

Revised supplementary information

Sharing N atoms boosting Z-scheme charge transfer in SrTiO₂N/CN_x
heterojunctions for selective photoreduction CO₂ to CH₄

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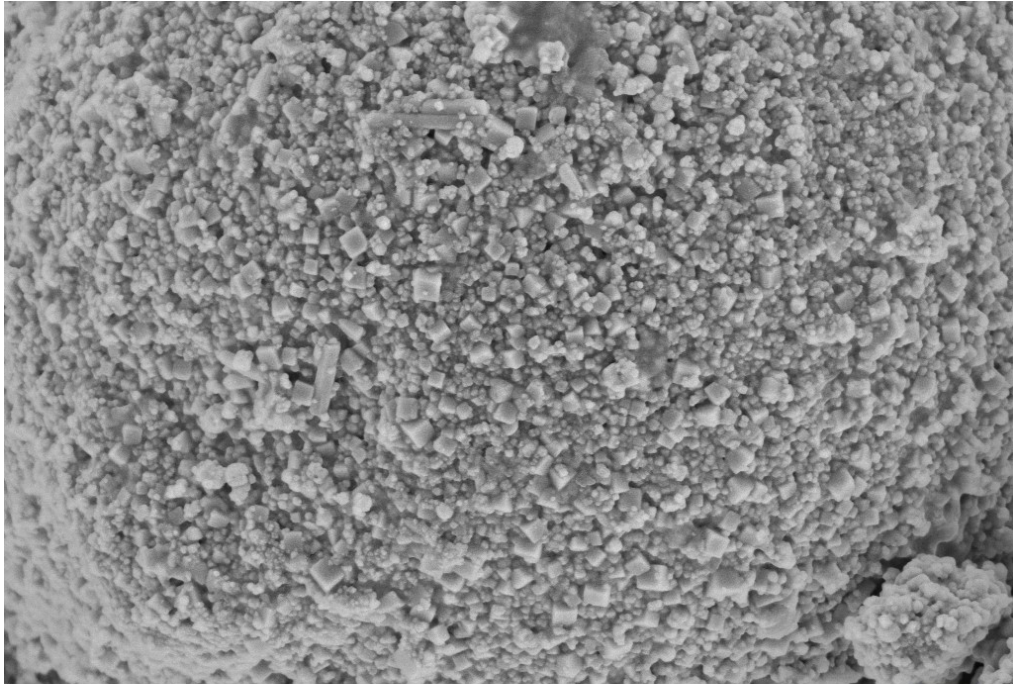


