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THE CATALYSIS OF WATER PHOTO–OXIDATION BY HEAVY METAL HEXACYANIDES

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Abstract : A number of heavy metal hexacyanides are tested for their ability to catalyse photo-oxidation of water with $bipy_3Ru^{2+}$ as the sensitizer and $K_2S_2O_8$ as the sacrificial agent. Strongest catalytic activity is seen in $Zn_3(Fe(CN)_6)_2$, $Cd(Fe(CN)_6)_2$ and $Fe_3(Fe(CN)_6)_3$. Semiconducting properties of heavy metal hexacyanides and their relevance to catalytic activity are discussed.