Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Synergistic lubrication of Porous MoS_2-POSS nanohybrid

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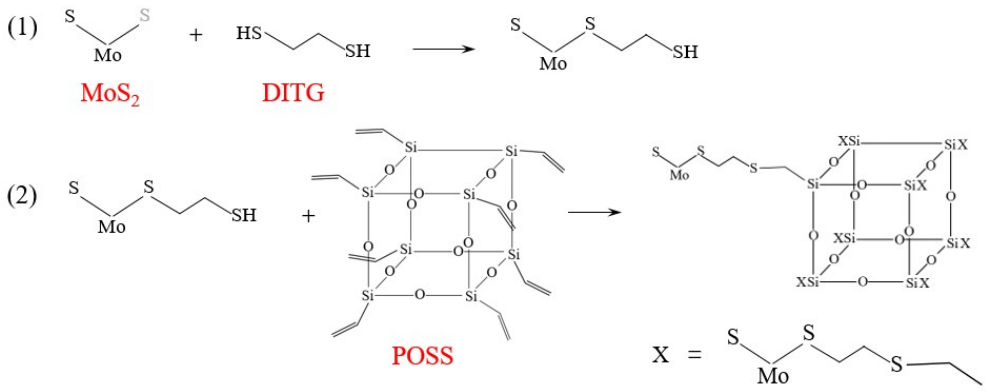

Fig. S1. Schematic diagram of the function of DITG in the synthesis of MoS_2-POSS nanohybrid.

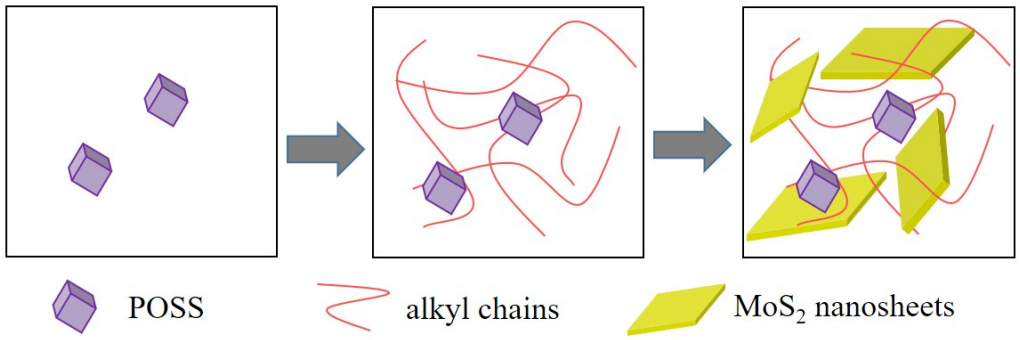

Fig. S2. Schematic diagram of formation of porous MoS_2-POSS nanohybrid.

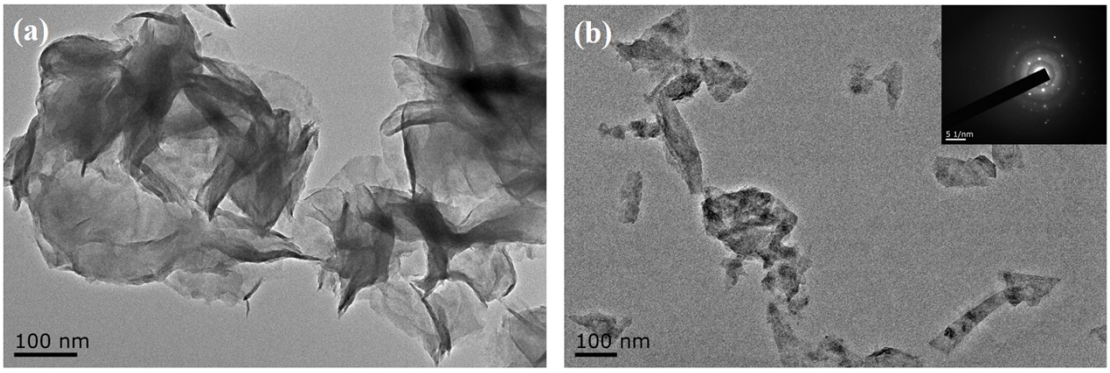

Fig. S3. TEM images of (a) bulk MoS_2, and (b) exfoliated MoS_2. The inserted picture: selected area electron diffraction (SAED) pattern.