Fig. S1 SEM of SrTiO₃

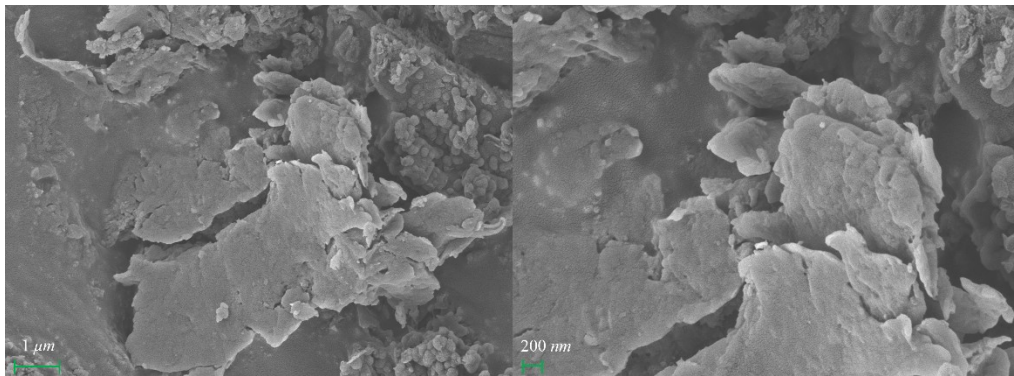


Fig. S2 SEM of CN

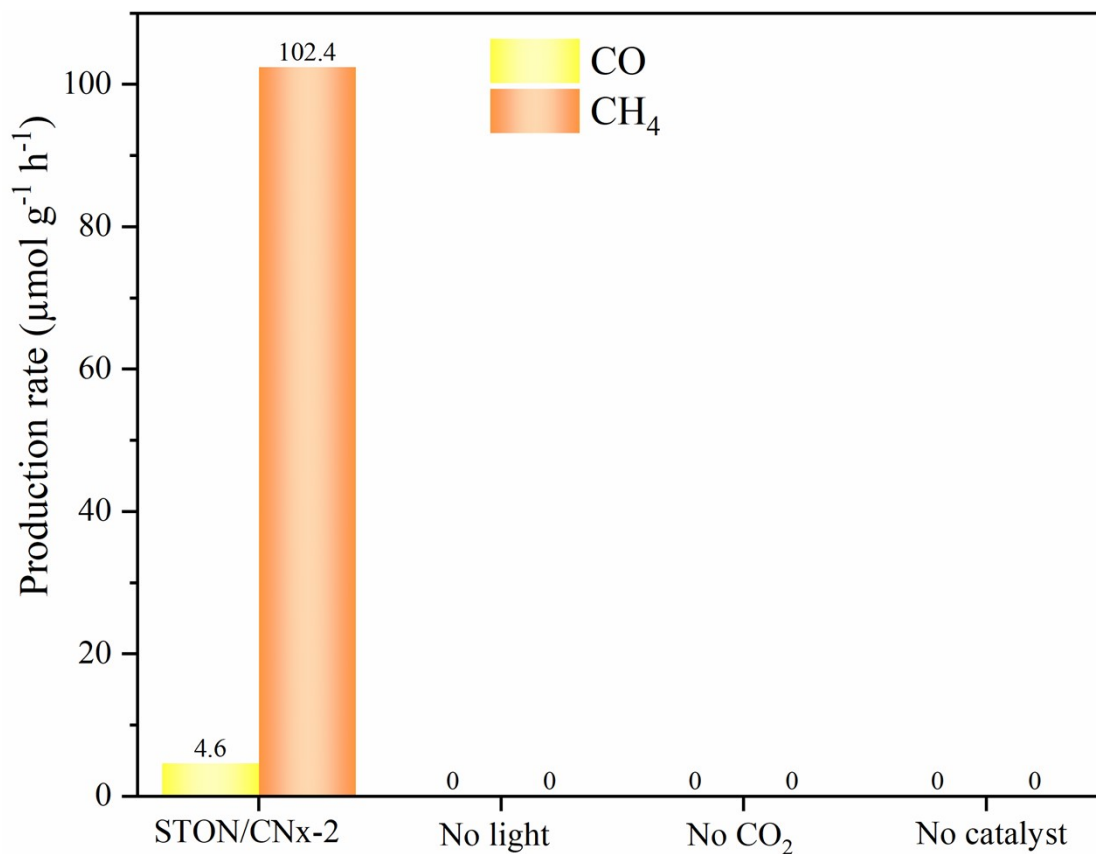


Fig. S3 CO₂ photoreduction activities of STON/CNx-2 in various conditions

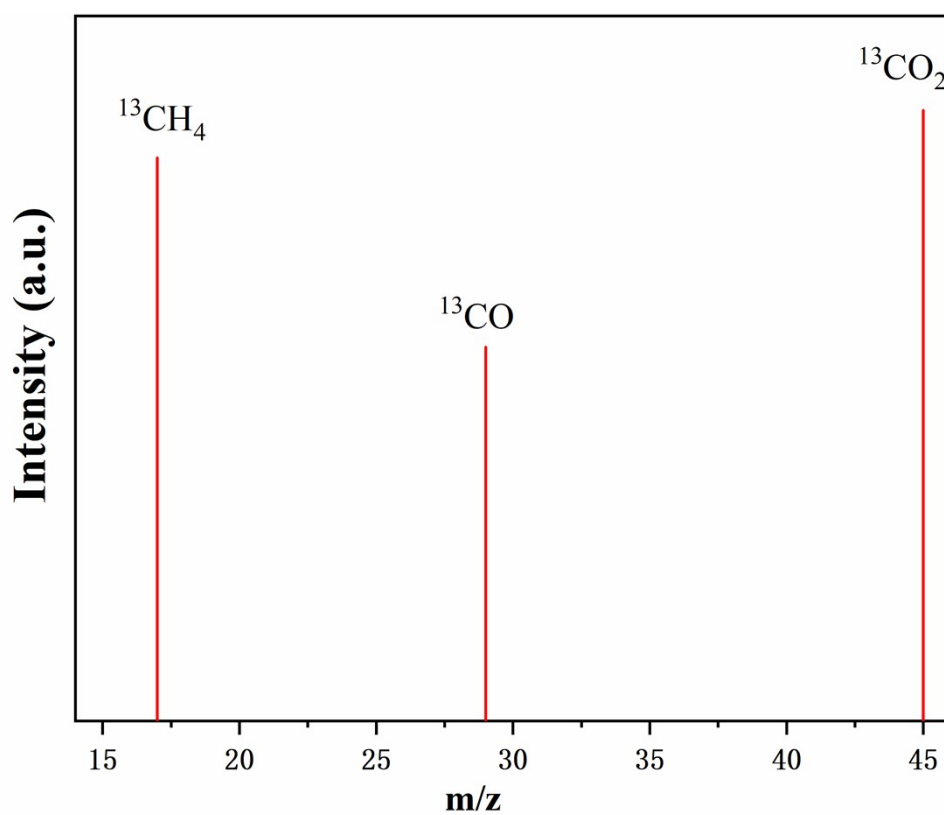


