

## POLYMER FROM PYROLYSIS PRODUCTS

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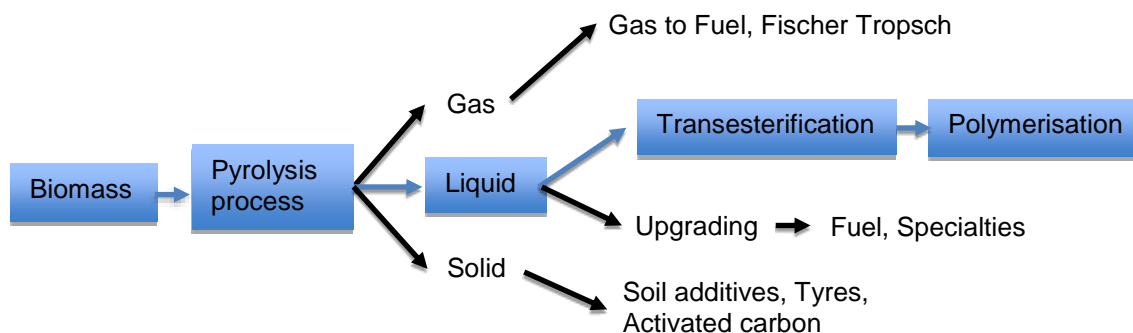


Figure 1 Potential routes to value from pyrolysis products, with the focus of this project, “pyrolysis products to polymer”, shown in blue.

Polymers are used every day; they are an indispensable part of our lives. If we want to maintain our plastic dependant lifestyles and expand our population alternative feedstocks for polymers need to be found. Pyrolysis is a possible route to useful materials however it is difficult to control and analyse the composition of liquid<sup>[1]</sup> and produce economically viable product<sup>[2]</sup>. Microwave pyrolysis involves lower temperature during pyrolysis and can give more controlled products compared with the conventional method<sup>[3]</sup>. It is anticipated to produce multiple pyrolysis liquids that are potentially input materials for a variety of processes. The focus of this work will be the synthesis of polymers from pyrolysis liquids and how pyrolysis liquid composition affects the behaviour of the product. This work could see a new family of polymers with properties dependant on the composition of pyrolysis liquid. This could help to reduce the use of crude oil for polymers.

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