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Re-UNITA RESEARCH Newsletter

Editorial

Unfortunately, there is still a need today to improve the visibility of women in the scientific and technological fields. And this involves a two-pronged approach. On the one hand, its necessary to vindicate the presence of outstanding women scientists, researchers and pioneers in science, technology, engineering and mathematics throughout history.
Women who have long been hidden or ignored in science education, even in science history books. On the other hand, to make women visible as current and daily references in research, especially in STEM careers.
Women who carry out their researching work into a total normality, their profession being just another facet of their daily lives.
With the aim of reducing the gender gap in science, the University of Zaragoza launches every year different activities to promote STEM vocations among girls. One of them has been the campaign "I am a woman scientist. I live in your neighbourhood", a photographic exhibition of 11 women scientists in the streets of the city. This initiative aims to reflect that every day we come across women scientists in our streets, and to help girls and teenagers to break with certain stereotypes (a woman scientist is not a heroine, nor a nerd, nor a bookworm) to promote their possible scientific vocations.

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Cultural Heritage

Choral Cultural Heritage Outreach in RomAnce Languages

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Cultural Heritage Hub Application - Marie Sklodowska-Curie Actions Cofunding Program

Alea jacta est: following the research workshop held at The Universitatea de Vest din Timisoara in the fall, the Cultural Heritage Hub was able to participate to the submission of a European Cofund programme towards the funding of 42 PhD studentships across the alliance. The aim of the UPPA-led CHORAL programme – Cultural Heritage Outreach in RomAnce Languages – is to promote and support excellence in research focusing on cultural heritage in all fields of the arts, languages and humanities as well as to encourage best practices among the partner universities of the consortium.

Circular Economy

Bacterial Tailors project
Coordinator: Isabel C. Gouveia
Host: FibEnTech – UBI
Partners: CEB-UMinho

Among all textile production processes, dyeing requires enormous amounts of water and chemicals. With increasingly stringent environmental regulations, developing new dyeing and printing technologies with the aim at decrease in water consumption and effluent emission is critical to the sustainable development of textile industry.

In this regard, advances in bacterial biosynthesis have opened new avenues to an economic production of by-products anticipated to replace a considerable fraction of the market of synthetic analogues fossil sources. Bacterial pigments (BP) are examples of such by-products with a wide variety of physicochemical and biological properties. Being nontoxic and biodegradable, they find great potential as sustainable dyes for textiles. Microorganisms efficiently convert different carbon sources into a diverse range of pigments, whereas color comprises desirable features as synthetic dyes alternatives from renewable sources [3,4]. Moreover, alternative culture media prepared from agricultural, forest, and food wastes offers an enormous design space for a sustainable and cost-

Renewable Energies

Ecological traNSition rUral aREas (ENSURE)

ENSURE project is aimed to provide technical solutions for the ecological transition in rural areas. The project addresses two major challenges: the decarbonization of the economy and the development and improvement of life quality in the rural areas, and it tackles it from a global perspective, by developing a set of new technologies and techniques, analysing them not only individually but their complementarity, also taking into account their environmental footprint and socio-economic impact. The ultimate goal is to contribute to a fully sustainable management of the rural environment with a quality of life comparable to the urban environment.

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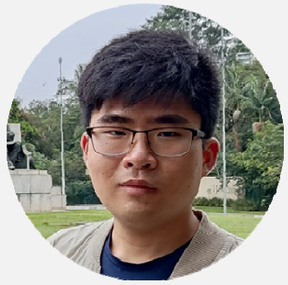
effective pigment yield optimization where there is no waste but only nutrients.

In addition, as the conventional organic solvents, widely used to extract biologically active compounds, such as pigments, exhibit volatile and hazardous properties, the ultimate goal is the development of green and sustainable extraction procedures, able to recover higher amounts of BP, in a cost-effective manner, while maintaining the lowest impact on the environment. Besides, they are in the frontline of research regarding alternative medium for dyeing textile fibers.
This project intends to place Portugal as a frontrunner in the eco-friendly approaches for the coloring of textiles. Bacterial-Tailors is giving us a new set of pigments with a broad color range and bioactive function, using renewable resources and microorganisms as the main sources.