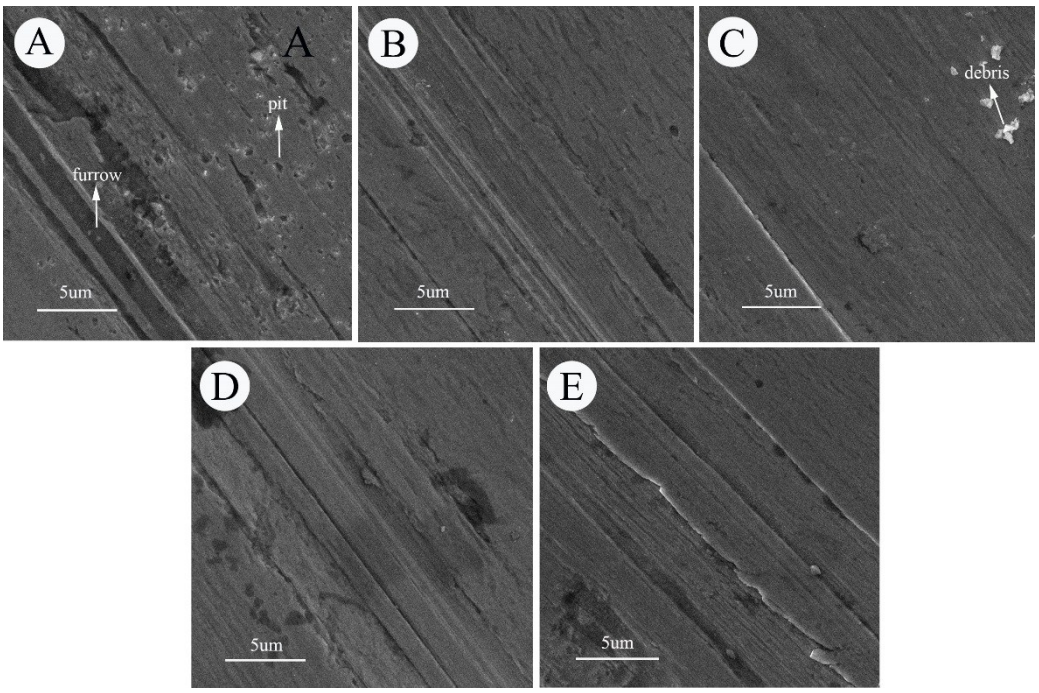

Fig. S4. SEM images of the worn surface on the pin lubricated with LP containing: (a) 0.20wt%, (b) 0.40wt%, (c) 0.60wt%, (d) 0.80wt%, and (e) 1.00wt% POSS.

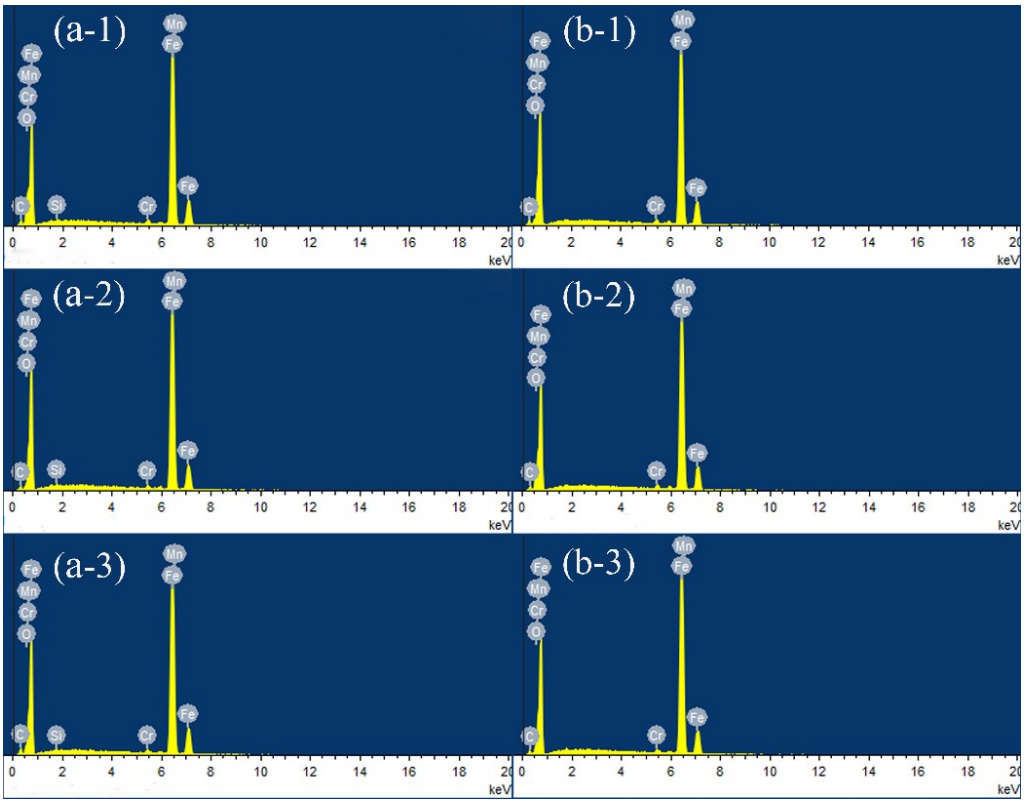

Fig. S5. EDS spectra of wear scars for the steel pin lubricated by LP containing (a-1) 0.20wt% POSS, (a-2) 0.60wt% POSS, (a-3) 1.00wt% POSS, (b-1) 0.20wt% MoS_2, (b-2) 0.60wt% MoS_2, (b-3) 1.00wt% MoS_2, respectively.