

Student Upcycles Solar-Powered Motorcycle

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With \$50 and some elbow grease, a Purdue student created a hybrid vehicle that could inspire a generation of alternative motorists.

Purdue junior and physics major Tony Coiro spent \$2,500 redesigning and retrofitting the used 1978 Suzuki motorcycle, and ended up with a solar-powered motorcycle that has a range of up to 24 miles per charge and top speed of 45 miles per hour.

"The riding experience is surreal," Coiro said [on the Purdue website](#). "I get instant, silent, constant acceleration that outpaces urban traffic. It's like riding a magic carpet."

Coiro has already received a provisional patent for his motorcycle, which cuts his transportation costs down to well less than a penny per mile. The vehicle was recently featured in Purdue Green Week's alternative energy vehicle show.

In an effort to help like-minded students expand their understanding of environmentally-friendly transportation options, Coiro has co-founded the Purdue Electric Vehicles Club with sophomores Jim Danielson and Sean Kleinschmidt.

Danielson and Kleinschmidt have been interested in alternative transportation for years, and spent the summer after their high school graduation upcycling a 1987 Porsche 924S they picked up for \$500 to electric power.

The students are well aware that their work is helping to propel public knowledge about [solar](#) and electric powered vehicles, and they are planning to patent and commercialize their inventions as a way to feed money back into their research.

Coiro is already designing a 100-horsepower motorcycle that will travel up to 100 miles per charge, top 100 mph and draw even more of its energy from the sun. The all-wheel-drive bike would include motors in each hub and no drive trains (Purdue.edu).

Although Coiro may be the first to create a functional solar-powered motorcycle with such a small budget, he's certainly not the first to tinker around with the idea. In 2009, a man named Richard Gryzch grabbed headlines for building what he claimed to be the world's [first fully sun-powered electric motorbike](#). He called the bike the Solar Flyer, and it was rumored to get up to 50 miles on a full charge with a top speed of 90 mph.