Fig. S4 Gas chromatography-mass spectrometry (GC-MS) of the products.

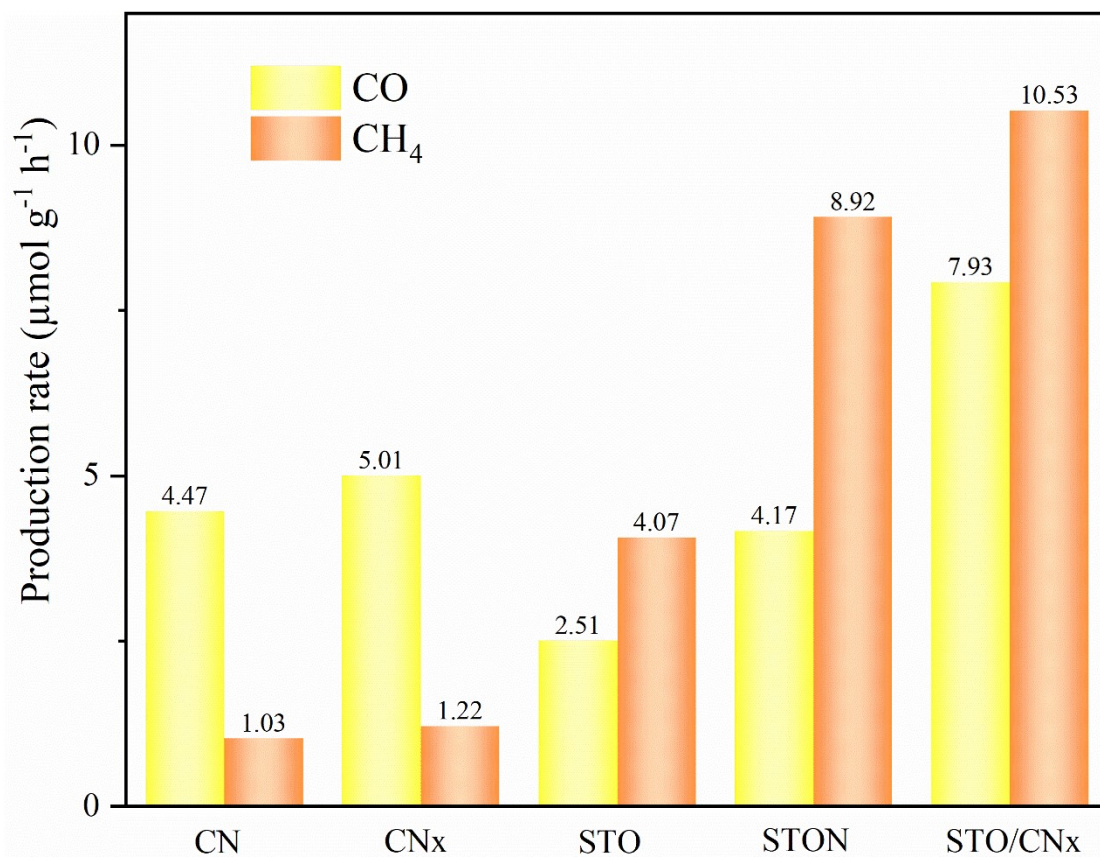


Fig. S5 Photocatalytic CO₂ reduction performance for prepared catalysts in 1% TEOA solution with 300 W Xe lamp.

