

Microwave-assisted WTB recycling: the role of chemical recycling routes

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Microwave-assisted WTB recycling: Ongoing activities

Assessment of the impact of heating source on: a) energy efficiency, b) products quality

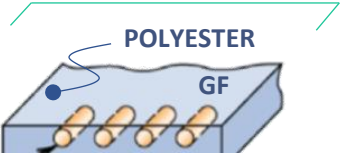


MW-assisted heating for WTB recycling in tubular fixed bed

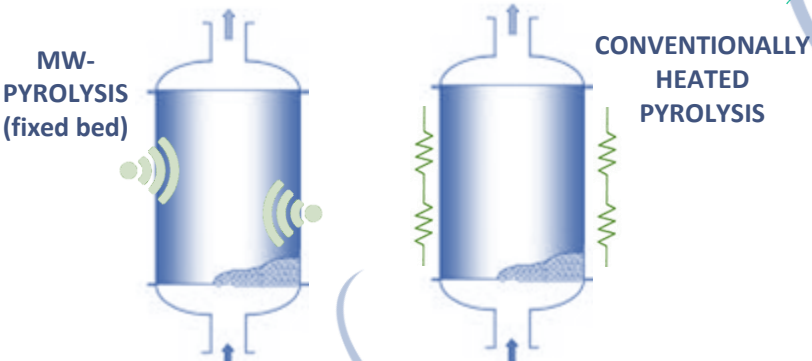
Conventional heating to replicate lab-scale WTB recycling

1200 °C

Feedstock: FRP typology



Recycling technology



Product distribution

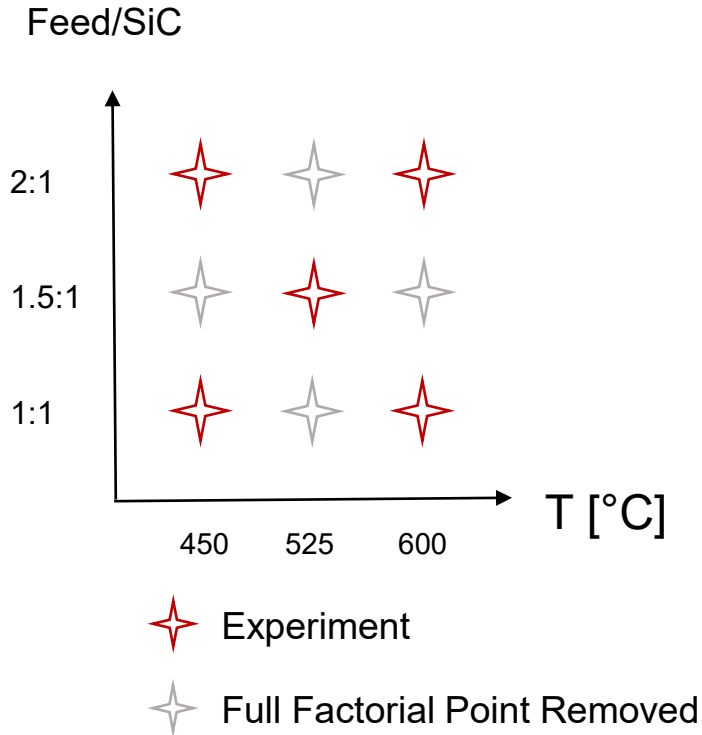


Oil (from resin degradation)



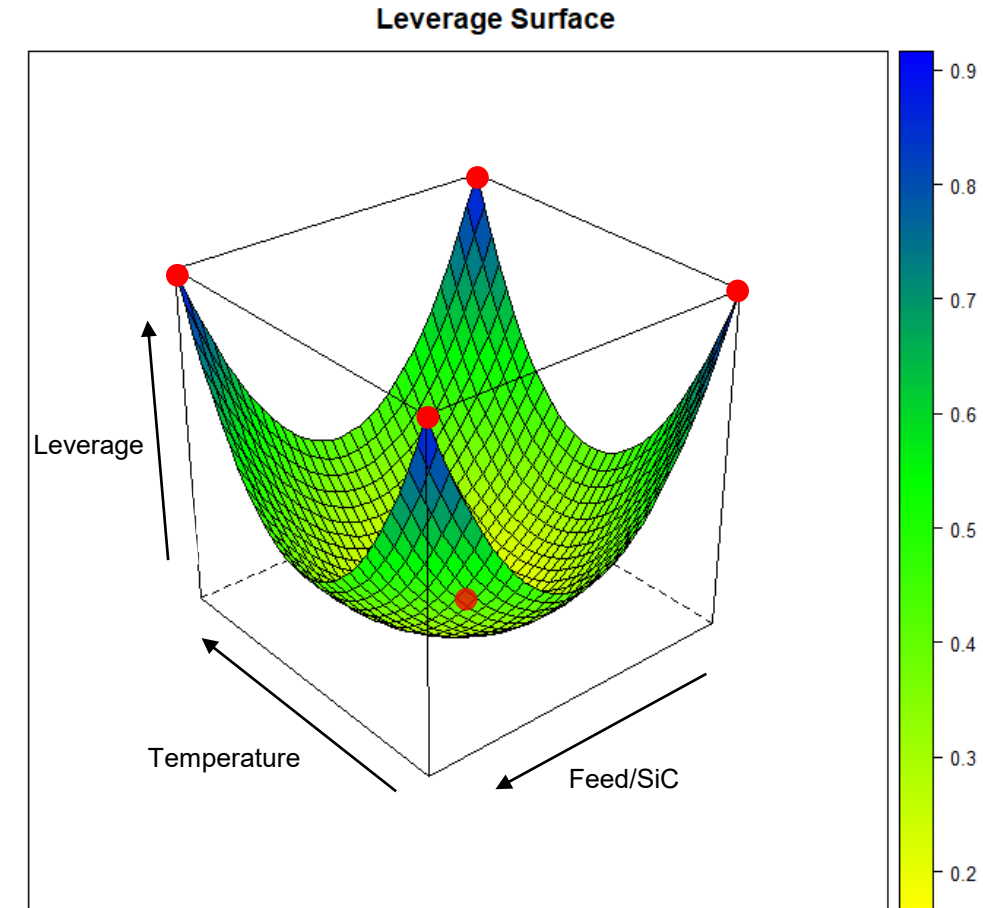
Energy demand

Microwave-assisted WTB recycling: Ongoing activities



➤ DoE to map the influence and to optimize temperature and feedstock / susceptor ratio

The objective is to evaluate the influence of temperature and feedstock-to-susceptor ratio on product distribution and energy demand while minimizing susceptor usage while maintaining effective heating conditions.



▲ Leverage surface of the general fractional factorial design



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Thank you for your attention!

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