

Supporting information

Sustainable route to methyl-9-hydroxononanoate (polymer precursor) by oxidative cleavage of fatty acid methyl ester from rapeseed oil

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The ¹H NMR spectra was recorded on a Bruker Avance III Ultrashield+ 400 MHz spectrometer with CDCl₃ as solvent, and chemical shifts were given in ppm downfield from trimethylsilane (TMS).

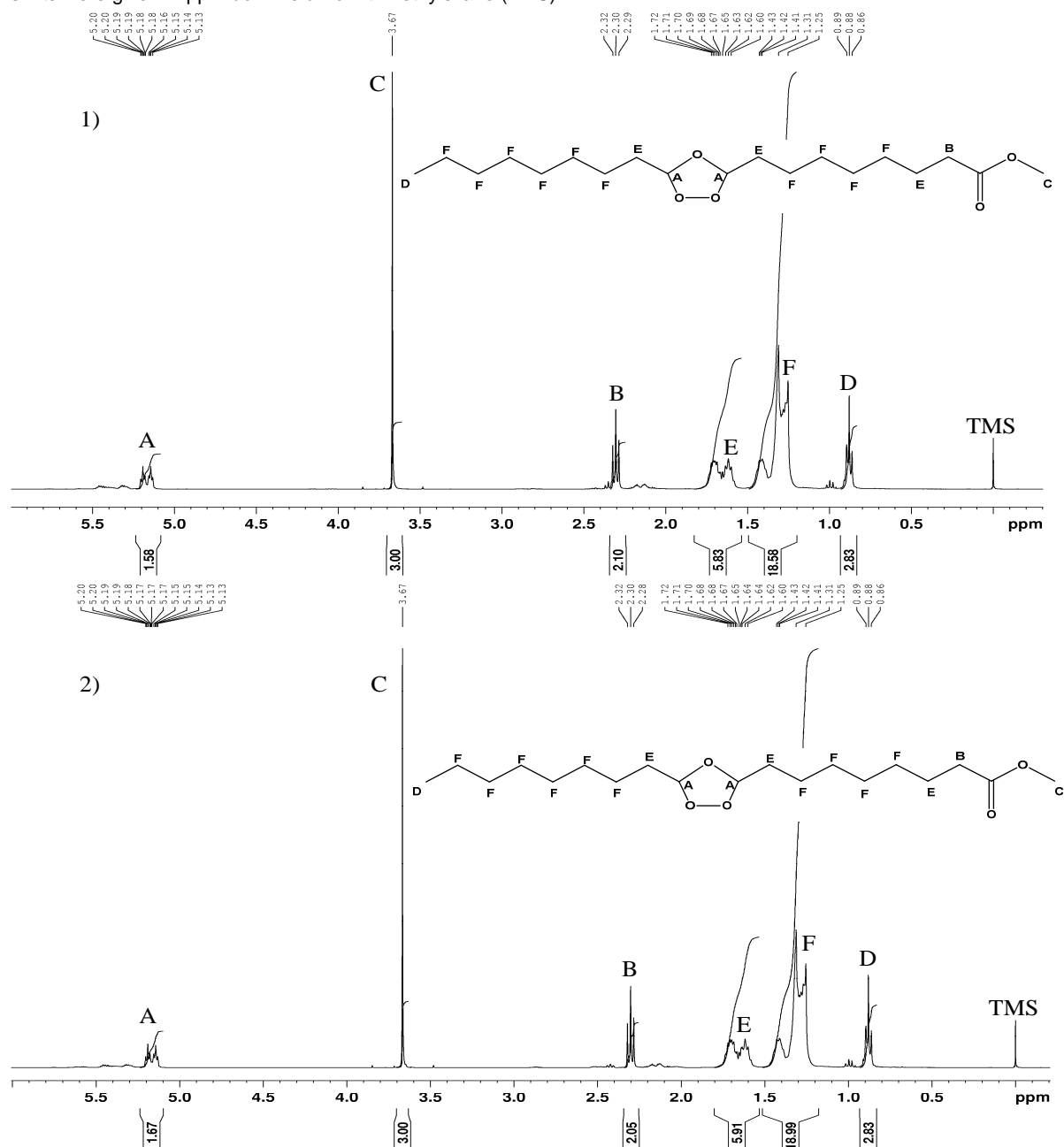


Figure S1. Stability of ozonides at room temperature. 1) Fresh ozonides mixture. 2) Ozonides mixture after 12 weeks store at room temperature.

