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SEMICONDUCTING AND PHOTOCATALYTIC PROPERTIES OF MERCURIC THIOCYANATE

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Mercuric thiocyanate is found to be a p-type semiconductor with a band gap of about 3.2 eV. The microcrystals of this material easily absorb several dyes from aqueous solutions. Experimental data on photoreduction of carbonic acid to formaldehyde by dye sensitized $Hg(CNS)_2$ and semiconductors are presented showing that the photocatalytic activity is enhanced when the dye is strongly adsorbed.