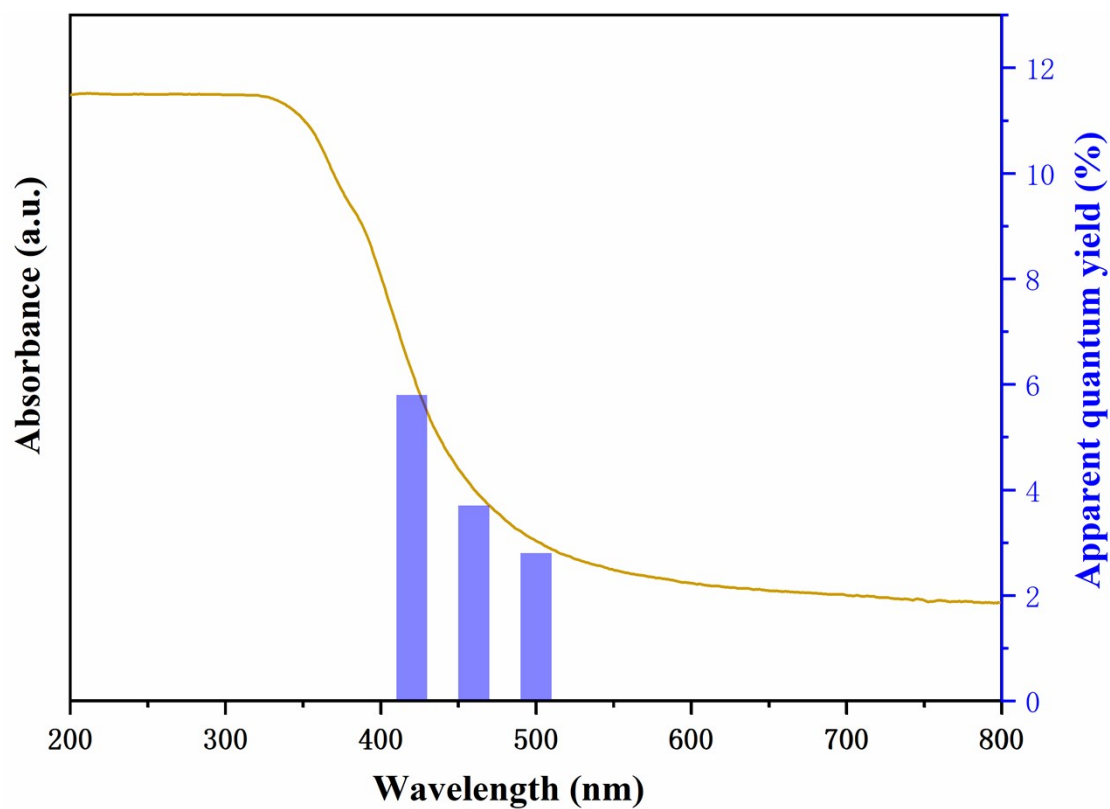


Fig. S6 AQY of the STON/CNx-2 at different wavelengths.

