidate of Chemical Sciences Kirill Alekseevich Gol'bert died suddenly in August 1962.

K. A. Gol'bert was born in 1913. He graduated from the Chemistry Faculty of Moscow State University in 1935 and worked for several years at the Moscow Textile Institute and the Karpov Physicochemical Institute. Latterly he directed the gas chromatography section of the Synthetic Alcohol Research Institute.

Gol'bert's research was mainly concerned with the theory and practice of sorption. The methods of determination of the thermodynamic and diffusion characteristics of the adsorbed phase which he developed are an important contribution to the knowledge of surface phenomena.

Gol'bert skilfully combined profound theoretical analysis with elaboration of important applied problems. Thus, *inter alia*, he directed all work on the design for installations for the separation of a number of gas mixtures (pyrolysis, cracking, coking, and others) by a moving-layer method†, and the development and application of a number of chromatographic analytical procedures.

In 1946 Gol'bert was awarded the State Prize for the development and introduction of the vacuum method of obtaining mercury.

Gol'bert was not only thoughtful and profound research worker but also a gifted teacher, whose students work in many Institutes and plants.

This energetic, sensitive, and kind man suffered an untimely death and his memory will long be cherished by his friends.

A.N. Frumkin, Ya.I. Gerasimov, K.V. Chmutov, M.I. Temkin, A.A. Zhukhovitskii, and N.M. Turkel'taub

† Fluidised-bed method? (Ed. of Translation).