November 2020 *.... enabling distributed manufacturing*

Advanced Manufacturing helps to Build Back Better

The UK's All Party Parliamentary Group on Access to Medicines has been evaluating options for securing the supply of essential medicines, noting a deteriorating situation in the ongoing Covid-19 pandemic. NiTech took part in the enquiry, which reached a firm consensus that the UK needed to develop secure and robust local supply chains for essential medicines.

The USA and EU governments are moving in a similar direction, aiming to relocate manufacturing closer to home to secure access to critical medicines. In September, the US House of Representatives passed a bi-partisan bill to invest in advanced manufacturing technologies, and authorised $80 million of funding to support initial development efforts to Build Back Better.

The Covid-19 pandemic has highlighted this urgent need to reshore production for critical medicines closer to the patient. The use of advanced manufacturing technologies will be a vital element in ensuring that the new supply chains are cost-competitive and environmentally sustainable.

Advanced manufacturing based on digital, continuous & bio-enabled technologies offers several important and tangible benefits:

- **Quality:** improved and consistent product and real-time quality data
- **Cost effectiveness:** lower capital and operational costs; higher efficiency
- **Speed:** shorter manufacturing time and process approval time
- **Flexibility:** ability to transfer and scale up and down (matching demand)
- **Sustainability:** reduced waste and carbon footprint
- **Cost:** less capital employed, lower operating costs, smaller footprint

In this Real Vision interview, NiTech's chairman, Paul Hodges, discusses the need for countries to reshore the supply of generic drugs using advanced manufacturing - to maximise local availability of critical medicines for patients

Contact us to help you Build Back Better after the pandemic in a **safer, greener, faster and cheaper** way.

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NiTech awarded Innovate UK grant for CBD development work

NiTech has won funding from Innovate UK's Sustainable Innovation Fund to demonstrate the crystallization of high-purity cannabidiol (CBD) isolate from hemp-derived distillate, using its continuous technology.

The aim is to deliver high-purity CBD isolate in large volumes at low cost and with minimal environmental impact. This will facilitate its use in a growing broad range of products from healthcare to food & beverages.

CBD's health benefits in treating epilepsy and other medical conditions were recognised in a 2017 report from the World Health Organization. The global market is already worth >$3bn..

In the five-month project, NiTech will work with the Institute of Biological, Environmental and Rural Sciences (IBERS) group within the University of Aberystwyth.

Chemical recycling collaboration

NiTech is collaborating with Recycling Technologies (RT), Bath University and Optimal Industrial Automation to create an end-to-end chemical recycling system for mixed plastic waste.

The proposed system will take existing elements from RT's pyrolysis process and NiTech's hydrogenator to convert the waste to high-grade feedstock for subsequent plastic production. The project aims to confirm the feasibility of an integrated process, with the aim of then designing and building a pilot-scale unit.

Source: Recycling Technologies

"We are delighted to be working with RT and other technology partners on this project as we seek to tackle one of the most important environmental challenges the world faces," said NiTech CEO, Dr Will Davies. "The application of NiTech's continuous processing technology is likely to be an important element in creating an end-to-end solution for recycling of otherwise problematic mixed plastic waste."

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