

## Supporting information

Interface synthesis for controllable construction of 2D Zn(Bim)(OAc)  
nanosheets via oil/water system and their application in oil

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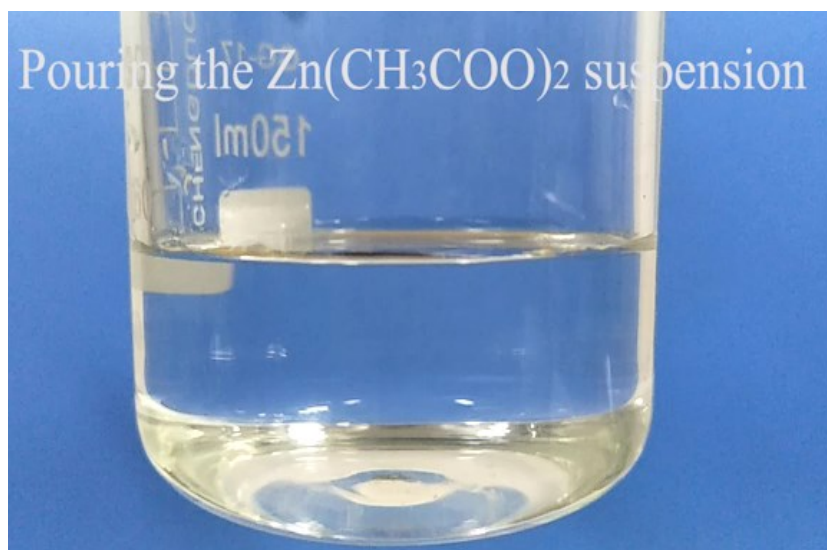


Fig. S1. The video of the formation of Zn(Bim)(OAc) nanosheets at O/W interface system.

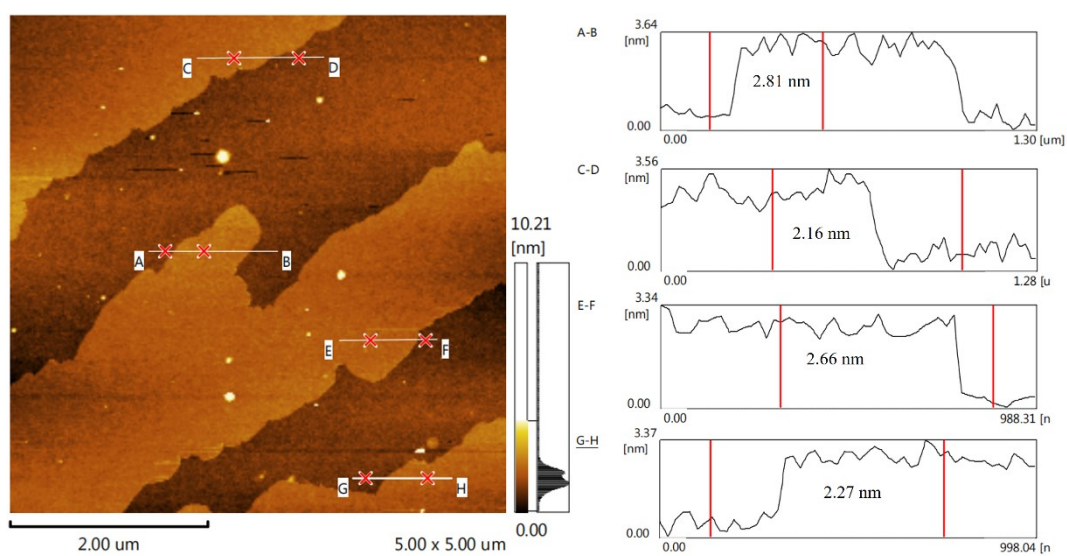


Fig. S2. AFM images of the as-synthesized Zn(Bim)(OAc) nanosheets.

