

Title	Development and application of a new, bio-based solvent
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With the tightening of the environmental regulations, alternative solvents are getting greater attention, which may be capable of replacing the traditional, environmentally harmful solvents. They have a lower tension, and they are not toxic nor flammable. In many cases, they can also be manufactured from bio-based materials.

In my research work, I aimed to synthesise an alternative solvent with the advantageous properties mentioned above. I have successfully determined the most important physical properties of the solvent and investigated its stability. Furthermore, it was successfully applied in carbon–carbon coupling reactions like Suzuki and asymmetric Michael reactions. Finally, it was applied as a cosolvent to hydrolyze PET and PC polymers.

The newly synthesised solvent has shown many of the common beneficial properties of the alternative solvents. It has also performed well in coupling reactions. Furthermore, it turned out to be an excellent cosolvent in the hydrolysis of polymers with a full conversion and yields (>80%).

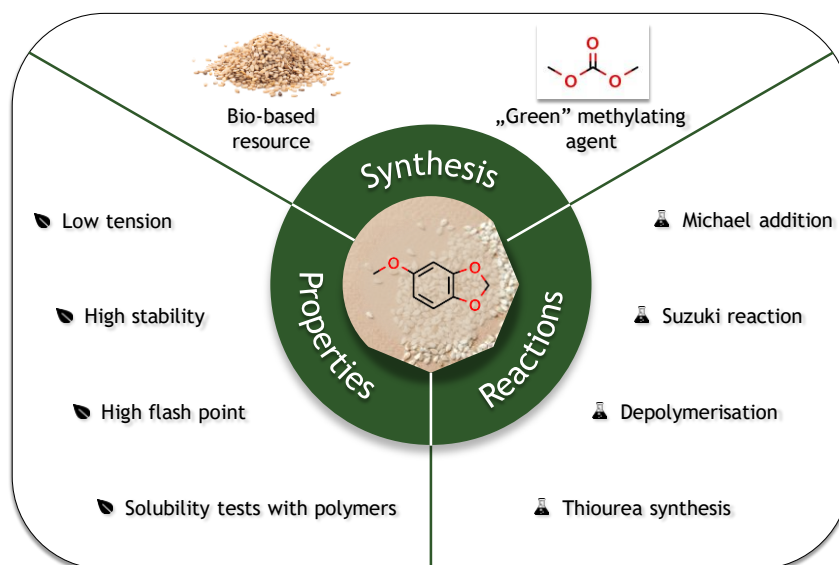


Figure 1: Properties of the new, bio-based solvent

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