

## Supporting Information

### Effects of Organic Cation on the Defect Physics of Tin Halide Perovskites

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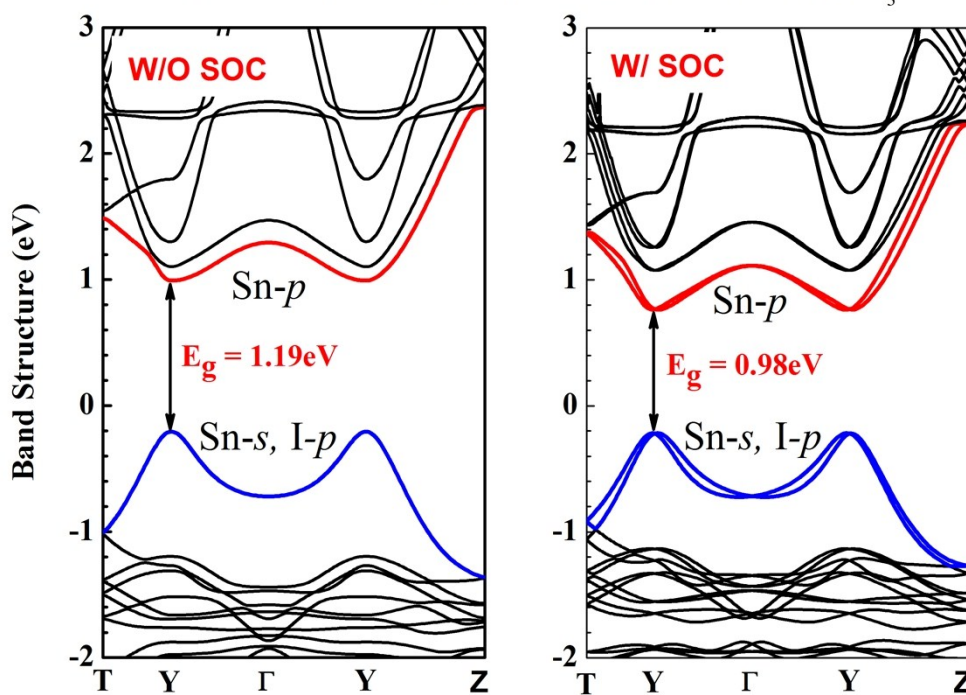
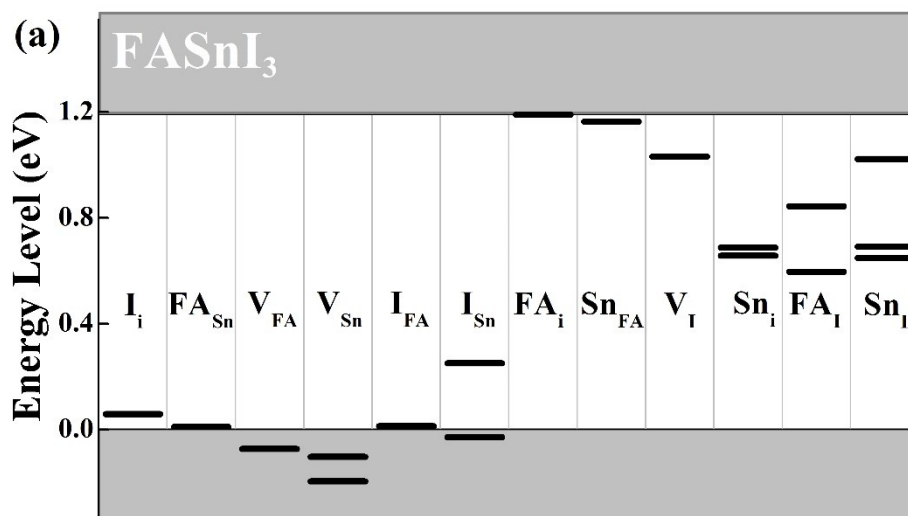
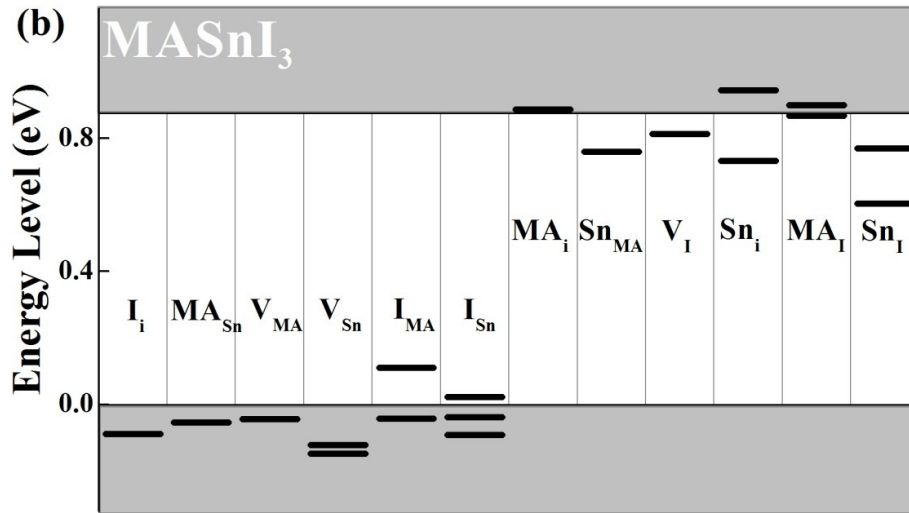
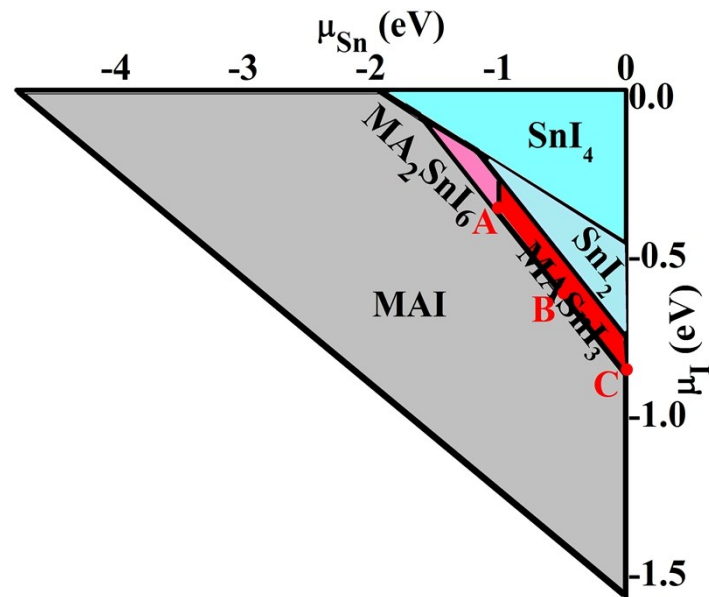


Fig. 1S The band structures of FASnI<sub>3</sub> based on PBE and PBE with SOC calculations





**Fig. 2S** The transition energy levels of various intrinsic acceptors and donors (a) FASnI<sub>3</sub> system and (b) MASnI<sub>3</sub> system.



**Fig. 3S** Thermodynamic stable range for equilibrium growth of MASnI<sub>3</sub> and three typical chemical environments, marked by A, B and C.