

Processing of material feedstock using plasma

CE-SPIRE-02-2018: Processing of material feedstock using
non-conventional energy sources (IA)

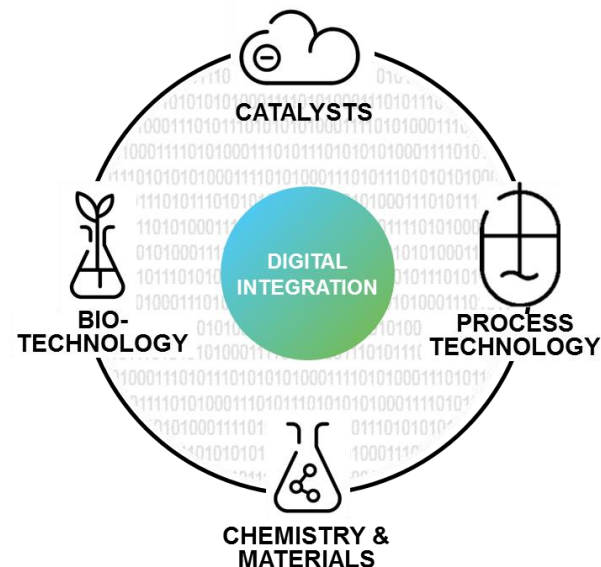
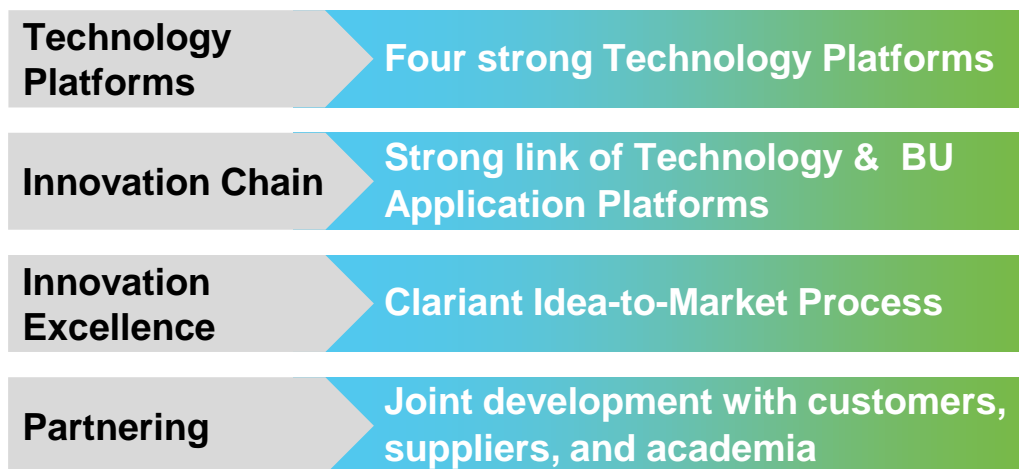
SPIRE (Chemical Technologies)

EU Brokerage Event on Kets in Horizon 2020

Strasbourg, 17th October 2017

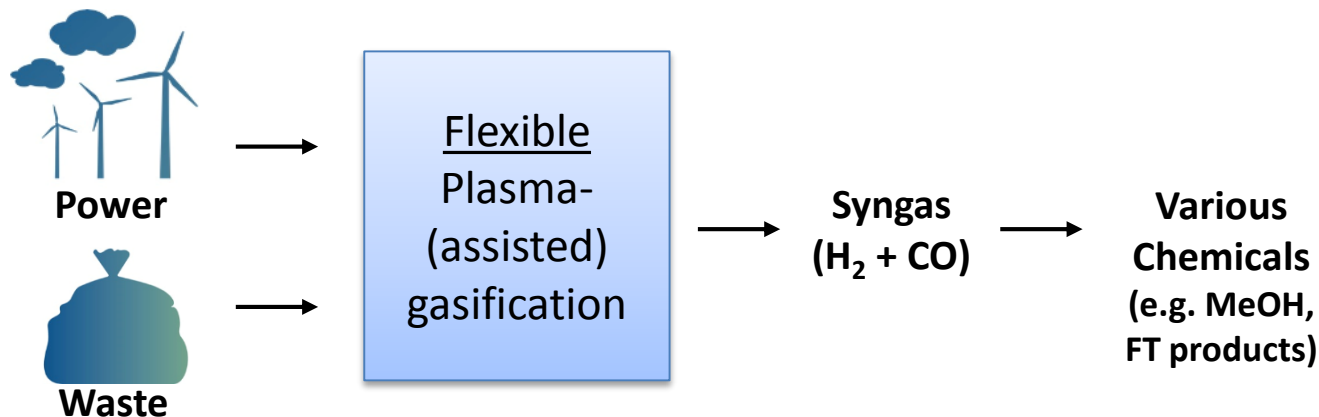
Clariant – A globally leading specialty chemicals company

- Clariant in Europe (2016): > 7500 employees, ~ 2 billion CHF sales (34 % of global)
- Sustainability as strategic pillar and strong focus on innovation through R&D and system solutions, tailor-made for customer needs and markets



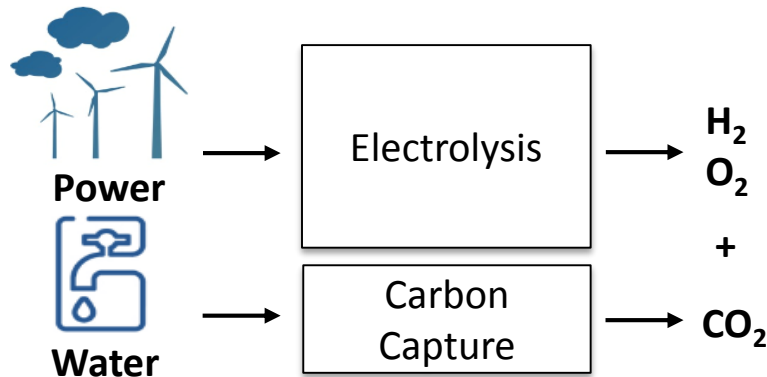
Plasma gasification as key technology for waste valorization

- Demonstration of a waste-to-value concept using plasma gasification technology (small-scale, modular, decentralized)
- Utilization of renewable energies and valorization of waste streams via a highly flexible and tolerant process
- Alternative to common Power-to-X approaches through direct syngas production as ideal platform for value-added chemicals



Expected impact of our project proposal

- Strongly related to CE-SPIRE-02-2018: Processing of material feedstock using non-conventional energy sources (IA)
- Efficient use of fluctuating renewable energies by a robust process based on plasma technology
- Industrial realization of Circular Economy and Zero Discharge concepts
- Attractive downstream opportunities via high quality syngas



Plasma gasification as an alternative to PtX concepts based on electrolysis

- waste valorization possible
- no CO_2 supply necessary

Consortium

Known partners / Competence offer

Name	Type	Country	Role in the project
Clariant	IND	DE	Technology end user (waste utilization) Downstream expertise and catalyst supplier Demonstration in industrial environment

Discussions with interested academic and industrial partners are ongoing

Partner search

Profile	Type	Country	Role in the project
Institute/University			Project Coordination
Additional end user	IND		Application for other waste streams
Plasma experts			Expertise in plasma physics and operation
Plant designer/manuf.	IND		Design and layout of demonstration plant
Equipment provider			Plasma technology & process control
Others disciplines			Process systems engineering, economics, etc.

Contact details

Clariant Produkte (DE) GmbH
Process Innovation
Frankfurt am Main, Germany
christian.dreiser@clariant.com
stefan.brand@clariant.com



Christian Dreiser



Stefan Brand