

Lubricant Additives Comprised of Ionic Liquids Containing Carboxylate Anions with Branched Chains of C4-C8 Alkyls

Disclosure Number

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Technology Summary

The present invention builds on the existing ORNL portfolio of ionic liquid lubricant additives. This is a joint invention between ORNL and Cytec for a new group of phosphonium-carboxylate ionic liquids as lubricant additives. The phosphonium cation of the ionic liquid is in a specific quaternary structure ([PR₄]⁺), and the anion is a specific carboxylate structure. The ionic liquid may be used as an ashless additive in lubricating oils, such as anti-wear and friction modifier.

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Licensing Contact

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