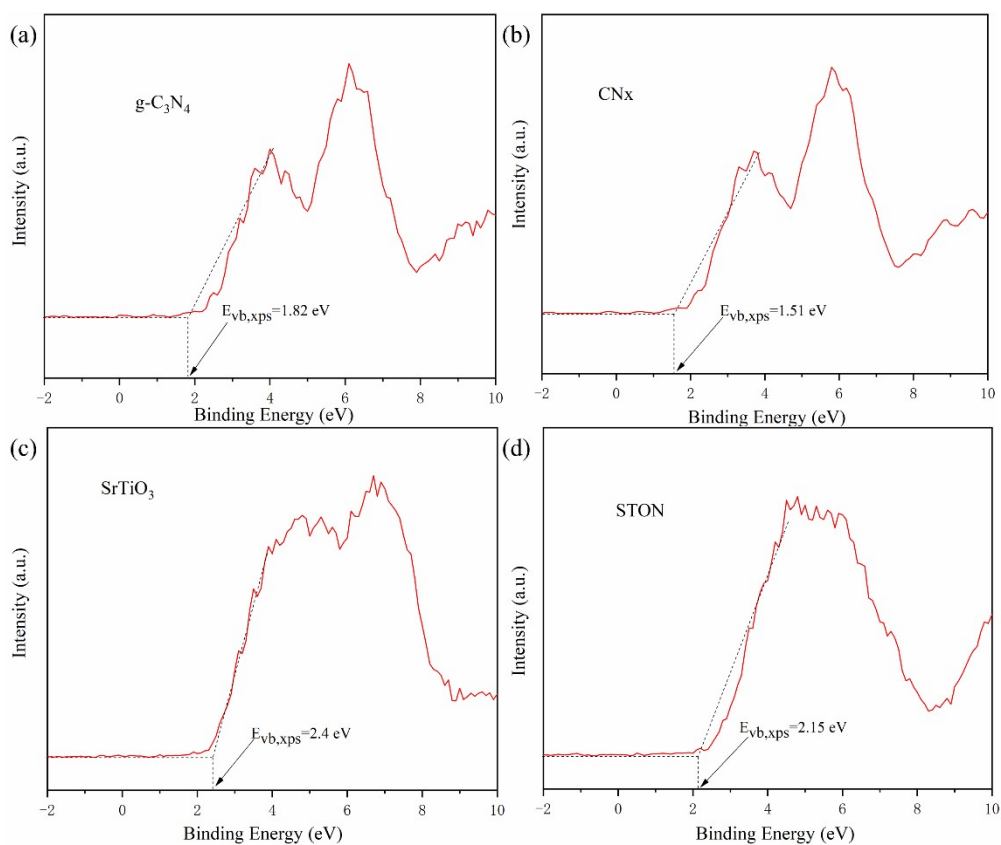


Fig. S7 Valence band energy of CN, CN_x, STO, and STON.

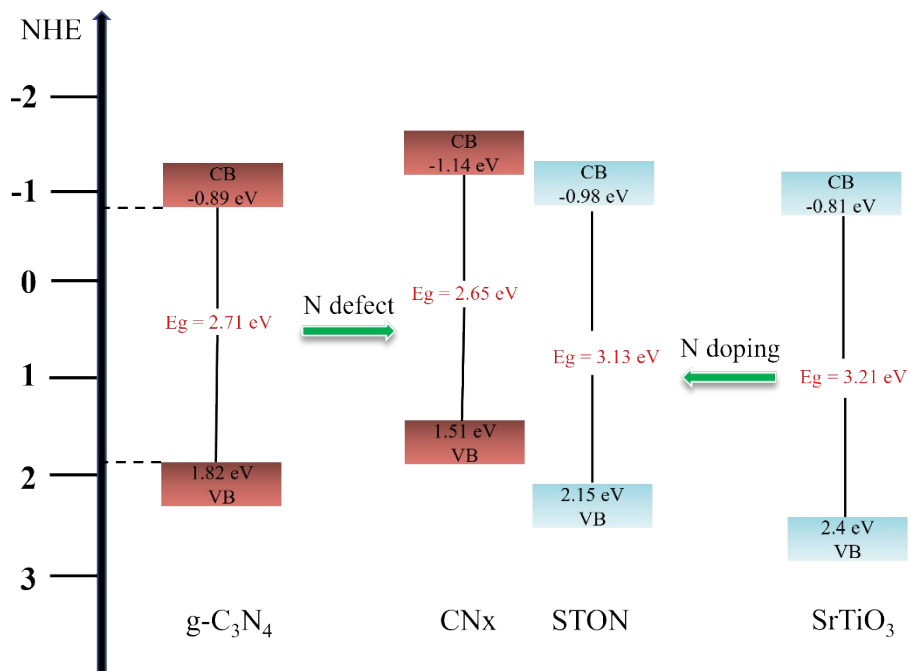


Fig. S8 The energy band structures of CN, CN_x, STO, and STON.

