



Why not join the **Great British Beach Clean** this summer?

(Image courtesy of Pexels.com)

# **EBNet Newsletter - July 2020**

## News

# **ECR2020 Conference NEWS**

Our first online conference gathered more than 80 ECR members to share their research and network with peers. We managed to entice people (on the hottest day of the year!) for a packed schedule of 17 featured research presentations and numerous posters, with a lively side chat too. Talks ranged widely. In addition to the usual AD & WWT, we covered everything from metatranscriptomics, microbubbles, management strategies and molluscicides. Our thanks go to the most able support provided by our ECR Scientific Committee members, whose ability to chair sessions (to time!) and ask intelligent questions was much appreciated.

# Congratulations to the Winners!

Overall Best Presentation: Dr Zhugen Yang, Cranfield University
Overall Best Poster: Georgia Waldram, Heriot-Watt University

# Winner Session 1: Wastewater and Resource Recovery

Nopa Maulidiany, University of Southampton: Enhancing phosphorus release from Hydroxyapatite-rich activated sludge in fermentation processes

## Winner Session 2: AD for the Future

Mauro Lafratta, University of Surrey: Innovative dynamic feeding strategies of anaerobic digestion of sewage sludge for on-demand electricity generation

## Winner Session 3: Microbial and Molecular Advances 1

Dr James Robson, University of York: Temporal metatranscriptomics reveals the rate limiting enzymatic step in the anaerobic digestion of whisky waste

# Winner Session 4: Microbial and Molecular Advances 2

Dr Zhugen Yang, Cranfield University: Paper-origami device enabling low-cost and rapid microbial analysis

# Winner Session 5: Engineering and Biology

Dr Erifyli Tsagkari, University of Glasgow: Combination of computational modelling and 3-D printing to

## Winner Session 6: Environmental Interactions

Till Weidner, University of Oxford: Comparison of local and centralized biowaste management strategies – a spatially sensitive approach for the Porto region

#### Poster Session 1

Maria Ramos Suarez, University of Southampton: Continuous acidogenic fermentation of organic residual solids; effect of hydraulic retention time

#### Poster Session 2: JOINT winners

Sarah Hunter, University College London: Evaluating the impact of chemical structure on anaerobic digestion &

Dr Rachel Schwartz-Narbonne, Sheffield Hallam University: Multidisciplinary analyses of wastewater reactors

#### Poster Session 3:

Georgia Waldram, Heriot-Watt University: Marine Oil Snow (MOS): understanding formation mechanisms and role in microbial biodegradation of crude oil

(Winners of these awards will be contacted soon to receive a coveted certificate and small prize.)

#### NOW OPEN

# Next Quarterly EBNet Placement Call Deadline: 17 August 2020

Awards have a value of up to £1,500 for UK-based placements and £3,000 for overseas placements. More *here*.

# Workshop: Designing Standardised Biological Electrochemical Systems Postponed: to early summer 2021

Are you researching microbial fuel cells, electrode-assisted fermentation; electro-bioremediation etc.? Featuring: expert talks (how to design the best electrochemical systems); collaborative design (taking best practice to create prototypes); networking (flash presentations and conference dinner). Register your interest <u>here</u>.

## Working Groups

Inspired by ECR2020 and want to form a group? We can help. Even for something as simple as hosting a specialist online webinar, we have resources, extensive contacts, access to top Speakers and free advertising! If EB is your passion get the ball rolling now. See <u>here</u>.

(Get in touch if you would like to host an event - including webinars. We are always looking to support enthusiastic members to disseminate and explore topics of wider interest.)

# **Spotlight On...**

## Video Content

In this day and age e-skills are not optional. Most content is posted online in some format and the ability to create short video clips from your phone for research communication, promotion or education is a simple case of CPD. EBNet now has a series of short teaching aids - aimed at our Early Career Researchers - but available to all. Want to create a few short clips or improve what you do? Get stuck in - Video Training available <a href="https://example.com/here">here</a>.

# **Congratulations**

KETBIO has selected its top 3 <u>EU-funded biotechnology projects</u> (out of 300) and the UK is well-represented. Congratulations to EBNet member Prof. Peter Golyshin for his success with <u>INMARE</u> - greener industries through enzymes from seas and oceans. Other winners include: flexJET - converting food waste and biomass into green jet fuels through biorefining & iMETLand - engineering nature to clean up wastewater.



# **Forthcoming Events**

Find selected upcoming events below or look further ahead with our online Google calendar.

What have we missed? Whether local or international, niche, general interest or 3rd party - provided the topic is EB, we can share with the wider membership.

FREE: ADBA - AD Operators Info Session - Online event

22 July 2020

KTN/IBioIC: BioEconomy Cluster Builder Launch event

23 July 2020

FREE: Water Resources - Securing Long-term Resilience (virtual conference)

30 July 2020

FREE: AquaEnviro Webinars: Ask the Expert

<u>Troubleshooting Wastewater Treatment Systems</u> - 5 August 2020 <u>Microscopic Examination of Activated Sludge</u> - 27 August 2020

Nutrient Removal and Recovery Conference (virtual conference)

1-3 September 2020 (Finland)

# **European Waste Water Management Conference**

13th - 14th October 2020, Manchester

<u>Delivering on Net Zero Carbon in Wastewater Management:</u> progress and prospects

13 October 2020, Manchester

# **HVB Network Meeting**

20-21 October 2020, online event

FREE PLACES: <u>Nature-based Decentralised Wastewater Treatment</u>: experiences from

the H2020 INNOQUA project - November 2020

## European Biosolids & Bioresources Conference & Exhibition

24-25 November 2020, Newcastle-upon-Tyne

# **UKWIR Annual Conference**

15 December 2020, Hilton London Tower Bridge

# The Future of Sewer Network Management

25 March 2021, Birmingham

For more, go to: Events Roundup

# **Funding**

Funding opportunities for academia and industry are highlighted below.

