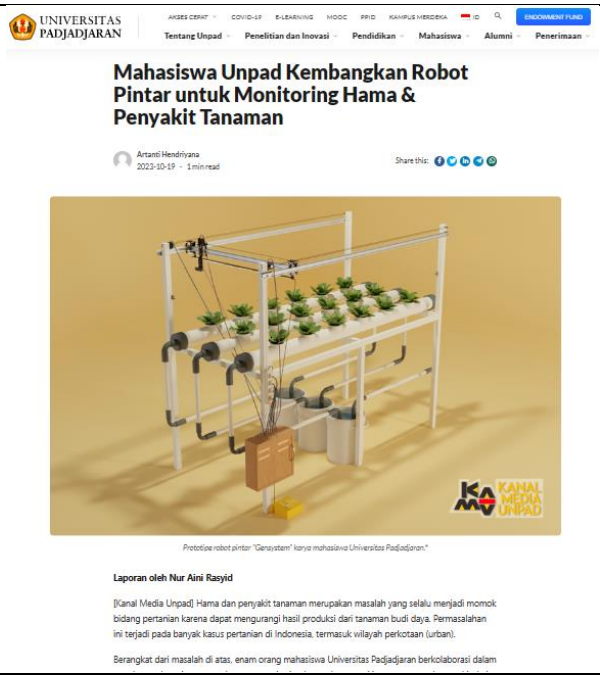
University : Universitas Padjadjaran
Country : Indonesia
Web Address : www.unpad.ac.id

Innovative program(s) in energy and climate change

https://inovkor.unpad.ac.id/

Online Innovation Product Catalog



UNIVERSITAS PADJADJARAN

Tentang Unpad · Penelitian dan Inovasi · Pendidikan · Mahasiswa · Alumni · Penerimaan

Mahasiswa Unpad Kembangkan Robot Pintar untuk Monitoring Hama & Penyakit Tanaman

Artanti Hendriyana
2023-10-19 · 1 min read

Share this:

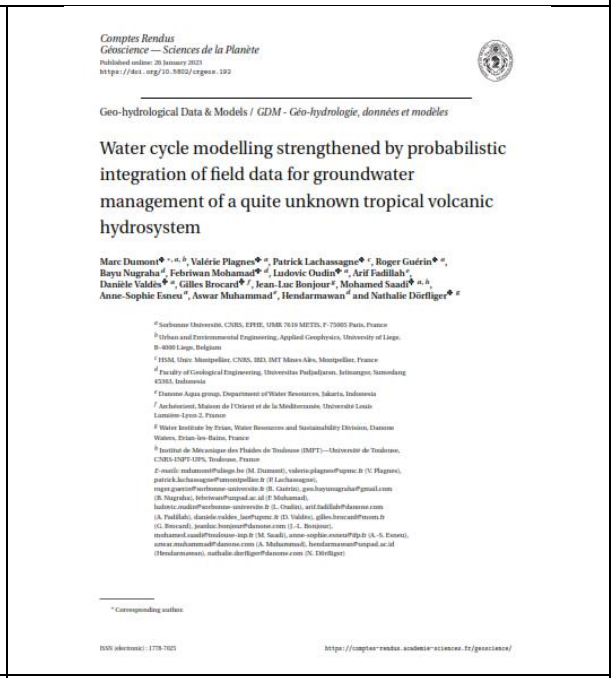
Prototipe robot pintar "Genasystem" karya mahasiswa Universitas Padjadjaran."

Laporan oleh Nur Aini Rasyid

[Kanal Media Unpad] Hama dan penyakit tanaman merupakan masalah yang selalu menjadi momok bidang pertanian karena dapat mengurangi hasil produksi dari tanaman budi daya. Permasalahan ini terjadi pada banyak kasus pertanian di Indonesia, termasuk wilayah perkotaan (urban).

