

Pennotec

Company Profile

Pennotec, a new venture established under Pennog Ltd, are industrial bio-technologists who aim to advise and provide technology to assist businesses and operators in the conversion of manufacturing waste into marketable resources.

Waste biomass typically accumulates as a result of numerous manufacturing activities from a variety of industries including: agriculture; food & beverage; chemicals & pharmaceuticals; and fuels & biofuels. Establishing new markets as an alternative to landfill and incineration disposal methods is a priority for Pennotec. Currently, Managing Director Dr Jonathan Hughes is focussing on the waste streams associated with crustacean meat processing.



Washed, dried and milled crab shell

Collaborating with BEACON

Initially learning of the BEACON project via the BioComposites Centre at Bangor, Jonathan met with Business Development Manager (BDM), Selwyn Owen and Senior Scientist Joe Gallagher at the BEACON 2013 Annual Conference held in Llandudno in June, and later set up a formal meeting to discuss alternative techniques for the fermentation of crab waste.

Discussions with the BEACON team during the Summer of 2013, resulted in the formation of a one month collaborative research and development project to identify innovative processing solutions.

BEACON's existing biorefining research and pilot-scale facilities, alongside the possibility of conducting a techno-economic analysis of the results obtained were factors that influenced Jonathan's decision to collaborate. Pennotec approached BEACON with the initial idea of utilizing the products of grass sugar biorefining as a means of removing specific compounds from waste crab shell material.

“*BEACON has provided considerable support to Pennotec, including providing network support for the future development of the business and a compelling Technology Strategy Board grant application.*”

Jonathan Hughes - Director

The handling and preprocess of waste crab shells proved to be a challenging task. However, this was overcome through the use of BEACON's upscale autoclave equipment at Aberystwyth, with drying and milling undertaken BioComposites Tech Transfer Centre in Mona, Anglesey.

BEACON has positively demonstrated their capability to incorporate waste crab shell material into grass sugar biorefining. The results of the collaboration have allowed Pennog Ltd to apply and successfully be granted the opportunity of Technology Strategy Board funding for a nine month technical feasibility project in 2014.



For more information: www.pennotec.com/about-us/