Effect of Atmospheric Oxygen on Adsorption of Dyes by Zinc Oxide

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A study of the effect of atmospheric oxygen, containing admixed polyvinyl butyral, on adsorp-

tion of acidic and basic dyes by photosensitive microcrystalline zinc oxide shows that the acidic dye adsorption isotherms are altered by the oxygen, whereas those of the basic dyes are not. These results indicate that the chemisorbed oxygen-containing particles are the active centers responsible for the adsorption of acidic dyes and for the dye-sensitized photoeffect of zinc oxide.