

Evidence that inexpensive device boosts fuel economy by up to 20 percent

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A new device could enhance fuel economy by up to 20 percent. Credit: Wikimedia Commons

Amid sticker-shock fuel prices, researchers in Pennsylvania are reporting results of laboratory tests and road tests verifying that a simple, inexpensive device attached to a car engine's fuel injector can boost gas mileage by up to 20 percent. That translates into several more precious miles per gallon, they say. Their study is scheduled for the November 19 issue of *ACS' Energy & Fuels*.

In the new study, Rongjia Tao and colleagues describe development and testing of a new fuel economy booster. The small device consists of an electrically charged tube that can be attached to the fuel line of a car's

engine near the fuel injector.

The device creates an electric field that thins fuel, or reduces its viscosity, so that smaller droplets are injected into the engine. That leads to more efficient and cleaner combustion than a standard fuel injector, the researchers say.

Six months of road testing in a diesel car showed that the device increased highway fuel from 33 miles per gallon (mpg) to 37 mpg. "We expect the device will have wide applications on all types of internal combustion engines, present ones and future ones," the report states, citing engines powered by gasoline, biodiesel, and kerosene. Further improvements in the device could lead to even better mileage, they suggest.

Article: "Electrorheology Leads to Efficient Combustion",
[dx.doi.org/10.1021/ef8004898](https://doi.org/10.1021/ef8004898)

Source: American Chemical Society

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