Plant oils: The perfect renewable resource for polymer science?!

Michael A. R. Meier

Karlsruhe Institute of Technology (KIT),Karlsruhe, Germany

In ages of depleting fossil reserves and an increasing emission of greenhouse gases it is obvious that the utilization of renewable feedstocks is one necessary step towards a sustainable development of our future. Especially plant oils bear a large potential for the substitution of currently used petrochemicals, since a variety of value added chemical intermediates can be derived from these resources in a straightforward fashion taking full advantage of nature's synthetic potential. Here, new (catalytic) approaches for the synthesis of monomers as well as polymers from plant oils as renewable resources will be discussed.

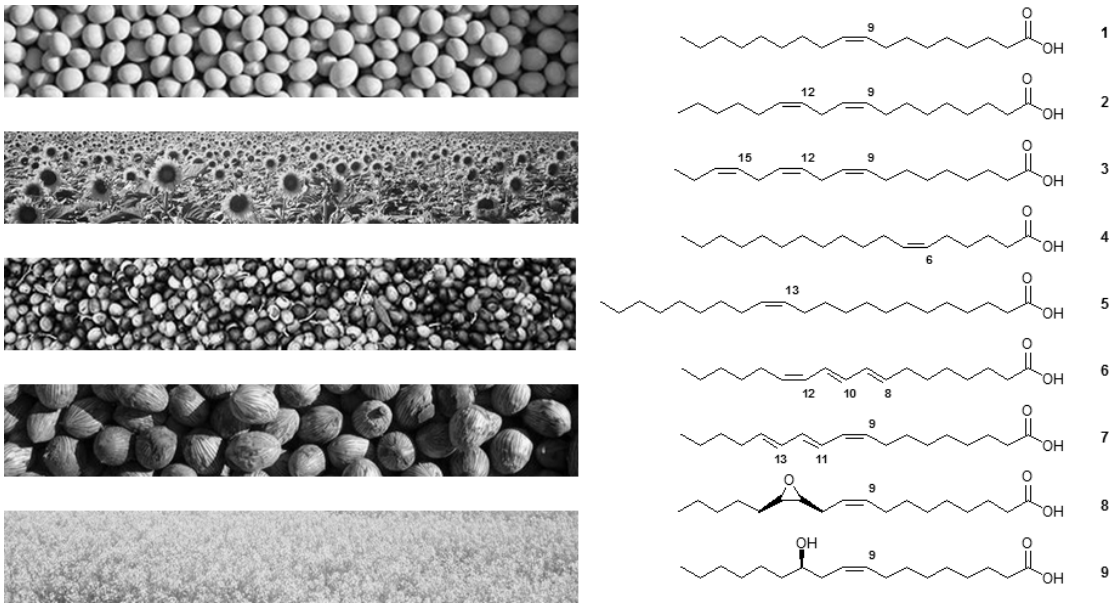

Figure 1 Plant oils offer a diverse set of fatty acids that can be utilized via efficient catalytic transformation, such as olefin metathesis and others.

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