

CLAIMS

1. A fuel composition comprising (1) greater than 50 wt. % of a hydrocarbon fuel boiling in gasoline or diesel range and (2) a minor amount of one or more of organic hydride-based reductant.
2. The fuel composition of claim 1, wherein the organic hydride-based reductant is substantially free of halogen, boron, or silicon.
3. The fuel composition of claim 1, wherein the organic hydride-based reductant is dihydropyridine, nicotinamide adenine dinucleotide, methylene tetrahydromethanopterin, acridine, triarylmethane, hexahydro triazaphenalene, triamine, aryl benzoimidazoline, dioxolane, diethercyclohexadiene, cycloheptatriene, flavin adenine dinucleotide, or an analog thereof.
4. The fuel composition of claim 1, wherein the organic hydride-based reductant is present in 25 to 5000 ppm by weight.
5. The fuel composition of claim 1, wherein the organic hydride-based reductant is present in 250 to 2000 ppm by weight.
6. The fuel composition of claim 1, further comprising:
oxygenate, anti-knock agent, detergent, dispersant, friction modifier, antioxidant, metal deactivator, demulsifier, pour point depressant, flow improver, cetane improver, or lubricity additive.
7. A method of preventing or reducing undesirable ignition events in an internal combustion engine, the method comprising:

supplying to the engine, a fuel composition comprising (1) greater than 50 wt. % of a hydrocarbon fuel boiling in gasoline or diesel range and (2) a minor amount of one or more of organic hydride-based reductant

8. The method of claim 7, wherein the internal combustion engine is spark-ignited.

9. The method of claim 7, wherein the internal combustion engine is operated at less than 3000 rpm.

10. The method of claim 7, wherein the spark-ignited internal combustion engine is operated under a load with a brake mean effective pressure of at least 1 MPa (10 bar).

11. A lubricating oil composition comprising (1) greater than 50 wt. % of a base oil and (2) a minor amount of one or more of an organic hydride-based reductant.

12. The lubricating oil composition of claim 11, wherein the organic hydride-based reductant is substantially free of halogen, boron, or silicon.

13. The lubricating oil composition of claim 11, wherein the organic hydride-based reductant is dihydropyridine, nicotinamide adenine dinucleotide, methylene tetrahydromethanopterin, acridine, triarylmethane, hexahydro triazaphenalene, triamine, aryl benzomidazoline, dioxolane, diethercyclohexadiene, cycloheptatriene, flavin adenine dinucleotide, or an analog thereof.

14. The lubricating oil composition of claim 11, wherein the organic hydride-based reductant is present in 0.001 to 10% by weight.

15. The lubricating oil composition of claim 11, wherein the organic hydride-based reductant is present in 0.5 to 5% by weight.

16. The lubricating oil composition of claim 11, further comprising:
antioxidant, ashless dispersant, anti-wear agent, detergent, rust inhibitor, dehazing agent, demulsifying agent, friction modifier, metal deactivating agent, pour point depressant, viscosity modifier, antifoaming agent, co-solvent, package compatibilizer, corrosion-inhibitor, dye, or extreme pressure agent.

17. A method of preventing or reducing undesirable ignition events in an internal combustion engine, the method comprising:

supplying to the engine a lubricating oil composition comprising (1) greater than 50 wt. % of a base oil and (2) a minor amount of one or more of an organic hydride-based reductant.

18. The method of claim 17, wherein the internal combustion engine is spark-ignited.

19. The method of claim 17, wherein the internal combustion engine is operated at less than 3000 rpm.

20. The method of claim 17, wherein the internal combustion engine is operated under a load with a brake mean effective pressure of at least 1 MPa (10 bar).