Title (en)

COMPLEX MIXTURES OF IONS AND PROCESSES FOR DEPOSITION OF COATINGS ON SURFACES

Title (de)

KOMPLEXE IONENGEMISCHE UND VERFAHREN ZUR ABSCHEIDUNG VON BESCHICHTUNGEN AUF OBERFLÄCHEN

Title (fr)

MELANGES COMPLEXES D'IONS ET PROCEDES DE DEPOT DE REVETEMENTS SUR DES SURFACES

Publication

EP 1807487 A2 20070718 (EN)

Application

EP 05796082 A 20050908

Priority

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Abstract (en)

[origin: WO2006029266A2] A composition and method for providing a wear-resistant and fuel-saving coating on metals, particularly metal surfaces within internal combustion engines. A source of ammonium ions, an alkali metal in an aqueous medium, and the coating metal to be applied to the surface are combined to produce an electrolyte solution comprising a complex ion mixture. The electrolyte solution can be used to deposit the coating metal on conductive substrates. The coating metal may comprise phosphorus, sulfur, carbon, bismuth, boron, silicon, and combinations thereof. The electrolyte solution can be dehydrated in a hydrocarbon medium, thus providing novel materials for use as lubricating oil additives and as fuel additives. These new surfaces may significantly reduce coefficient of friction, smooth the flame front, reduce corrosion, enhance fuel economy, and reduce hydrocarbon emissions when used in internal combustion engines.

IPC 8 full level

C10L 1/23 (2006.01)

CPC (source: EP US)

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Citation (search report)

See references of WO 2006029266A2

Designated contracting state (EPC)

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