Supplementary Information

Speed dependence of liquid superlubricity stability with $\text{H}_3\text{PO}_4$ solution

Chen Xiao$^a$, Jinjin Li$^b$, Lei Chen$^a$, Chenhui Zhang$^b$, Ningning Zhou$^c$, Linmao Qian$^{a,*}$ and Jianbin Luo$^b$

$^a$Tribology Research Institute, State Key Laboratory of Traction Power, Southwest Jiaotong University, Chengdu 610031, Sichuan, China.

$^b$State Key Laboratory of Tribology, Tsinghua University, Beijing 100084, China

$^c$Beijing Key Laboratory of Long-life Technology of Precise Rotation and Transmission Mechanisms, Beijing Institute of Control Engineering, Beijing 100094, China

* Corresponding Author: linmao@swjtu.edu.cn, Tel.: +86 28 87600687 and Fax: +86 28 87603142

1. SEM image and EDS spectra of the worn area on glass surface after rubbed at 0.628 m/s

The surface morphology and element compositions of wear scar after the running-in procedure at 0.628 m/s and original surface were characterized by SEM and EDS detector. Before the EDS detection, the surface was rinsed by plentiful DI water to eliminate the influence of liquid lubricating film. As shown in Fig. S1, EDS results showed that no obvious difference was identified between worn surface and original surface in the elemental compositions.
Fig. S1 (a) SEM image of worn (I) and original surface (II) on glass substrate after cleaning. (b) Element analysis by EDS spectra.