**Influence Ti2O and Ag to exchange of density water and hydrazine**

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TiO2 thin films and Ag/TiO2 nanoparticles were prepared by CVD and plasma bombardment method.XRD results showed the presence of nanoparticles in TiO2 matrix.SEM image confirmed of Ag nanoparticles.XPS analysis was utilized to study the chemical state of the Ag/TiO2 nanostructure. Formation of Ag/TiO2 nanoparticles led to the reduction of roughness of the samples from 0,72nm to 0,61nm. Ag/TiO2 nanoparticles represented greater hydrophilicity under UV illumination and visible light compared with TiO2-TiO2 thin films and Ag/TiO2 nano-particles showed an inhibition for proliferation of the bacteria on their surfaces.TiO2as a pollution control and self-cleaning material has attracted interest in the past decades and has been widely used due to in photocatalysis and hydrophilicity properties [1]. Fabrication process was started by cleaning the substrate through the standard Radio Corporation of America (RCA) method (NH4OH:H2O2:H2O solution with volume ration of 1:1:5) and then rinsed in deionized water.TiO2 layer was deposited on glass substrate using an atmospheric pressure chemical vapor depositing (CVD) system at temperature 250oC.TiCl4 was used as the main precursor to form titanium dioxide. Argon gas was used for delivery of the solution from a bubbler into the chamber.Ar flow rates during the deposition were kept at 200 Sccm. Oxygen was also introduced into the chamber by a separate inlet with flow rate of 400 Sccm. In this process crystalline TiO2 nanostructured layer was formed on the substrate. After this process 40nm thickness of Ag layer was deposited on the TiO2 coated substrate.The mechanism of photo – induced hydrophiliciety of TiO2 has been investigated by many researchers. As a result, it was revealed that preferential adsorption of water molecules on the photogenerated defective sites o the surface lead to the formation of highly hydrophilic TiO2 thin film surfacesThe density of liquids studied as a function of temperature and pressure. Existing methods for the experimental determination of the density of liquids at different temperatures and pressures is divided into two main groups: the piezometric and hydrostatic weighing. Hydrostatic weighing method is based on determining the weight of the solid body in the air, water and the sample liquid.Density of the test liquid is calculated by the formula:

 (1)

Where, G1 - Solid weight in air;G1 - Solid weight in air; G3 - weight of the suspension wire to the sample liquid;G4 - weight solids from the suspension in water of the wire;G5 - weight suspension of wire water. Accuracy by this method a liquid density of 0.001%. In the method of variable volume piezometer certain mass m isothermal fluid is compressed in the piezometer to accurately known volume V g:

 (2)

The amount of liquid in the piezometer during the experiment remained constant, the volume occupied by the fluid varies with pressure. The mercury level is fixed by changing the voltmeter at the time of closing one of the contacts with mercury. The volume of the piezometer to each of the contacts accurately measured. Since in this case the fluid has a low compressibility for a noticeable change in volume necessary to take measurements for larger amounts of fluid.

**Reference.**

1. Gan K., Surf. Technol. 191 (2005) 155.