

Oxygen absorption of partially reduced TiO_2 by hydrogen plasma treatment

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The non-equilibrium plasma has been applied to re-reduction of metallic oxide. The partial reduction of metallic oxides was examined using electrochemical method and heating. But, it is not reported that metallic oxide was reduced partially by plasma reaction.

The purpose of the present work is to investigate the partial reduction of anatase form TiO_2 without the form transformation from anatase form to rutile one using hydrogen plasma and to examine its absorption of oxygen.