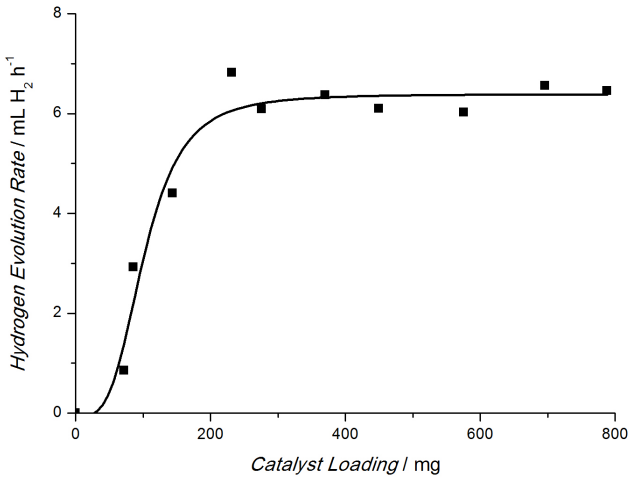
Marks
2

- When irradiated with visible light, CdS can catalyse the production of H_2 from water.

$$H_2O + \text{light} \xrightarrow{CdS} H_2 + \tfrac{1}{2}O_2$$

The rate of H_2 production from 80 mL of water at constant illumination varies with the amount of catalyst present (*i.e.* CdS loading) as shown below.



Why does the rate of H_2 production as a function of catalyst loading plateau?

THE REMAINDER OF THIS PAGE IS FOR ROUGH WORKING ONLY.