Berangkat dari masalah di atas, enam orang mahasiswa Universitas Padjadjaran berkolaborasi dalam

Smart Robot for Monitoring Plant Pests & Diseases



Comptes Rendus Géoscience — Sciences de la Planète

Published online: 20 January 2023
https://doi.org/10.5802/crgeos.192

Geo-hydrological Data & Models / *GDM - Géo-hydrologie, données et modèles*

Water cycle modelling strengthened by probabilistic integration of field data for groundwater management of a quite unknown tropical volcanic hydrosystem

Marc Dumont[◆ *, a, b], Valérie Plagnes[◆, a], Patrick Lachassagne[◆, c], Roger Guérin[◆, a], Bayu Nugraha[d], Febriwan Mohamad[◆, d], Ludovic Oudin[◆, a], Arif Fadillah[e], Daniele Valdes[◆, f], Gilles Brocard[◆, f], Jean-Luc Bonjour[g], Mohamed Saadi[◆, a, h], Anne-Sophie Esneu[a], Aswar Muhammad[e], Hendarmawan[d] and Nathalie Dörfliger[◆, g]

Water cycle model

THE IMPACT RANKINGS


Beranda › Berita › Inovasi

Mahasiswa Unpad Buat Tablet Pemurni Minyak Jelantah

Artanti Hendriyana
2023-09-26 · 1 min read

*Produk "Taborai" tablet pemurni minyak jelantah karya mahasiswa Universitas Padjadjaran.**

[Kanal Media Unpad] Selain berbahaya bagi kesehatan, minyak jelantah juga menimbulkan masalah bagi lingkungan. Masih banyak masyarakat yang membuang minyak jelantah sembarangan ke saluran air dan selokan berpotensi mencemari lingkungan.

Untuk itu, sejumlah mahasiswa Universitas Padjadjaran melalui Program Kreativitas Mahasiswa-Kewirausahaan (PKM-K) membuat produk tablet pemurni yang dapat mengurangi radikal bebas

Used Cooking Oil Purification Tablet


Beranda › Berita › Inovasi

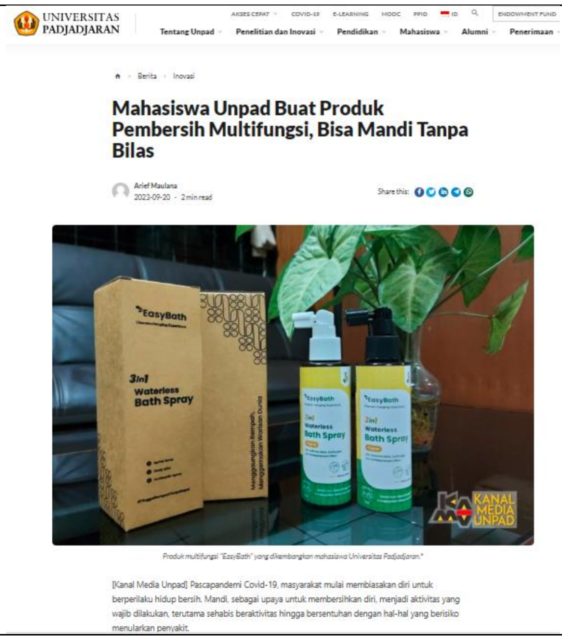
Dosen Unpad Buat Plastik Mudah Terurai dari Limbah Cangkang Udang

Artanti Hendriyana
2023-09-25 · 2 min read

*Dosen Fakultas Perikanan dan Ilmu Kelautan Universitas Padjadjaran Dr. Emma Rochima, M.Si., mengembangkan plastik mudah terurai (biodegradable) dari limbah cangkang udang. (Foto: Dadan Triawan)**

[Kanal Media Unpad] Tim peneliti gabungan Universitas Padjadjaran membuat plastik pembungkus makanan ramah lingkungan (*bio-packaging*) yang terbuat dari limbah cangkang udang dan rumput laut. Plastik ini bersifat *biodegradable* atau mudah terurai secara alami.

