

[more links at end](#)

SUNY Engineers Developing Regenerative Shock Absorber

21 March, 2010 04:30:00

Solar Backup Power System

Are You Prepare? Off Grid Systems Back Up Power Systems
rps-solar.com/solar.shtml

Honda Insight Hybrid

The hybrid for everyone is here. Compare at the Official Site.
www.honda.com

2010 Car of the Year

Ford Fusion Hybrid. Motor Trend's Car of the Year - Find Out Why.
www.FordVehicles.com/FusionHybrid

Best Electric Cars '09-10

Find & Compare Top electric cars of the year + Most Fuel efficient List
www.thegreencarco.com

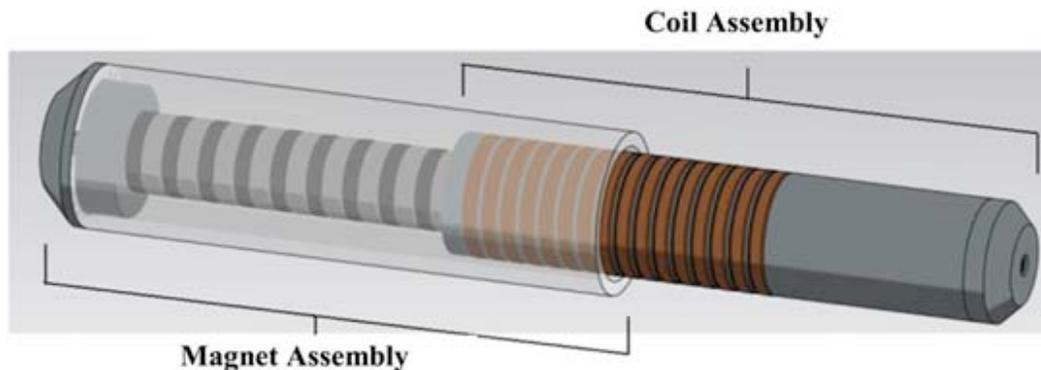
Mechanical engineers from

the [State University of New York](#) at Stony Brook are developing a regenerative shock absorber that recovers a vehicle's vibrational energy and converts it into usable electricity.

Unlike the regenerative [shock absorber system designed by Massachusetts Institute of Technology](#) where fluid is forced through the turbine and generates energy when vehicle goes over bumps in the road, this regenerative shock absorber relies on magnetic flux to generate power.

The researchers have built a 1:2 scale prototype that generates 2-8W of power during typical driving conditions at a speed of about

45mph. They predict that a full scale system on all four wheels of a car will be able to generate up to 256W.



The shock absorber consists of two tube-like components - a hollow coil assembly and a magnet assembly that uses vibrational energy from the vehicle's suspension to move up and down inside it.

The coil component is made of copper coils wound around a plastic delrin tube, while the magnetic assembly is made of ring-shaped permanent magnets and ring-shaped high magnetically permeable spacers stacked on a rod of high reluctance material.

When the vehicle is in motion, the vibrations in the suspension cause the coil tube to move relative to the magnetic tube. As the copper coils move inside this magnetic field, a voltage is generated, which can be used to recharge the car's batteries.

[source: [Physorg](#)]

[Subscribe to the RSS feed](#) or [Follow Us on Twitter](#) for more information on green cars, green car news & green car technologies.

FURTHER READING

Click any one of the following links to be taken to a website which contains the following documents.

The following are some patents.

[1976792_ELECTRIC_SHOCK_ABSORBER](#)
[3941402_Electromagnetic_shock_absorber](#)
[4032829_Road_shock_energy_converter](#)
[5347186_Linear_motion_electric_power_generator](#)
[5818132_Linear_motion_electric_power_generator](#)
[6952060_Electromagnetic_linear_generator](#)
[7357229_Electromagnetic_shock_absorber](#)
[7362003_Coil_switching_circuit_for_linear_generation](#)

Some more information concerning the harvesting of shock absorber energy.

[electromagnetic energy harvester for vehicle suspensions](#)
[Regenerative Shock Absorber](#)
[Vehicle shock absorber recovers energy](#)

A common method of energy harvesting involves the used of vibration.

[5578877_Apparatus_for_converting_vibratory_motion](#)
[6897573_Electrical_voltage_generating_device](#)
[7569952_High_efficiency__inductive_vibration_energy_harvester](#)

[Energy harvesting from vibration](#)
[Getting Started with Vibration Energy Harvesting_V7](#)

The following are some other new applications and patents.

[6982497_Backpack_for_harvesting_electric](#)
[7168532_Wave_energy_Converter__WEC__with_Magnetic_Braking](#)
[Renewable_Energy_Data](#)

1.3.11_2.44PM
dsauersanjose@aol.com
Don Sauer
<http://www.idea2ic.com/>