

## **Electronic Supplementary Information (ESI)**

### **Band structures and optical properties modulation of holey C<sub>2</sub>N nanosheets by alloying with group IV and V elements**

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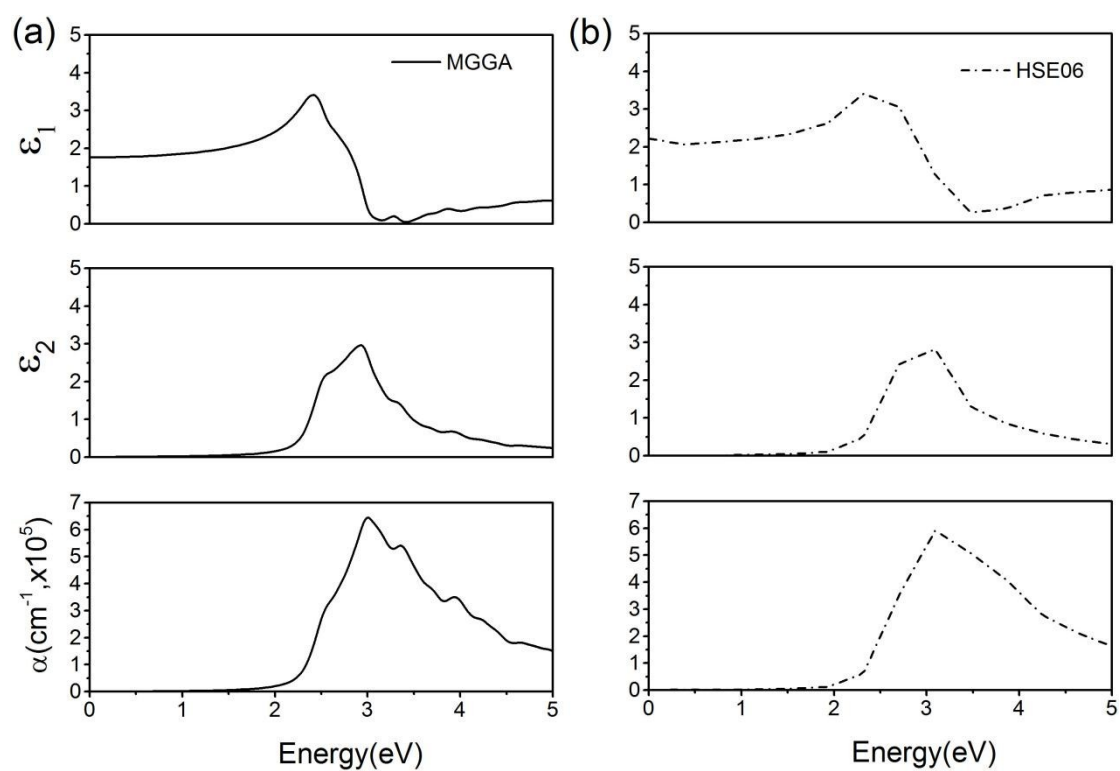


Fig. S1 The real part  $\epsilon_1(\omega)$ , imaginary part  $\epsilon_2(\omega)$  of the dielectric function and the optical absorption coefficients as a function of photon energy along the x-y plane of the 2D C<sub>2</sub>N unitcell using the (a)MGGGA and (b)HSE06 methods, respectively.