## **Supplementary Information:**

## Multiwalled carbon nanotubes enhanced the friction layer evolution and self-lubricating property of TiAl-10 wt.% Ag-1 wt.% MWCNTs sample

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Fig.S1 Typical FESEM cross-sectional morphology of MWCNTs in TAM (a) and

XRD pattern of TAM sample prepared by SPS (b)



Fig.S2 Representative EPMA morphology (a) and main elemental distributions (b-e)

of TAM sample prepared by SPS



Fig.S3 Representative EPMA morphology (a) and main elemental distributions (b-f)

of TAM sample at 160 min



Fig.S4 Typical EPMA morphology of wear scar of TA sample (a), main element content (b) and FESEM micro-morphology of silver lubricating film (c) in the region of rectangle A in Fig.S4a at 160 min