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Development of nickel based catalysts for the transformation of natural triglycerides and related compounds into green diesel: a critical review

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Highlights

□ An entire picture is synthesized of Ni catalysts for green diesel production via selective deoxygenation (SDO) □ Supports with high surface area, medium acidity and mesoporous structure are suitable □ Main SDO pathways: triglyceride → fatty acid → [aldehyde ↔ alcohol] → green diesel □ Ni or NiMo phosphides favor HDO with respect to deCO reducing undesirable methanation □ The subject is open for application of more advanced preparation methods

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