Shrimp Shell Waste as Plastic Material


Beranda › Berita › Inovasi

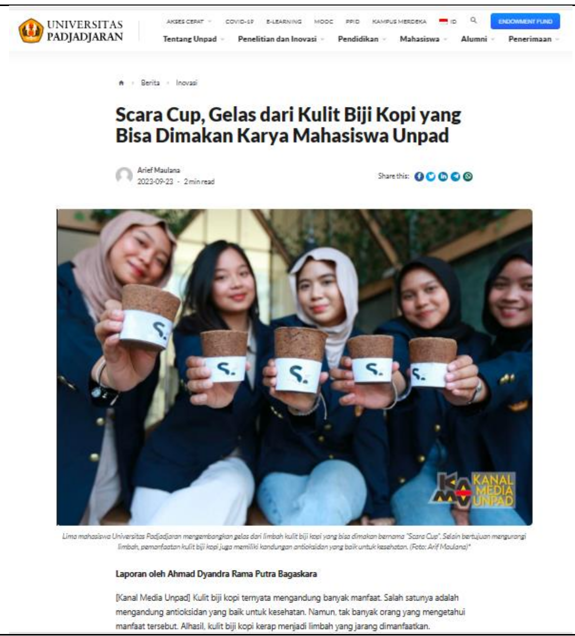
Mahasiswa Unpad Buat Produk Pembersih Multifungsi, Bisa Mandi Tanpa Bilas

Arief Maulana
2023-09-20 · 2 min read

*Produk multifungsi "EasyBath" yang dikembangkan mahasiswa Universitas Padjadjaran.**

[Kanal Media Unpad] Pascapandemi Covid-19, masyarakat mulai membiasakan diri untuk berperilaku hidup bersih. Mandi, sebagai upaya untuk membersihkan diri, menjadi aktivitas yang wajib dilakukan, terutama sehabis beraktivitas hingga bersentuhan dengan hal-hal yang berisiko menularkan penyakit.

EasyBath


Beranda › Berita › Inovasi

Scara Cup, Gelas dari Kulit Biji Kopi yang Bisa Dimakan Karya Mahasiswa Unpad

Arief Maulana
2023-09-22 · 2 min read

*Lima mahasiswa Universitas Padjadjaran mengembangkan gelas dari limbah kulit biji kopi yang bisa dimakan bernama "Scara Cup". Selain bertujuan mengurangi limbah, pemanfaatan kulit biji kopi juga memiliki kandungan antioksidan yang baik untuk kesehatan. (Foto: Arif Maulana)**

Laporan oleh Ahmad Dyandra Rama Putra Bagaskara

[Kanal Media Unpad] Kulit biji kopi ternyata mengandung banyak manfaat. Salah satunya adalah mengandung antioksidan yang baik untuk kesehatan. Namun, tak banyak orang yang mengetahui manfaat tersebut. Alhasil, kulit biji kopi kerap menjadi limbah yang jarang dimanfaatkan.

Scara Cup

Eco-friendly straws from Black Soldier Fly (BSF) larvae


Global Journal of Environmental Science and Management (GJESM)

Homepage: https://www.gjesm.net/

CASE STUDY

Modeling regional aboveground carbon stock dynamics affected by land use and land cover changes

A.D. Malik, M.C.W. Arief, S. Withaningsih, P. Parikesit

ARTICLE INFO | ABSTRACT

Description:
(*Please describe innovative program(s) on your campus. The following is an example of the description. You can describe more related items if needed*.)

