



PRESS RELEASE

# REINVENTING GRIGNARD MANUFACTURING

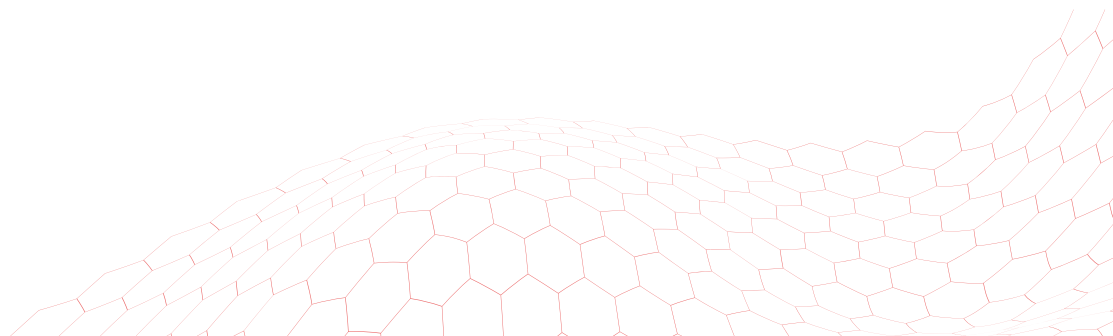
## CHEMIUM LAUNCHES Mg<sup>Flow</sup>® TECHNOLOGY AND REINVENTS GRIGNARD MANUFACTURING

Louvain-La-Neuve, September 29<sup>th</sup> 2022,

**Based on the Flow Chemistry concepts and advanced simulation techniques, CHEMIUM has developed a novel, safe, reliable and highly flexible continuous flow technology, to produce Grignard reagents at industrial scale.**

Discovered by Victor Grignard in 1900, this family of magnesium-based reagents is largely used in the industry for the key chemical transformation that leads to carbon-carbon bond formation, giving to chemists the ability to build or extend the carbon backbone of chemical structures. This amazing chemistry has proven to be a key element in the production of useful products in highly dynamic markets such as pharmaceutical, agrochemical or electronic industries.

However, the preparation of such Grignard reagents in large quantities in batch reactors raises very serious safety concerns. The reaction, which has to be made under inert conditions, is highly exothermic and requires a tricky initiation phase that may turn to be uncontrollable if not handled properly.



## An entirely re-designed, continuous process for Grignard reagents production

Thanks to a dramatic increase in reaction kinetics, the hold up volume is several orders of magnitude lower than in conventional reactor set-up, hence reducing the energy accumulation to non-hazardous levels. The process safety concerns inherent to Grignard batch production are eliminated.

Furthermore, the excellent heat transfer of the system allows for a very tight temperature control, resulting in homogeneous reaction conditions, maximum efficiency and minimized side-reactions.

CHEMIUM's continuous flow technology is the best choice to quickly find optimum safe reaction conditions and to support fast scaleup from liters to multi metric tons capacity, covering all steps of new product development.

*"Our ambition is to support the fine chemicals players by offering ready-made solutions for specific chemical reactions which they can easily integrate in their own manufacturing lines, hence eliminating the need for outsourcing or delocalising, reducing supply-chain complexity, lowering transportation volumes and most importantly keeping tighter control on the overall production chain and the product quality"* stated Luc Reginster CEO of CHEMIUM.

### ABOUT CHEMIUM

CHEMIUM is a Chemical Technology company providing innovative solutions for challenging chemical intermediates. CHEMIUM's focus is on maximising process efficiency and reducing environmental footprint, both in our own and our customers' processes.

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