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(54) **MODIFIED LUBRICANT**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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See application file for complete search history.

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(57) **ABSTRACT**

A modified lubricant includes lubricant grease and nano-graphite plates dispersed thoroughly in the lubricant grease. The content of the nano-graphite plates is 0.0001 wt % to 10 wt %. Each nano-graphite plate has a length or a width between 1 and 100  $\mu\text{m}$ , a thickness within 10 nm and 100 nm, and N graphene layers stacked together and a surface modifying layer disposed on the top or bottom of the nano-graphite plates, wherein N is 30 to 300. The surface modifying layer has a surface modifying agent which includes at least two functional groups located at two ends of the surface modifying agent, one of the two functional groups is chemically bonded with certain organic functional group remaining on the surface of the nano-graphite plate, and the other of the two functional groups forms the functional surface of the nano-graphite plate.

**9 Claims, 6 Drawing Sheets**

