

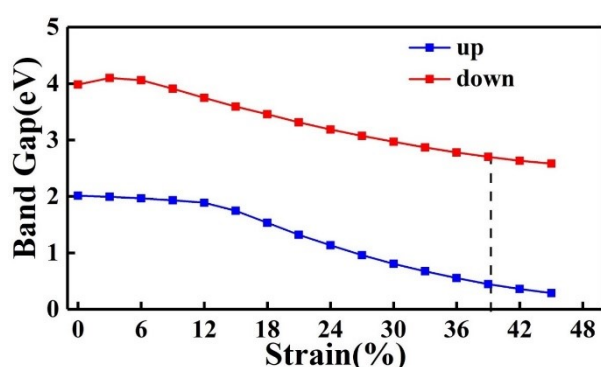
## Transition of CrI<sub>2</sub> from two-dimensional network to one-dimensional chain at monolayer limit

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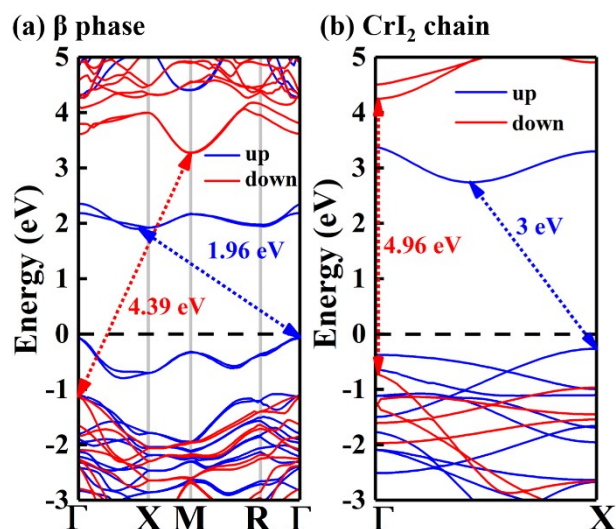
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**Figure S1.** The band gap values of the CrI<sub>2</sub> chain under different stretching strain. Blue and red lines represent spin-up and spin-down band gaps, respectively.



**Figure S2.** Electronic band structures of the  $\beta$  phase CrI<sub>2</sub> (a) and CrI<sub>2</sub> chain (b) calculated by HSE06 method. Blue and red lines represent bands for spin up and spin down, respectively. Red and blue arrows indicate the band gaps. The Fermi level is set to zero. Data is calculated at 0 K.