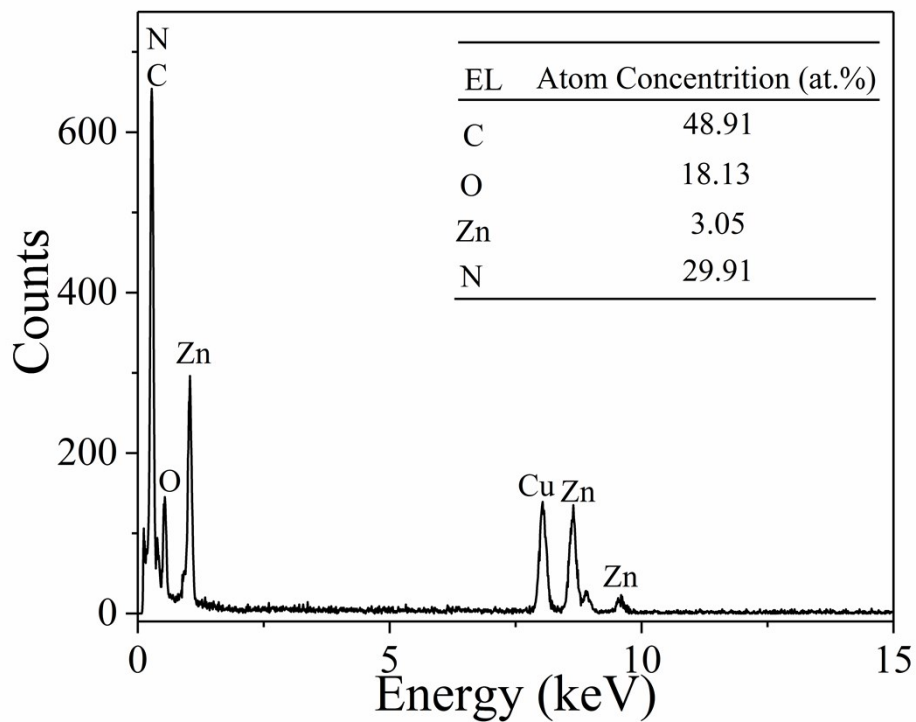


Fig. S3. EDS spectra of the as-synthesized Zn(Bim)(OAc) nanosheets.

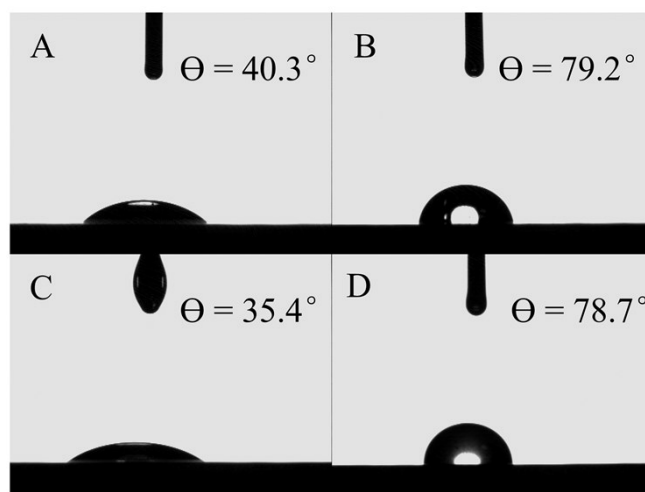


Fig. S4. The contact angles of (A) base oil, (B) castor oil, (C) base oil-Zn(Bim)(OAc) nanosheets and (D) castor oil-Zn(Bim)(OAc) nanosheets on the 304 stainless steel.

