GREEN ALERT

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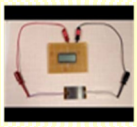
The focus of Environment information System (ENVIS) is to disseminate environmental information to decision makers, policy planners, scientists and researchers across the world.

The CERC-ENVIS Centre focuses on 'Eco-labeling and Promotion of Eco-friendly Products'. This bi-monthly e-bulletin features latest news, developments and innovations in the field.

Eco product of the month

Cardboard, tape and a pencil for producing energy



A small device made from everyday materials can generate enough energy to power several diodes. A team from EPFL (Ecole Polytechnique Federale de Lausanne) in Switzerland and researchers from the University of Tokyo, used these materials to make an 8 cm-2 devices that can generate a considerable power. An eco-friendly and inexpensive system can operate a remote micro-sensor or system. Research on the use of static electricity to generate energy, dubbed 'TENG' (triboelectric nanogenerator) began in 2012. It shows robust output power when pressed by fingers demonstrating its use as energy harvester based on low-cost, commodity materials such as paper, Teflon and graphite. This could represent the next step since it removes the need for conventional batteries.

http://actu.epfl.ch/news/producing-electrical-power-with-cardboard-tape-and/

Green issue

IT sector in India is going green

India's software firms deliver a wider range of software development task, now efforts are under taken by these firms to "go green." A recent study "Going green: A case study of information technology (IT) sector in India" by Rambalak Yadav from ICFAI Business School and Govind Swaroop Pathak from Indian School of Mines found that the IT Industries are adopting green practices like their counterparts in developed countries. They studied the green IT practices adopted by them in India and analyses their approach towards Green IT. IT sector is considered as one of the sectors in the service industry that contributes to environmental degradation, as it contributes to 2% of global CO_2 emission which is equivalent to CO_2 emitted by the airline industry.

Adopting a holistic approach to addressing the environmental issues of IT in an effective and comprehensive way, it will also help in implementing 'green' at all possible steps. The steps are green deign, green manufacturing, green use and green disposal.

For the case study, researchers have considered top four organisations in India for its Green IT practices. These are Tata Consultancy Services (TCS), Infosys, Wipro and HCL Technologies.

A wide range of eco-friendly activities has been adopted and implemented by these Indian IT organisations as organisations are voluntarily adopting green IT practices along with conforming to the regulatory compliances. The green strategies adopted have helped them to reduce their energy consumption and helping them to be earning carbon credit which will help them to be carbon neutral in the near future. The green initiatives implemented and adopted by the IT firms in India shows their approach toward 'Green IT' but the time demands the including the concept of 'Greening by IT' along with Green IT. The concept of 'Greening by IT' helps organisations to deal with environmental issues in a better way, as this concept emphasises on helping the other organisation in implementing green/eco-friendly practices i.e. providing green solutions to another firm.

https://www.researchgate.net/publication/282808334_Going_green_A_case_study_of_information_technology_IT_sector_in India

Eco news

Nanoparticle technology can help reduce the need for fertilizer

India-origin researchers at Washington University hope that nanoparticle technology can help reduce the need for fertilizer, creating a more sustainable way to grow crops. They have found a sustainable way to boost the growth of a protein-rich bean by improving the way it absorbs much-needed nutrients. To reduce the use of fertilizer made from rock phosphorus they used zinc oxide nanoparticles and found that there is an improvement in the growth of food crops. Food crops need phosphorus to grow and farmers are using more and more phosphorus- based fertilizer. However, the plants can only use about 42 % of the phosphorus applied to the soil and the rest runs off into the water streams, where pollutes water sources. The research was published in the ***Journal of Agricultural and Food Chemistry***.

https://engineering.wustl.edu/news/Pages/Nanoparticles-present-sustainable-way-to-grow-food-crops.aspx

'Bionic' leaf turns sunlight into liquid fuel

A team of scientists from Harvard University has produced a distinctive "bionic leaf" that uses solar energy to split water molecules into oxygen and hydrogen, and hydrogen-eating bacteria to produce liquid fuels from CO_2. The system can convert solar energy to biomass with 10% efficiency, far above the 1% seen in the fastest-growing plants. In addition to increasing the efficiency, the system can be used to generate usable fuels. There is a room for additional increases in efficiency, the system is already effective enough to consider possible commercial applications, but within a different model for technology translation. Scientists hope to continue developing the technology and its applications in nations like India with the help of their scientists. This paper was published in the ***Science***.

http://news.harvard.edu/gazette/story/2016/06/bionic-leaf-turns-sunlight-into-liquid-fuel/

Eco tip of the month

Let's go green to get our globe clean

Living a more green lifestyle, conserving our resources and not polluting are all things we can do to go green and help keep the environment clean.

Visit CERC-ENVIS website www.cercenvis.nic.in and https://www.facebook.com/EcoProductsEcoLabeling to know more about our activities.

Consumer Education and Research Centre

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