



News

Greener days ahead for carbon fuels?

When you take a piece of copper metal, it may feel smooth to the touch, but at the microscopic level, the surface is actually bumpy -- and these bumps are what scientists call "active sites," said Joel Ager, a researcher at JCAP who led the study. Ager is a staff scientist in Berkeley Lab's Materials Sciences Division and an adjunct professor in the Department of Materials Science and Engineering at UC Berkeley. These active sites are where the magic of electrocatalysis takes place: electrons from the copper surface interact with carbon dioxide and water in a sequence of steps that transforms them into products like ethanol fuel; ethylene, the precursor to plastic bags; and propanol, an alcohol commonly used in the pharmaceutical industry. Ever since the 1980s, when copper's talent for converting carbon into various useful products was discovered, it was always assumed that its active sites weren't product-specific -- in other words, you could use copper as a catalyst for making ethanol,[Read more...](#)

Date: December 18, 2018

Source: Science Daily

Scientists added a rabbit gene to a plant and turned it into an air purifier

No matter how much you clean your house daily, it is a hub of toxins with toxic air entering and germs entering your house via thousands of mediums. You'll be shocked to know that it has everything from formaldehyde to chloroform to benzene and all other toxins you want to save your kids from. This is not news, it has been there for quite sometime now and that's why air purifying plants and electronic are a new rage. Some plants do purify air but not that efficiently. According to studies, two large plants are needed per 100 square feet to purify air. Recently, scientists have found a new way to boost the air purifying ability of a common houseplant -- and they do this by splicing in a bit of DNA from a rabbit. In a study published Thursday in the journal Environmental Science &[Read more...](#)

Date: December 20, 2018

Source: India Today

Take action to stop waste water pollution of rivers: NITI Aayog

The NITI Aayog on Wednesday unveiled its comprehensive national Strategy for New India, which defines clear objectives for 2022-23. It is a detailed exposition across forty-one crucial areas, including gender issues and sustainable environment, and suggests the way forward for achieving the stated objectives. On sustainable environment, the report said a major contributor to air pollution is the practice of burning crop residue, particularly in north India, and convincing farmers to discontinue the practice by providing alternative methods of disposal through economically productive use of crop residues is a key challenge. Another key challenge identified by it is lack of awareness of the ill effects of pollution. "This makes it difficult to bring about the behavioural change that is critical to fighting pollution. 'Polluters should pay for the pollution' principle is not effectively implemented," the[Read more...](#)

Date: December 20, 2018

Source: The Week

Now, GM 'money plant' to reduce indoor pollution

New Delhi: Houseplants have long been used to reduce indoor air pollution levels, but research shows they do not completely remove some of the toxic air pollutants present inside houses. To address the challenge, scientists from the department of civil and environmental engineering, University of Washington, introduced a mammalian gene CYP2E1 to a common houseplant, pothos ivy (*Epipremnum aureum*), locally known as the 'money plant', to boost the plant's detoxifying potential. The modified plant has a protein called cytochrome P450 2E1, which converts these compounds into molecules that plants can then use to support their own growth. The team then injected benzene and chloroform gas into closed vials that contained growing plants to test them for 11 days.[Read more...](#)

Date: December 21, 2018

Source: Live Mint

Trees' 'enemies' help tropical forests maintain their biodiversity

Also playing a key role in the tropical forest dynamic are seed dispersers. Seeds from individual trees that are carried a distance away -- often by rodents, mammals or birds -- have a chance to get established because the fungi and arthropods in the new region target different species. This restriction of tree recruitment near the adult trees creates a long-term stabilizing effect that favors rare species and hinders common ones, the researchers say. Overturning previous theory, the researchers demonstrate that these interactions with enemies are important enough to maintain the incredible diversity of tropical forests. Results of the study are being published this week in Proceedings of the National Academy of Sciences (PNAS). "In many North American forests, trees compete for space[Read more...](#)

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Source: Science Daily

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