



News

Budding Scientists from IIT, Delhi University Develop a Plant-Based Air Purifier

Budding Indian scientists have developed a living plant-based air purifier named 'Ubreathe Life', which amplifies the air purification process in indoor spaces. These indoor spaces can be hospitals, schools, offices or even people's homes. The state-of-the-art 'Smart Bio-Filter' can make breathing fresh, claimed Urban Air Laboratory, a startup incubated at the Indian Institute of Technology (IIT), Ropar. The budding scientists are from IIT Ropar, IIT Kanpur and the Faculty of Management Studies, Delhi University. "The technology works through the air-purifying natural leafy plant. The room air interacts with leaves and goes to the soil-root zone where maximum pollutants are purified. The novel technology used in this product is 'Urban Munnar Effect' along with patent-pending 'Breathing Roots' to exponentially amplify the phyto-remediation process of the plants.Read more...

Date: September 02, 2021

Source: The Weather Channel (The Times of India)

Environmental monitoring of organic pollutants using plants

Researchers at Kobe University's Biosignal Research Center have successfully developed plants that can be used to detect organic pollutants, such as polychlorinated biphenyls and endocrine-disrupting chemicals, which contaminate soil and water. The team consisted of Petya Stoykova, recipient of a Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship for Research in Japan (now a researcher at Bulgaria's AgroBioInstitute), Kobe University Professor Emeritus OHKAWA Hideo and Professor INUI Hideyuki. Next, they hope to use plants to develop convenient and inexpensive technology for monitoring toxicity. These research results were published online in two papers, which appeared separately in the Journal of Plant Physiology on June 29 and the Chemosphere on July 22.Read more...

Date: September 06, 2021

Source: phys.org

How plants can respond to threats

Plants are constantly exposed to adverse environmental influences and attacks, for example from pest infestation. An international team of researchers led by Heinrich Heine University Düsseldorf (HHU) has now described a central part of the signal mechanism used by plants to respond to threats and thus initiate a defence response in unaffected parts of the plant. In the current edition of the journal Science Advances, they describe the role played by the protein MSL10 among others. Changing weather conditions, alternating drought and rain, and pests such as plant-eating insects pose challenges for plants on a daily basis. Estimates suggest that between five and 20 percent of global harvests are lost to insect damage alone each year. Models indicate that this trend is likely to intensify as a result of global warming. From an economic and food safety perspective,Read more...

Date: September 08, 2021

Source: Science Daily

Raining Microbes? New Research Finds Rain-Borne Bacteria Colonize Plants

When it rains, plants are not only showered with water, but also microbes. These rain-borne microbes have the opportunity to become part of a plant's aboveground microbial community – known as the phyllosphere. Phyllosphere microbes can protect plants from disease and other stressors and understanding where they come from may help us improve plant health. While plant microbiome research has historically focused on soil and seeds as sources of plant-associated microbes, new findings by scientists at Virginia Tech University suggest that rain may also be an important reservoir. A study recently published in Phytobiomes Journal led by Marco Mechan-Llontop and Boris Vinatzer examined rain as a reservoir of phyllosphere bacteria.Read more...

Date: September 12, 2021

Source: Sci Tech Daily

Assessing the impact of the European Union Green Deal

A significant reduction in agricultural production in the European Union with full implementation of the Farm to Fork Strategy of the European Green Deal: that is one result of the study to assess the impact of the Green Deal published today (Monday 13 September), which was led by Professor Christian Henning of Kiel University (CAU) and commissioned by the Grain Club alliance and other associations. Henning, Professor of Agricultural Policy at Kiel University's Faculty of Agricultural and Nutritional Sciences, points out, however, that this could also lead to opportunities for all sides. For instance, the full Farm to Fork measures reinforced ecosystem services, such as climate and water protection, in all EU member states and at the same time even increased the income generated by EU farming by up to €35 billion per annum.Read more...

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Source: phys.org

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