1. **Online Innovation Product Catalog**
2. **Smart Robot for Monitoring Plant Pests & Diseases**
   The purpose of making this Prototype Gensystem is to monitor pests and plant diseases automatically, so as to overcome obstacles in the application of urban farming. Identification in plant monitoring is done through a deep learning approach of image recognition and sound frequency. For the operating system itself, the Gensystem Robot is installed on cultivated land and integrated with applications on smart devices so that users can control it. It is hoped that with the application of the Gensystem Robot, especially in urban farming, it will be able to help the community meet the need for food supply.
3. **Water cycle model**
   Unpad's researcher developed a lumped hydrological model to mimic the structure and functioning of a previously unknown hydrosystem located on the flanks of the Salak volcano (West Java). The structure of the aquifers was revealed with electrical resistivity tomography. The distinction between springs fed by the extensive artesian aquifer and others fed by shallow perched aquifers was obtained mostly using hydrochemistry. The elevation of the recharge area was identified using isotopic analysis of spring water.
4. **Used Cooking Oil Purification Tablet**
   This product, called "Taborai", has successfully secured funding from the Ministry of Education and Research in 2023. Taborai is made from corn stalk charcoal, lemongrass, and bleaching earth. "To maintain the availability of raw materials, we have a partnership with the Mentari Pagi Darussyfa Farmer Group in Garut, where they are a hybrid corn producer whose corncobs are currently an untapped waste," said In-In. Taborai utilizes corncob waste as the main raw material. "Corncobs contain a lot of non-volatile organic substances that make it suitable as a source of charcoal, because it can absorb free radicals that are 3-7 times stronger," said Nariswari as the team leader. The team has tested the effectiveness of the product with results showing a satisfactory purification level. Used frying oil that was originally dark brown in color can return to its original color. In addition, the oil also became clearer.
5. **Shrimp Shell Waste as Plastic Material**
   A joint research team from Universitas Padjadjaran has made bio-packaging plastic made from shrimp and seaweed shell waste. This plastic is biodegradable or easily decomposed naturally. This research was conducted by a lecturer from the Faculty of Fisheries and Marine Sciences, Dr. Emma Rochima, M.Si. Emma said that the research started from the concern of the accumulation of plastic waste, the majority of which comes from food wrapping waste. Most plastics are not easily biodegradable.
6. **EasyBath**
   EasyBath is a multifunctional product that can be used for bathing without water and soap, body fragrance, and antiseptic products. This product contains a variety of authentic Indonesian spices. The spices used are essential oil extracts, chayote peel waste, turmeric, betel, and tamarind seeds. Siamese orange peel waste contains d-limonen, which is antibacterial, antifungal, and provides an anxiolytic effect with a fresh aroma that can calm the mind. Meanwhile, turmeric, siri, and tamarind seeds are common spices found in the kitchen. Besides being used for seasoning, these spices have various ingredients such as antimicrobials, antioxidants, anti-inflammatory, and other ingredients that can protect the skin from bacteria and free radicals.
7. **Scara Cup**
   Armed with research and knowledge gained during college, they developed an environmentally friendly product called "Scara Cup". The product development was guided by a lecturer from the Faculty of Agricultural Industrial Technology (FTIP), Dr. Gemilang Lara Utama Saripudin, S.Pt., M.I.L. Scara Cup itself is an edible cup product developed by utilizing coffee bean skin. This product development also

utilizes other ingredients, namely wheat flour, eggs, butter, sugar, and chocolate. Chocolate is used to coat the inside of the Scara Cup to prevent liquid from seeping.

8. **Eco-friendly straws from Black Soldier Fly (BSF) larvae**
   Currently, there are many eco-friendly straw products made by utilizing food materials. However, not many eco-friendly straws have been made using BSF larvae shell casings. The Exustraw product itself has several advantages. One of them is that it is biodegradable, which means it can be decomposed by soil in less than 7 days.
9. **Modelling regional aboveground carbon stock dynamics affected by land use and land cover changes**
   Land use and land cover changes directly affected the aboveground carbon stock potential in Rancakalong District, indicated by an 11,096 ton reduction in the stock. This shortage of carbon stock potential was mainly attributed to the massive reduction in mixed garden areas between 2009 and 2021 by 21 percent, which caused a significant decrease in aboveground carbon stocks. The application of the Integrated Valuation of Ecosystem Services and Tradeoff's model is efficient in analyzing the effect of land use and land cover change on aboveground carbon stock dynamics and can be widely used in environmental engineering studies involving remote sensing approaches.

Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):
https://doi.org/10.5802/crgeos.192
https://www.unpad.ac.id/2023/10/mahasiswa-unpad-buat-sedotan-ramah-lingkungan-dari-kulit-larva-lalat/