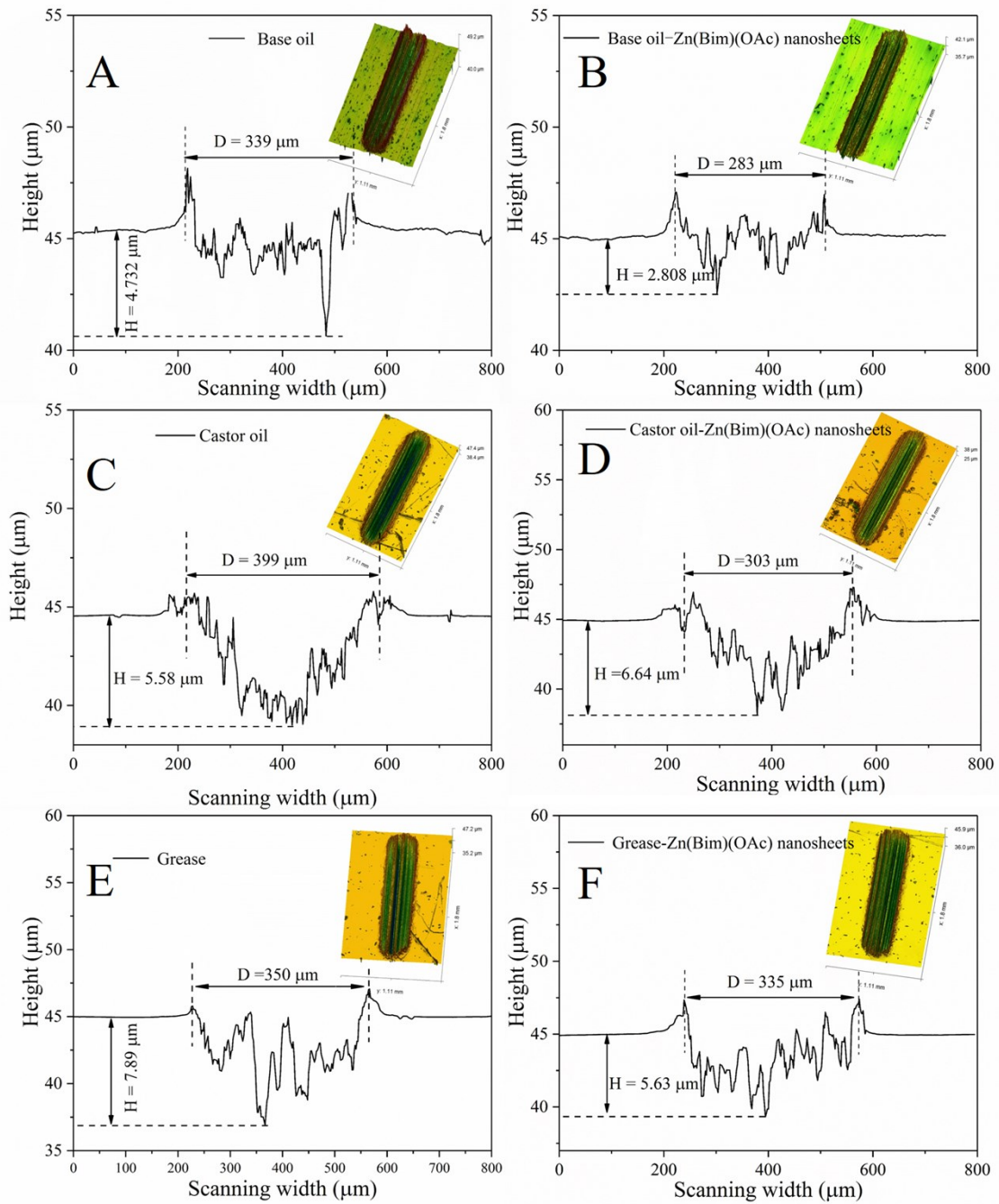


Fig. S5. 3D worn surface topography (inset) and 2D cross section profiles perpendicular to sliding direction of (A) base oil, (B) base oil-Zn(Bim)(OAc) nanosheets, (C) castor oil, (D) castor oil-Zn(Bim)(OAc) nanosheets, (E) grease, (F) grease-Zn(Bim)(OAc) nanosheets.