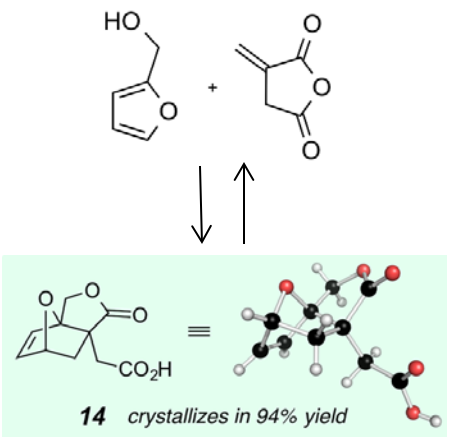
Versatile Reaction Technology for Corn-based Renewable Chemicals - Itaconic Acid & Furans



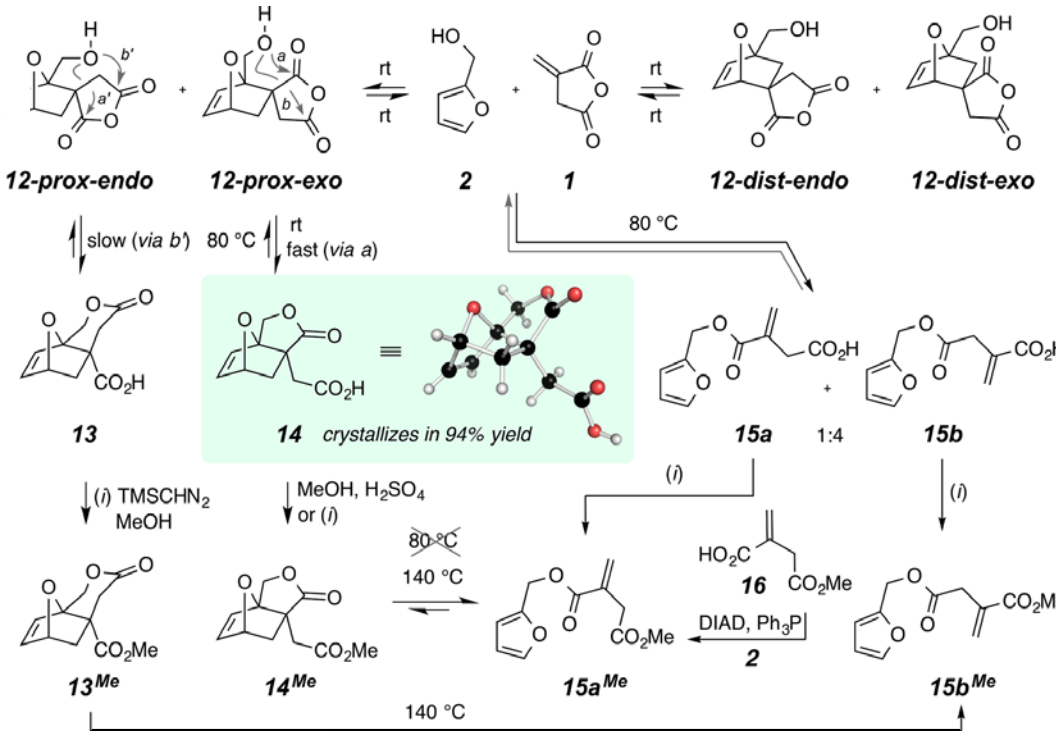
A number of unique molecules can be synthesized starting with itaconic acid and furfuryl alcohol or other furans. New chemical compounds can be synthesized that could be used as exciting cost effective monomers or reactants with potential applications such as renewable polymers, surfactants or plasticizers.

Description of the Invention

Researchers at the University of Minnesota have discovered that a metastable lactone acid can be produced in high yield (94%) under trivial reaction conditions [1:1 mixture of itaconic acid and furfuryl alcohol, neat, ambient temperature]. This opens the way for conversion into derivatives amenable to polymer or chemical compound synthesis.

Features and Benefits

- Production equipment is relatively simple leading to low cost reaction conditions
- Multiple compounds can be produced in high yield from renewable itaconic acid and furfuryl alcohol. Reactions in the bulk have been demonstrated.



Potential Applications

- New polymers based on renewable starting materials
- New specialty chemical based on renewable starting materials

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Technology Status

Laboratory scale proof of concept. Chemicals compounds characterized.

Publication

doi.org:
10.1021/acs.orglett.6b00929

IP Status

Patent Pending

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Case Reference

20160256