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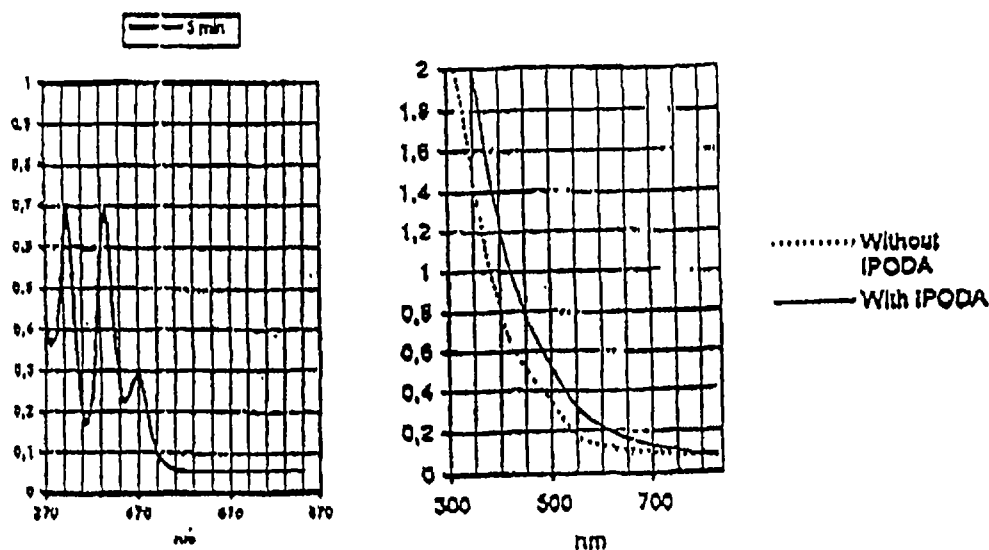
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4) Title: NANOSIZED PARTICLES OF MOLYBDENUM SULFIDE AND DERIVATIVES AND USES THEREOF



(57) Abstract: A lubricant composition is disclosed that comprises (a) a lubricant and (b) at least one molybdenum-containing compound in the form of surface-capped nanosized particles of the general formula $(Z)_n(X-R)_m$ wherein Z is an inorganic moiety comprising molybdenum and sulfur in the form of particles having dimensions in the range of from about 1 to about 100 nm, (X-R) is a surface-capping reagent wherein R is a C_4 to C_{20} straight or branched-chain alkyl or alkylated cycloalkyl radical or radicals and X is a functional group capable of specific sorption and/or chemical interaction with molybdenum/sulfur moiety, n is the number of molecules of Z in the particles, m is an integer representing the amount of surface-capping reagents relative to a single particle, and the ratio of m to n is in the range of from about 1 to about 10.

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