



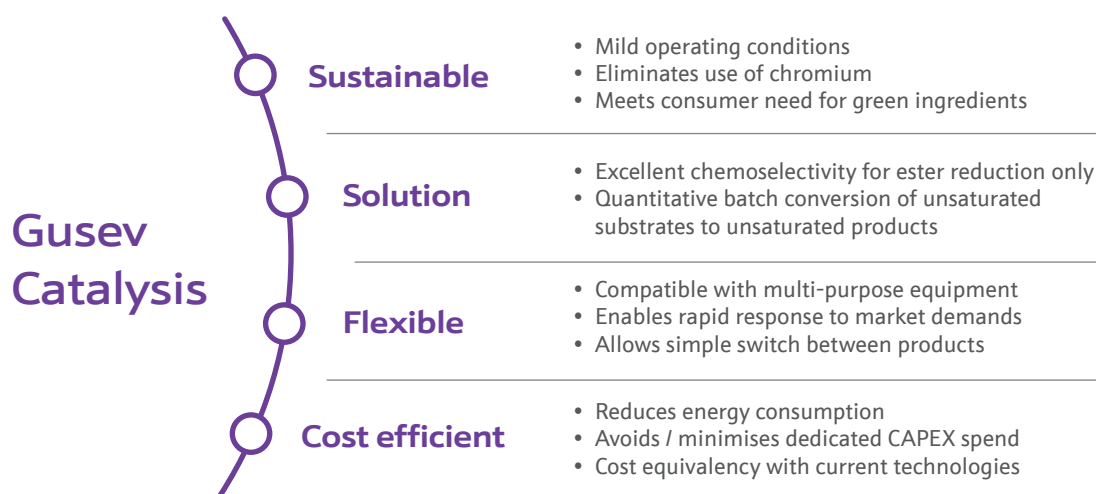
Flexible specialty fatty alcohol manufacturing with Gusev catalysis



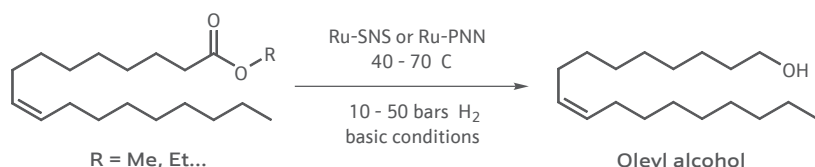
Achieve highly chemoselective reactions for the manufacture of specialty or niche volume fatty alcohols in multiuse vessels with quantitative substrate conversion, mild conditions and minimal byproduct formation using homogeneous Gusev catalyst technology.

Heterogeneously catalysed processes to bulk fatty alcohols are well-established and economical but present significant challenges for specialty fatty alcohols (SFAs). SFA volumes are often incompatible with continuous processes and the harsh reaction conditions associated with the heterogeneous routes cannot be replicated in standard batch hydrogenation equipment. Gusev-catalysed processes offer a batch-compatible solution which can be optimised for chemoselective ester reduction, for example, to allow the retention of the C=C bond in oleyl alcohol. In contrast, traditional routes achieve this only at partial substrate conversion.

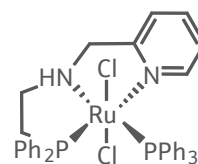
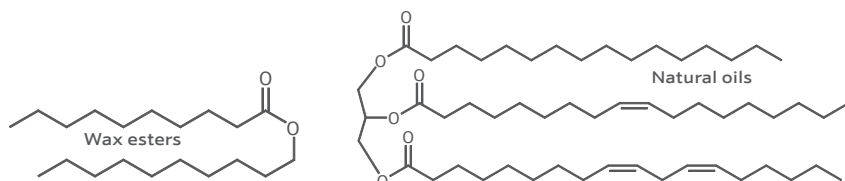
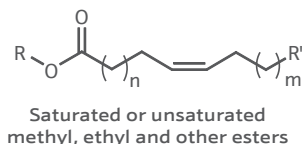
A sustainable solution for flexible, cost-efficient production of specialty fatty alcohols



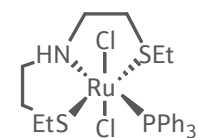
Substrate scope



A range of substrates are compatible under similar conditions:



C1-850, Ru-PNN



C1-750, Ru-SNS

Key characteristics

- High ester chemoselectivity (C=C retention)
- Very high activity under basic conditions
- Mild conditions at low T (30 - 90 °C) and P (5 - 50 bar)

To find out more search Gusev technology on matthey.com or email samples@matthey.com