Branched polyethyleneimine modified carbon nanoparticles as the effective additives of water lubrication

Zihao Moua, Baogang Wanga,b,[[1]](#footnote-2)\*, and Zhiyu Huanga,b

aCollege of Chemistry and Chemical Engineering, Southwest Petroleum University, Chengdu 610500, P. R. China

bOil & Gas Field Applied Chemistry Key Laboratory of Sichuan Province, Chengdu 610500, P. R. China



**Figure S1.** TGA curve of CNPs-PEI.



**Figure S2.** Selected area EDS analyses of wear scars of the lower balls lubricated by (a) base liquid and (b) CNPs-PEI (0.15 wt%)/base liquid suspension (insets: elemental compositions and SEM images of wear scars).

1. \* Corresponding author.

*Email address:* bgwang@swpu.edu.cn [↑](#footnote-ref-2)