



BioRefine Bulletin

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Struvite recovery from digested sludge

NuReSys, together with Aquafin, has been investigating the possibilities for phosphorus recovery from digested sludge from municipal wastewater at a pilot installation in Leuven, Belgium. The NuReSys-P technology to recover PO₄-P as struvite had already been successfully applied on wastewater with a low suspended solids content (0.2% SS). The challenge was the application on digested sludge from a MWWTP with SS > 4%. The goal was to produce struvite crystals that are easily harvested and that contain little impurities to permit usage as fertilizer. The technical advantages of PO₄ removal from sludge are a better dewatering ability and a lower backflow of nutrients to the head of the station. Furthermore, the formation of "wild" struvite can be diminished resulting in less maintenance and a higher availability of the treatment plant. The realization of this 8m³/h pilot allowed developing skills in separation techniques ensuring an easy separation of the formed crystals from the sludge. The remaining challenge is to develop an efficient washing technique to get the recovered struvite as pure as possible.

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P-REX Summer School was a success

From 10 till 12 September 2014 the FHNW hosted 40 master and PhD students as well as young professionals out of 12 different countries during the P-REX Summer School in Basel. The main objective of the P-REX-project, one of the Biorefine Cluster Europe members, is the practical implementation of phosphorus recovery and recycling from wastewater in Europe. The attendees listed advice to deal with the phosphorous challenge during this 3 day event. First of all, to close the phosphorus cycle, cooperation among the industry, government and knowledge institutes is essential, and more research on the recycling technologies is useful to obtain even lower costs and a lower environmental impact. The attendees also agreed that awareness raising is essential. How many people do even know phosphorus? Besides, the current P-market does not encourage P-recovery, therefore political actions are necessary and regulations can act as a driver to start implementing the existing recovery technologies.

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EIP-AGRI Focus Group: Fertilizer efficiency

The EIP-AGRI Focus Group on fertilizer efficiency is the 10th focus group in line that aims to complement the construction of the EIP-AGRI network, funded under the EU Rural Development policy. The Focus Group brings together 20 experts in plant fertilization (such as farmers, advisers, researchers, businesses and NGOs) to map and develop solutions within the field of efficient fertilizer use. To fulfil this mission, experts will perform mini papers amongst others. One of these papers will talk about organic fertilizers, focusing on digestate and compost of different origins and their derivatives, biochar, and other products like industrial residues. Additionally, implementation issues and other bottlenecks of organic fertilizers will be described. The work done by the fertilizer Focus Group will be round up with a final report, including the views of different experts, and a call for Europe-wide cooperation to face the fertilizer challenge by innovating on the indicated pathways. The first fertilizer Focus Group meeting was held in Alicante (Spain) on 3-4 June 2014. The second meeting is planned for October 2014.

Zoltán Hajdu; SOLTUB Kft.

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German-Flemish exchange on nutrients

On 12-13 May 2014, the Flemish Coordination center for Manure processing (VCM), Ghent University and Vlakwa welcomed a German delegation from the state of Lower Saxony in the frame of the BIOREFINE project's bilateral working group. The German delegates expressed a lot of interest in finding solutions for manure processing and wastewater treatment, since they are currently dealing with a nutrient surplus in their region and are expecting a further increase for the upcoming years. With this visit, the German delegates wanted to learn more about the extensive experience in Flanders with nutrient surpluses and possible solutions. During this two-day workshop with presentations, speed dating and site visits, a lot of interesting information has been exchanged and new contacts have been set up. Hopefully this can be the start of a good bilateral cooperation on the shared challenges. In the spring of 2015, a Flemish delegation will go to Germany to continue this fruitful knowledge-sharing with the German stakeholders.

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Bioenergy for Green Regions in Europe

Register now for the 1st interregional conference of the PROGRASS network in Karlsruhe and Lake Constance (Germany) on 7-10 October 2014. The PROGRASS[®] concept is a European regional development approach for the recovery of regional biomasses for decentralized production of climate friendly, storable biofuels. It builds on the use of a technology called "Integrated Generation of Solid Fuel and Biogas from Biomass (IFBB)". The main goal of the conference is to gather stakeholders at local, regional, national and EU-wide levels that wish to enlarge and exchange their knowledge about the IFBB technical approach and about its potential socio-economic impacts on their specific regions. The "Bioenergy for Green Regions in Europe" event will address the following topics: (1) state of the art: the PROGRASS concept and the IFBB technology as implemented in the European partner regions; (2) perspectives: new developments regarding input materials, biomass recovery areas and socio-innovations; (3) networking and joint project development.

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Establishing a UK nutrient platform

As partners in the innovative European Interreg IVB BIOREFINE project, Link2Energy and Leeds University are pleased to announce an exciting industry event in November 2014. This pioneering event, featuring experts in the Nutrient Cycle and Funding Provision, will explore the potential benefits of instigating a UK Nutrient Platform along the lines of an existing arrangement in the Netherlands. It will investigate the recycling of inorganic chemicals from agricultural and industrial biowastes waste streams, the key ambition being to close nutrient cycles and develop sustainable resource management in North West Europe, both from an economic and ecological perspective. The event is to be held at The Leeds Club, Leeds, on Wednesday 12th November 2014. Please contact the event manager at Link2Energy at info@link2energy.co.uk to book.

Malcolm Bailey; Link2Energy Ltd.

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