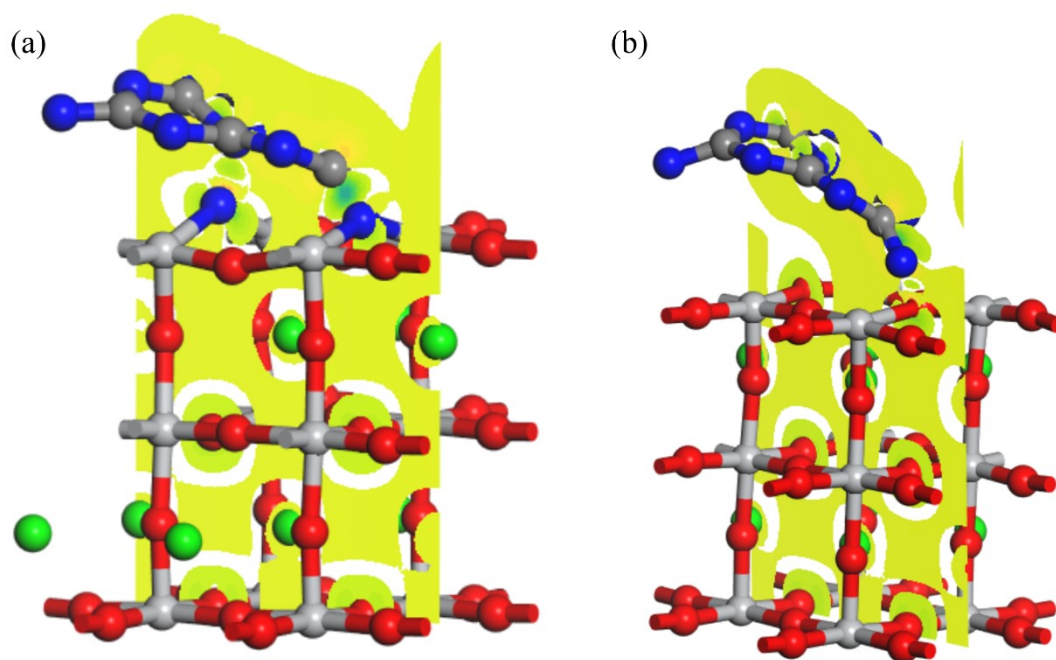


Fig. S9 The charge density distributions on the cut layers of STO/CNx (a) and STON/CNx (b).

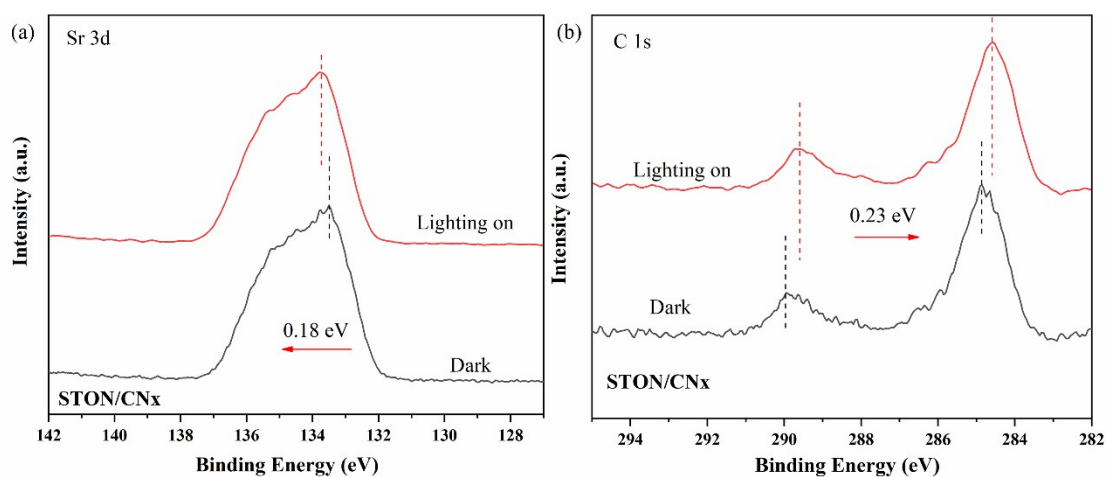


Fig. S10 (a) Sr 3d and (b) C 1s XPS spectra of STON/CNx with and without irradiation.