

Background

The development of novel biotechnological platforms, specifically designed to produce valuable biofuels from organic waste residues is essential for Ireland and the EU to transform the economy from one heavily reliant on imported fossil fuels to a more indigenous low carbon economy, centred on energy efficiency, renewable energy and smart networks.

Such platforms are being developed in the SFI Research Professorship “Innovative Energy Technologies for Biofuels, Bioenergy and a Sustainable Irish Bioeconomy”, awarded to Prof. Piet Lens at University of Galway. Novel and disruptive bioenergy production technologies will be developed by predictive modelling and adaptive process control of the anaerobic digestion of organic matter. The work plan involves three approaches: i) anaerobic digestion for enhanced methane production and direct grid injection; ii) steering the anaerobic degradation of organic matter towards diversification of the biofuel mix, including biohydrogen, biopropanol/biobutanol and bioelectricity; and iii) production of biofuels from waste(water) inorganics, i.e. sulfur and ammonium.

The innovative research program will exploit fundamental scientific investigations to realise the full potential of these bioprocesses as commercially viable biofuel production and biorefinery systems.

Information

Registration fee:

There is no fee for this event.

Location:

Microsoft Teams Event

[Click here to join](#)

Time zone: Dublin/London Time

Contact:

Dr. Juan Castilla-Archilla

Ryan Institute, School of Natural Sciences

University of Galway, Ireland

E-mail: juan.castillaarchilla@universityofgalway.ie

Online Seminar

Trends in Environmental Biotechnology



Sustainable Alternatives for Proteins from Agro-Industrial Residues and By-Products

November 22nd, 2023
On line via Teams



SFI Research Professorship scheme

Attracting outstanding research talent to Ireland is one of the principal ambitions of SFI. The recruitment of world-leading scientists and engineers helps to build the national research base and enhance Ireland's reputation as a location to carry out high-impact, high-quality research. The SFI Research Professorship Programme supports national strategic priorities by assisting Research Bodies in the recruitment of world-leading researchers for professorial chairs in targeted scientific areas in all areas within SFI's legal remit.



OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY



SDG3 Challenge Funding

The UN Sustainable Development Goals (SDGs) are a call to action for all countries, in partnership, to achieve a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace and justice. The SDG Challenge seeks to support diverse, transdisciplinary teams to develop transformative, sustainable solutions that contribute to addressing development challenges under the UN SDGs in countries where Irish Aid works.

Challenge based funding is a solutions-focused approach to research funding that empowers researchers to find solutions to societal and economic problems. Teams are inter- and trans-disciplinary – scientists, engineers and researchers from different domains working together with non-technical experts.



IRELAND TẠI VIỆT NAM
VÀ TIỂU VÙNG MÊ KÔNG

Programme

9.00-9.15: Opening of the event
Piet Lens (University of Galway, Ireland)

9:15-9:50

Key note: Circular bioeconomy meets other renewables: purposing circular & biogenic carbon in a decarbonising world
Luuk van der Wielen (University of Limerick, Ireland and TU Delft, the Netherlands)

Session 1: Protein from AD commodities

Chair: Yan Zhan (Shandong Academy of Agricultural Sciences, China)
10.00-10.20

Sulfur upcycling to produce sulfur rich microbial protein from biogas

Marica Areniello (University of Galway, Ireland)

10.30-10.50

Beyond biogas upgrading: making single cell protein from GHGs

Mingyi Xu (DTU, Denmark)

Session 2: Protein industrial innovation

Chair: Amitap Khandelwal (University of Galway, Ireland)
11:00-11:20

Seaweed biomass: a green solution for healing our oceans

Maria Cermenon (Poseidona, Spain)

11:30-11.50

Sustainable solutions for environmental recovery and side stream valorization

Stijn Boeren (Avecom, Belgium)

12:00-13:00 PM Lunch Break

Session 3: Valorization of biomass residues

Chair: Adriana Braga (Teagasc, Ireland)

13:00-13:20

Protein and fibre derivatives from brewery spent grain

Juan Castilla-Archilla (University of Galway, Ireland)

13:30-13:50

Innovative platform to valorise carbon and nitrogen from hemp biomass residues

Carlo Moscariello (University Federico II, Naples, Italy)

Session 4: Protein from plants

Chair: Bui Thanh (Ho Chi Minh City University of Technology, Viet Nam)

14:00-14:20

Green Biorefineries - how farmers can get more usable protein and co-products from grass

James Gaffey (Munster Technological University and Biorefinery Glas, Ireland)

14:30-14:50

Duckweed cultivation and sustainable protein production in Ireland

Marcel Jansen (University College Cork, Ireland)

15:00 Closure of the day
Piet Lens (University of Galway, Ireland)