

Supporting information for

“Plasmonic Bound States in the Continuum to Tailor Exciton Emission of MoTe₂”

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Figure S1: The simulated $\text{Re}(E_z)$ patterns of the plasmonic mode.

Figure S2: PL mapping at the wavelength of MoTe₂ exciton.

Figure S3: the transmission spectrum of the ML MoTe₂ covering by plasmonic BIC structure.

Figure S4: The diagram for PL spectrum of MoTe₂ without and with plasmonic BIC mode.

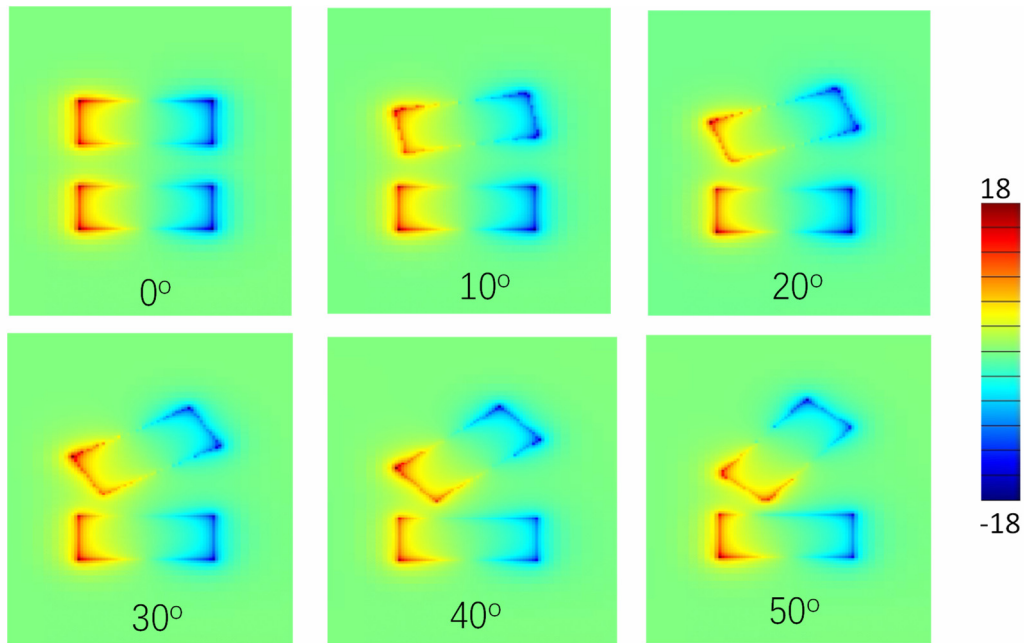


Figure S1. The simulated $\text{Re}(E_z)$ patterns of the plasmonic mode (1100nm) with the nanorod rotation angle of 0, 20 and 50 degrees.

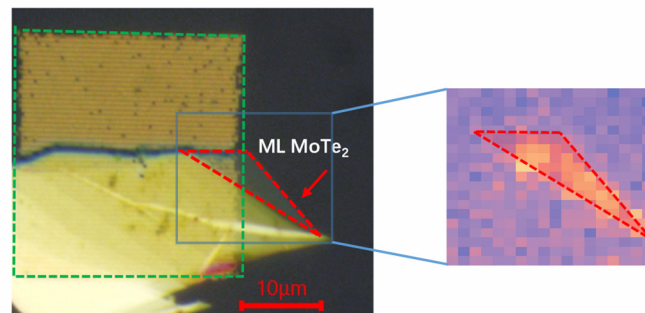


Figure S2. Image of the device and the corresponding PL mapping at the wavelength of 1140nm.

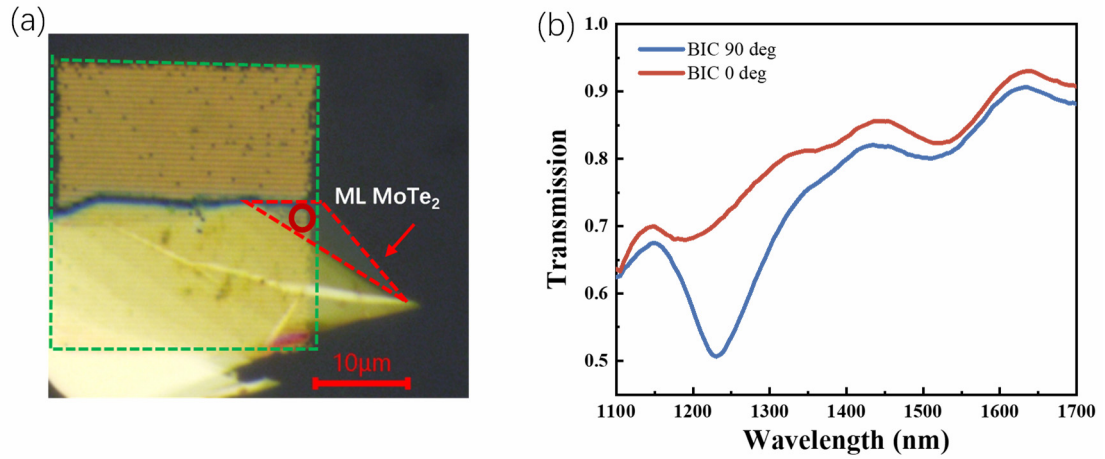


Figure S3. (a) Image of the device. For transmission measurement, the light spot is incident on the red circle, which is region of ML MoTe₂ covering by plasmonic BIC structure. (b) the transmission spectrum of the ML MoTe₂ covering by plasmonic BIC structure.

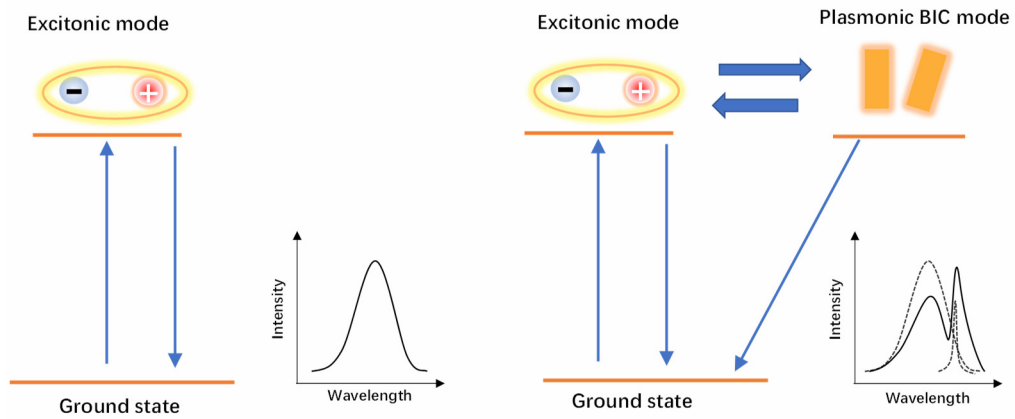


Figure S4. The diagram for PL spectrum of MoTe₂ without and with plasmonic BIC mode. Without coupling, the PL peak reflects the excitonic transition. When the coupling with plasmonic BIC mode, exciton will transfer energy to plasmonic mode, which open the plasmonic BIC transition channel. These two transitions will interfere with each other and lead to the Fano-like line shape.