

Rostyslav Yeshchurovskyi

Converted Types of Automotive Fuels



Arrow Science & Technology

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CONVERTED TYPES OF AUTOMOTIVE FUELS

*Fuel Emulsions for Smart Transport and Smart
Homes with Real-Time Dynamic Homogenization*

2026

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Converted Types of Automotive Fuels / R. Yeshchurovskyi, –
Urbana : Arrow Science & Technology, LLC – 2026. – 38 p.

ISBN 978-1-967596-29-4

Modern engines equipped with high-pressure pumps can be fitted with a dynamic fuel mixture homogenization system without requiring any significant modifications to the existing fuel system. Installation of a dynamic homogenization system can be implemented both on stationary internal combustion engines and on internal combustion engines installed in vehicles.

The dynamic homogenization system may be additionally equipped with a subsystem for forming two types of fuel emulsions: compressible emulsions and incompressible emulsions. The dynamic homogenization system enables effective emulsification of up to eight additional components within the fuel emulsion.

Without any structural modification, the dynamic homogenization system is capable of efficiently dissolving combustible gases into the flow of liquid hydrocarbon fuel immediately prior to injection into the combustion chamber, both in stationary internal combustion engines and in engines installed in transport vehicles.

Keywords: *Liquid fuel; heavy liquid fuel; complex dynamic homogenization; hydrocarbon fuel mixtures; internal combustion engines; vortex mixing; vortex tube.*

Subscribe to print 28/02/2026. Format 60×84/16.

Offset Paper. Arno Pro. Pec. liter. 14. Circulation of 300 copies.

Typeset in Arrow Science & Technology, LLC, USA.

Publishing by Arrow Science & Technology, LLC

805 Silver St., Urbana, IL 61801

ISBN 978-1-967596-29-4

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