

A 'shrimp cocktail' to fuel cars and trucks

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A substance made from shrimp shells may transform biodiesel production into a faster, less expensive and more eco-friendly process, researchers are reporting. Credit: Wikimedia Commons

Call it a "shrimp cocktail" for your fuel tank. Scientists in China are reporting development of a catalyst made from shrimp shells that could transform production of biodiesel fuel into a faster, less expensive, and more environmentally friendly process. Their study is scheduled for the Aug. 20 issue of ACS' *Energy & Fuels* journal.

Xinsheng Zheng and colleagues note that an energy-hungry world, concerned about global warming, increasingly puts its future fuel hopes on renewable fuels like biodiesel. Today's biodiesel production processes, however, require catalysts to speed up the chemical reactions that transform soybean, canola, and other plant oils into diesel [fuel](#).

Traditional catalysts cannot be reused and must be neutralized with large amounts of water — another increasingly scarce resource — leaving behind large amounts of polluted wastewater.

The researchers describe development of a new catalyst produced from [shrimp](#) shells. In laboratory tests, the shrimp shell catalysts converted canola oil to biodiesel (89 percent conversion in three hours) faster and more efficiently than some conventional catalysts. The new catalysts also can be reused and the process minimizes waste production and pollution, the scientists note.

More information: "Shrimp Shell [Catalyst](#) for Biodiesel Production"; *Energy & Fuels*

Source: American Chemical Society ([news](#) : [web](#))

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