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ELECTRICAL PROPERTIES OF SnO_2-Pt/Al_2O_3 IN REDUCTION ATMOSPHERE

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Abstract

Catalysts having mobile electrons in bulk such as metals and semiconductors are good solid materials for red/ox type of reaction (oxidation) and can be effectively used in gas sensing devices as well. The aims of this work were: (i) to investigate the surface behavior of Pt(0.28%)/Al_2O_3 and SnO_2(2.94%)-Pt(0.28%)/Al_2O_3 samples in inert atmosphere (He) and in reducing atmosphere containing helium-cyclopropane gas mixture under ambient condition (i.e., room temperature, atmospheric pressure) by using electrical capacity method; (ii) and to obtain primary information on the electrical properties of these solid material for possible application to monitor the reducing gases such as hydrocarbons. The capacity results were correlated with acidic property of the studied samples.

Keywords: electrical capacity, SnO_2-Pt/Al_2O_3, cyclopropane adsorption

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