Photoelectrochemical Cell Involving $Ru(bpy)_3^{2+}$ for Visible Light Induced H_2 Evolution

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A photoelectrochemical cell by the dye sensitization on the working electrode was fabricated to produce hydrogen, simultaneously measuring the corresponding photocurrent. The dye, $Ru(bpy)_3^{2+}$, was supported by nafion to be loaded on the FTO or TiO_2 -coated FTO. In this research, the correlation between the photocurrent and the yield of hydrogen generation, the effect of electrolyte and electrode composition on the electron transfer within the cell will be investigated. Particularly, the effect of the electron carriers, TiO_2 and methylviologen, on the working electrode will be compared.