

November 2016

## ***COP21 TREATY REQUIRES MANUFACTURING TO CHANGE***

Sustainability is rapidly becoming a key driver for the global economy. A total of 81 countries, representing more than 55% of greenhouse gas emissions, have now signed the COP21 Climate Change agreement, which will enter into force on 4 November.



It aims to cut greenhouse gas emissions and so limit the rise in global average temperature to “well below” 2°deg C (3.6° F) compared to pre-industrial levels. This is the point when climate change could threaten life on earth.

Manufacturing has a key role to play in delivering the necessary changes.

NiTech’s innovative and proven technology will enable your business to develop **SAFER, GREENER, FASTER & CHEAPER** manufacturing processes by helping to reduce greenhouse gas emissions in a number of critical areas:

- ❖ >70% plant footprint reduction
- ❖ >50% plant capex reduction
- ❖ >30% operating cost reduction
- ❖ More consistent quality
- ❖ >10% yield increase (less waste)
- ❖ Safer, more controllable process

### **NITECH’S TECHNOLOGY IS ALREADY IN ACTION AROUND THE WORLD**

Many forward-thinking companies are already developing new continuous processes using NiTech units:

- Aug 2016** France’s SAS Pivert and the University of South Wales’ Centre of Excellence in Anaerobic Digestion chose NiTech units for biotech research
- Feb 2016** NiTech won a major £1.25 million project, funded by Innovate UK and led by Croda, the UK’s largest quoted chemical company. This will become an industry showcase
- Jun 2015** Bayer Technology Services identified NiTech’s units as a potentially key technology for the future
- Jun 2015** Corning successfully demonstrated an integrated continuous flow chemical manufacturing process using a NiTech crystalliser

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**Jun 2015** SP Process Development, NiTech's partner laboratory in Sweden, added a new scale-up, demonstration and GMP facility.

### **SAFER, GREENER, FASTER & CHEAPER**

Over the past three years, NiTech and its engineering partner Alconbury Weston (AWL) have created a comprehensive **DN15** product range to meet your application needs:

**Feb 2015** High-pressure, ATEX-compliant unit introduced. It enables increased yield and purity - while reducing reaction times, solvent volumes and catalyst loading

**Jul 2014** High-pressure unit introduced, enabling companies to carry out a wider range of chemistries than is possible in a glass reactor

A **DN15** rental unit is made available, enabling companies to undertake feasibility studies in their own laboratories

**Mar 2014** A full range of **DN15** continuous crystallisers and reactors in glass is launched, including Lite, Standard and Plus models from 1.25 litres to 3.5 litres.

NiTech's technology has also been in use since 2012 at the £84m Centre for Continuous Manufacturing and Crystallisation at the University of Strathclyde, helping companies to gain practical experience of crystallisation science.

### **'PROCESS INTENSIFICATION VIA CONTINUOUS CRYSTALLIZATION, WITH REAL TIME ANALYTICS'**

NiTech and our partners AWL will be presenting at an industrial Open Day at the Department of Chemical Engineering, Purdue University, Indiana, USA on 2 December.



Hosted by Prof. Zoltan Nagy, the Open Day will demonstrate continuous crystallization, including process intensification and continuous filtration, as well as monitoring using a variety of novel in-situ and online PAT tools.

For further details, and to register, please go to [crysworkshop.neocities.org](http://crysworkshop.neocities.org)