PhD student of the month



Giberto Yuki - PhD student at UPPA and UNITO

Giberto Yuki is a PhD student at LaTEP-UPPA (Laboratory of Thermal Engineering, Energy and Processes) and at DISAFA-UniTO (Department of Agriculture, Forest and Food Science). He has a background in chemical engineering from University of São Paulo with a double degree from ENSGTI-UPPA.
His current research is on modelling and optimization of energetic platforms containing methanation and anaerobic digestion reactors. The objective of his research is to develop computer-based tools that can be used to optimally design and operate such industrial process.

More information on OPTIMETH

Woman researcher of the month

Andreia Garcia is an architect, curator, editor, researcher and professor. Her career has been defined by the disciplinary crossing of Architecture with complementary areas. Her interests focus on contemporary architectural practice in an era marked by strong technological advances and a progressive ecological crisis. She is the founder of Architectural Affairs, founder and director of the Art(e)facts Knowledge Biennale, and co-founder of the Architecture Gallery, an independent space for reflection and debate on Architecture, City and Territory. She is a researcher at the Centre for Architecture, Urbanism from the Faculty of Architecture University of Lisbon. She was Visiting Assistant Professor at the School of Architecture of the University of Minho and studio tutor at the Architectural Association, London. She is Assistant Professor and Vice-President of the Faculty of Engineering at the University of Beira Interior. She is curator of the Portuguese Official Representation at the 18th International Architecture Exhibition La Biennale di Venezia 2023 - Fertile Futures.

Read interview»

Highlights

ReUNITA meeting in Zaragoza
The first days of February, Universidad de Zaragoza (UNIZAR) has held the face-to-face meeting of the Management Committee and the Vice-rectors for research, internationalisation and science policy involved in the ReUNITA Project, within the framework of the UNITA Governance Board.
We have the opportunity to visit some of the most interesting scientific infrastructures.
http://www.unizar.es/actualidad/vernoticia_ng.php?id=71036&idh=
http://www.unizar.es/actualidad/vernoticia_ng.php?id=71064&idh=
http://www.unizar.es/actualidad/vernoticia_ng.php?id=71106&idh=

Day of Women and Girls in Science, 11F
To commemorate the International Day of Women and Girls in Science, 11F, the photographic campaign "I am a Scientist. I live in your neighbourhood", which shows 11 women scientists from the University of Zaragoza as real and close references. This initiative seeks, on the one hand, to reflect the proximity and closeness of women scientists, as real, flesh and blood references and, on the other hand, to break down counterproductive stereotypes.
https://ucc.unizar.es/11f

In the framework of Re-UNITA project the following training courses on Open Science are available:
1.Open Science from A to Z:
https://forms.gle/KhDMDGuKGKSHRYXRA
2.Fair Data Basics: https://forms.gle/ZMGrx9HN6beQFKnV9
3.Open Science in Horizon Europe:
https://forms.gle/FvT8ikaZarDwNLPJ8
4.Use Open Identifiers and manage your researcher's digital identity: https://forms.gle/ypmeRWeaVsCarPsZ6
5.Legal Issues: Intellectual Property:
https://forms.gle/2i9kGK6bQhzFKztA7

ELECMI, Electron Microscopy ICTS, presents a new open access protocol.
Successful applications will be granted free access to the facility (LMA-Advanced Microscopy Laboratory of the University of Zaragoza)
The next competitive open access call will open on March 15, 2023, and the deadline for receipt of applications will be March 31, 2023.
The resolution is scheduled for May 2023.
All the information is available on the ELECMI website:
https://elecmi.es/en/access-protocol-2/