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## **Supplementary Information**

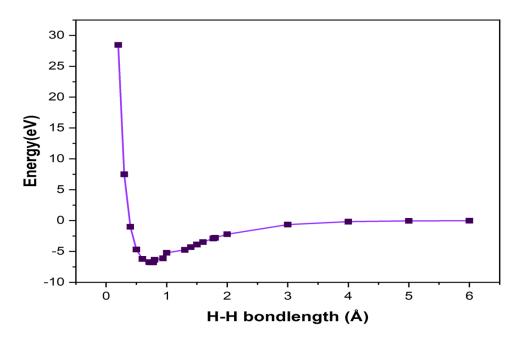


Figure S1: The dissociation curve for isolated  $H_2$  molecule. The optimum bond-length came to be 0.75 Å with an energy of -6.67eV.