Parallel effects in catalytic solids

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ABSTRACT

A comparison is made between the compensation effect which is well-known through the heterogeneous catalysis and a similar phenomenon (which is too called a compensation effect) acting on the electrical conductivity of semiconductors. Experimental data on the electrical conductivity of an alumina support for catalysts do stand for the existence of the compensation effect. The results confirm Kuznetsov hypothesis that the magnitudes E and $\sigma_0$ are functions of the same parameter: the concentration of impurities. Thus, the variations of the magnitudes E and $\sigma_0$ are compensating each other.

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