



Limited resources and unlimited usage. How can we save it? Conserve the energy,

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Newsletter

INSIDE...

Article : 1 Epson paper lab ... Read more...

Article : 2 Sponge that can ... Read more...

Article : 3 Hawaii produces ... Read more...

Article : 4 Virus produces ... Read more...

Why ???

We the people on the earth are gifted with wonderful energy sources by the nature, which has made our routine much more smother & easier... However, this gift of the nature is ' limited '. What we have done is, with the growth of science & technology, we have started using it extremely, because of which the energy resources are going to finish in near future. Hence, let us take the pledge to conserve the energy - save the energy!!!

Save our climate!

Tips of the Month



Article - 1 : Epson paper lab

Epson has developed strong reputation in its printing career and its latest innovation proves why it is still an industry leader. 'Paper lab' is first of its kind in recycling paper.

The product is probably not for the home office because it used documents and shoots them out as fresh new sheets of paper. Usually one cup of water is required to make a single A4 sheet of paper; Epson designed the product to recycle paper using a dry process.

The machine works by breaking down used documents fed into the machine into long, thin, cottony, fibers. The machine not only destroys confidential information, but it allows for a variety of different binders to be added to the fiberized material. This enables the user to alter the strength, color, fragrance or size of the recycled paper. It allows the user to produce sheets of A4 or A3 office paper, or even business cards.

Paper lab produces the first new sheet of paper in about three minutes of having loaded it waste paper and 14 A4 sheets per minute and 6,720 sheets in an eight hour day.

pressing the start button. The machine can produce about

*Source: http://www.news.com.au /technology/innovation/design/printer-giantepson-has-created-the-first-inoffice-paperrecycling-machine/newsstory/436db3e39116ec134ece50cc16a4d50b



*Image Source: https://www.tonergiant.co.uk/blog/2016/01/epsons-newpaperlab-actually-work/

Article - 2 : Sponge that can clean oil spill

Scientists has come out with a new material which can absorb 90 times its own weight in spilled oil and then be squeezed out like a sponge and reused, reducing the stress at oil spill sites. This new material is created by Seth Darling and his colleagues at Argonne National Laboratory in Illinois.

The sponge consists of simple foam made of polyurethane or polyimide plastic and coated with oil loving silane molecules with a sweet spot for capturing oil. Too much chemical attraction would render the sponge useless as an absorber, whereas too much would mean the oil could not be released. When it was tested in laboratory, the researchers found that when engineered with just the right amount of silane; their foam could repeatedly soak up and release oil with no significant changes in capacity.

*Source: https://www.newscientist.com/article/2123391-sponge-can-soak-upand-release-spilled-oil-hundreds-of-times/



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Article - 3 : Hawaii produces energy from volcanoes

Volcanic eruption may sometime look very awesome, geothermal energy by sucking up hot briney but it can be terrifying too, as it spews clouds of hot ash, groundwater, converting it to steam to power turbines poisonous gases, molten lava, huge rocks and and then delivering the resulting electricity to the main sometimes generate giant tornadoes of fire. But it we power grid. The main island alone gets 50% of its energy look at, this ferocious power of a volcano can be used in from a mixture of renewable sources. The Puna plant generating power as rich source of renewable energy. generates about 38 megawatts, according to Hawaii Costa Rica has earlier operated more than two months of Electric Co. That's enough to power up to 4,400 typical 100% renewable energy. Hawaii has also planned to Hawaiian homes every month. reach that same goal to create 100% renewable-sourced grid something no US state has achieved. The Governor of Hawaii has pledged to become completely selfsustaining by 2045. Hawaii has no significant reserves of coal, oil, natural gas or other fossil fuels. According to US Energy Information Administration, the import of oil to satisfy its citizen's demand is costing around \$5 billion per year. This ends up costing Hawaiians two to three times the national average for electricity. But Hawaii is ultimately rich in other energy source like solar, wind, flowing water, ocean waves and more interestingly volcanoes. Engineers can tap these hot spots for

*Source: https://www.businessinsider.in/Hawaii-is-chasing-100-renewableenergy-with-active-volcanoes/articleshow/48273511.cms



*Image Source: https://www.businessinsider.in/Hawaii-is-chasing-100renewable-energy-with-active-volcanoes/articleshow/48273511.cms

Article - 4 : Virus produces electricity

Laboratory have come with the invention of generating electricity from viruses. The scientists have coated a postage stamp sized electrode with specially engineered, harmless virus, that when tapped can generate enough electricity to power a small LCD display. This principle is generally known as piezoelectricity- the generation of energy through mechanical stress, especially pressure or vibrations. This concept was first identifies 130 years back and it is used in many common devices, but it was the first time it was noticed that it was generated by biological materials. According to Berkley Lab, this discovery could lead to innovations like tiny electric generators placed on stairs which could help power lights and other nearby

When we hear or speak of virus, we generally think of its electronics. The virus used was genetically engineered association with numerous diseases. But what if we variant of the M13 bacteriophage virus which is harmless could produce electricity form it, not to power our body to humans, which is also used in labs in recombinant DNA instead charging electrical devices. Scientists at the US processes. The M13 virus self replicates million of times Department of Energy's Lawrence Berkeley National over the course of just few hours, so it is plentiful enough and sustainable for piezoelectric appliances.

> *Source: https://www.mnn.com/green-tech/researchinnovations/stories/scientists-generate-electricity-from-viruses



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Conserve the Energy, Save our Climate!



It's Tom orrow

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