Want a partner? Contact us with your details and we can connect you with members with similar interests or put a request out through the network



# **NERC: Discovery Science Standard Grant**

Deadline now 28 July 2020

## Innovate UK

The £191m <u>Sustainable Innovation Fund</u> is a fund to help all sectors of the UK recover, grow and create new opportunities from the aftermath of Covid-19.

Sustainable Innovation Fund Round 1 Deadline: 29 July 2020 (£100-500K)

## Young Innovators Awards 2020/21

Young people can apply for an award to make their business idea a reality - £5,000 grant, tailored business support and a living allowance.

Deadline: 2 September 2020

#### **EUREKA GlobalStars Japan**

Deadline: 10 September 2020

#### **HVB Proof of Concept Calls**

Deadline: 14 September 2020.

- 1. High value biorenewable products or processes for industry
- 2. Research on high value biorenewables or processes to underpin the creation of new spin-outs

#### **BBNet: Proof of Concept Call**

Deadline: 30 September 2020

## **HVB Business Interaction Voucher Call**

Deadline: 6 October 2020

#### **EUREKA GlobalStars Singapore**

Deadline: 15 October 2020

## Agri-tech catalyst round 10: agriculture and food systems, early stage

UK registered organisations can apply for a share of up to £2.5 million to work on agri-tech and food chain innovations in Africa.

Deadline: 21 October 2020

For more, go to: Funding Roundup



# Awards, PhDs & Jobs

Did you know we have funds available to help members access placements in industry or academia. Could you host one to share what you know? Contact us now.

## Jobs

# **BBSRC: Deputy Executive Chair**

Salary range £85000 - £95000. Deadline: 20th July 2020

We are seeking individuals with a first-class track record of academic achievement in any branch of the biological sciences and proven strategic and analytical thinking to join as the Deputy Executive Chair for UKRI-BBSRC.

# **Anaerobic Digestion Engineer**

The company is looking for a Project Engineer in a biotechnical field such as bioprocessing, environment, agriculture or waste management with industry experience in anaerobic digestion (AD) to join its Edinburgh team. Deadline: 21st July.

# Survey

# New <u>UK R&D Roadmap</u> published - share your views in this <u>Survey</u>

The Government's UK Research and Development Roadmap aims to ensure the UK is the best place in the world for scientists, researchers and entrepreneurs to live and work. People and organisations across the UK are now invited to share their views.

# Awards

# Salters' Centenary Awards

20 July 2020

The Salters' Centenary Awards are an award scheme for chemists and chemical engineers starting their careers in industry (4 awards of £2.5K).

## The Queens's Awards for Enterprise 2021

Deadline: 9 September 2020

These are for outstanding achievement by UK businesses in the categories of: innovation; international trade; sustainable development; promoting opportunity

## PhD Studentships

Recover, Recycle, Reengineer: A microbial and biotechnological solution to tackle the waste tyre problem

Heriot-Watt University. Deadline: 31 July 2020

Computational and Polymer Sciences to Engineer Microbial Physiology

University of Birmingham. Deadline: 31 July 2020

Interdisciplinary PhD in Sustainable Social Entrepreneurship - identifying patterns and processes of environment related entrepreneurial approaches undertaken by women to alleviate poverty

Durham University. 1 August 2020

# **Publications**

# <u>Paper-based microfluidics for DNA diagnostics of malaria in low resource underserved rural communities</u>

Julien Reboud, Gaolian Xu, Alice Garrett, Moses Adriko, Zhugen Yang, Edridah M. Tukahebwa, Candia Rowell, and Jonathan M. Cooper

PNAS March 12, 2019 116 (11) 4834-4842

<u>Soil organic matter prevails over heavy metal pollution and vegetation as a factor shaping soil microbial communities at historical Zn-Pb mining sites</u>

Stefanowicz, A.M. et al.

Chemosphere 2020 Feb; Vol. 240, pp. 124922.

# Polyhydroxyalkanoate (PHA) purification through dilute aqueous ammonia digestion at elevated temperatures

 $Burniol\text{-}Figols, A., \, Skiadas, \, I.V., \, Daugaard, \, A.E., \, Gavala, \, H.N.$ 

Journal of Chemical Technology and Biotechnology. Volume 95, Issue 5, 1 May 2020, Pages 1519-1532

# An innovative biotechnology for metal recovery from printed circuit boards

Becci, Alessandro; Amato, Alessia; Fonti, Viviana; Karaj, Dafina; Beolchini, Francesca

Resources, Conservation & Recycling; Feb 2020, Vol. 153, 104549

# Still here?

Challenge for the day – think of a situation where the following adage might apply – "When a measure becomes a target, it ceases to be a good measure."

Personal favourite - paying small children to clear slugs from the veg patch (small bounty/slug).

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