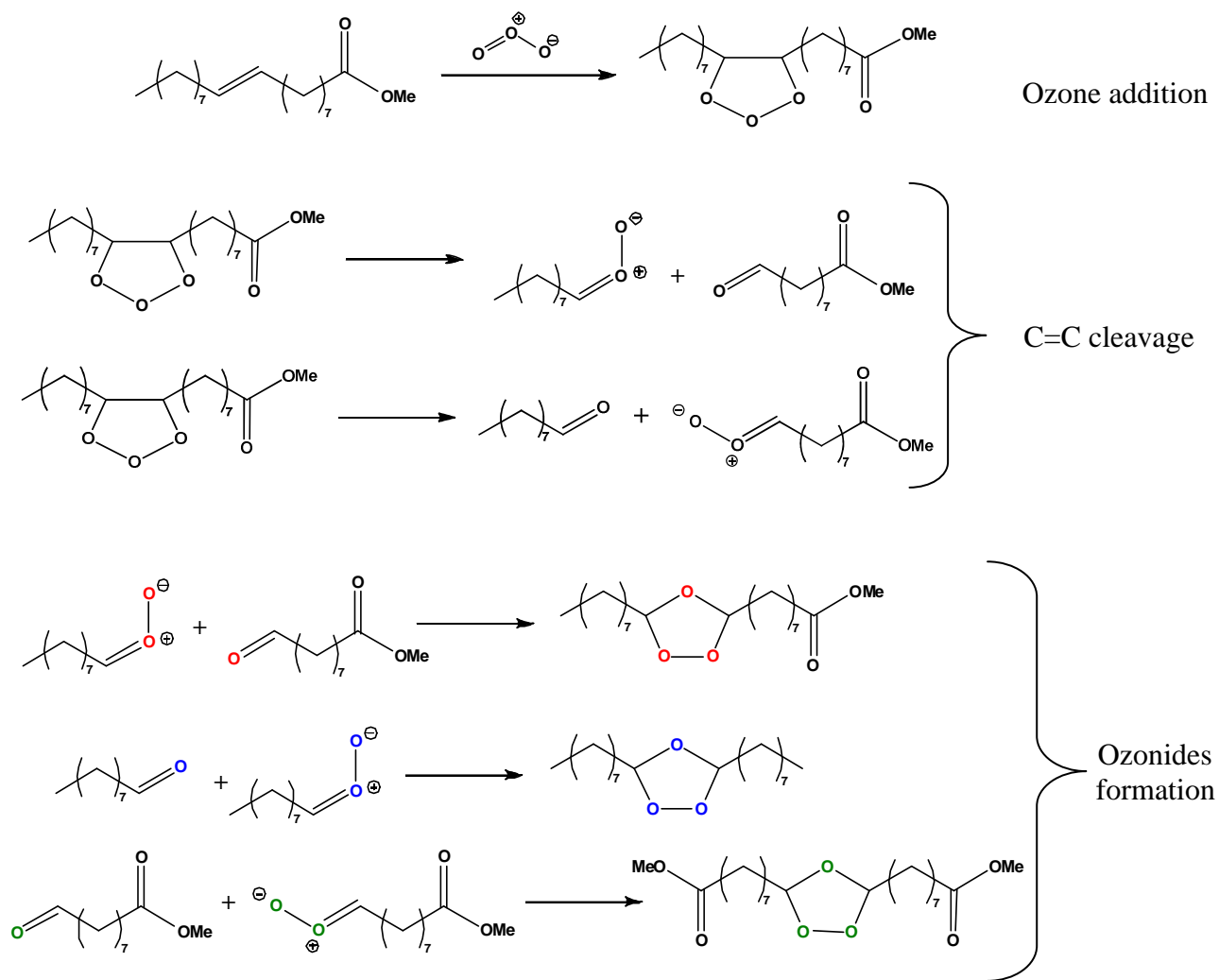


Figure S2 : Mechanism of the ozonides formation.

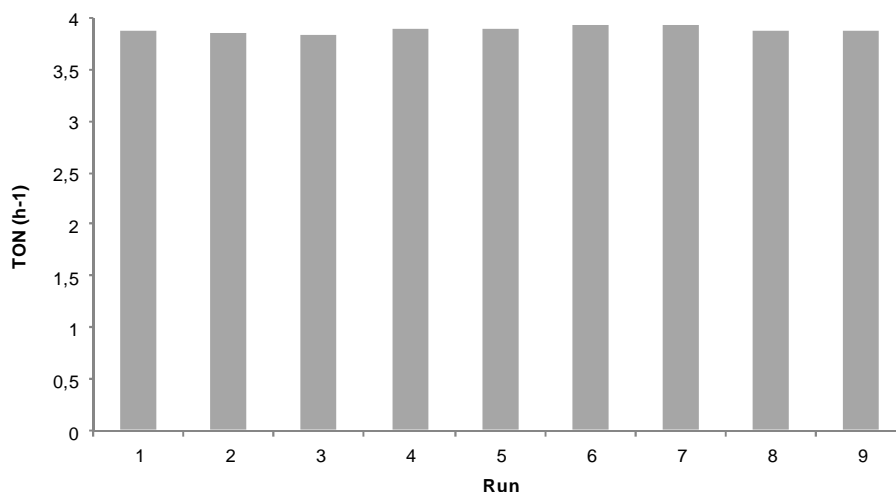
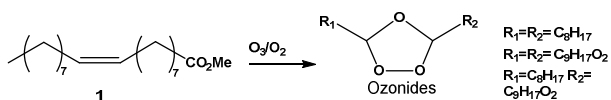


Figure S3 : Study of recyclability of Pd(5)/C catalyst during catalytic reduction of ozonides of FAME from rapeseed oil. Conditions: Ozonides (20 mmol), Pd(5)/C (10 wt%), H_2 ($200 mL \cdot min^{-1}$), 9.5 h, room temperature.

Table S1 : Ozonolysis of methyl oleate in non-polar solvents



Entry	Solvent	Conversion of 1 (%)	Selectivity (%)
1 ^a	Dichloromethane	>99	>99
2 ^b	Dichloromethane	>99	>99
3 ^c	Dichloromethane	>99	>99
4 ^c	n-Pentane	>99	>99
5 ^c	n-Hexane	>99	>99
6 ^c	n-Heptane	>99	>99
7 ^d	-	>99	>99
8 ^d	-	>99	>99

Conditions: O_3/O_2 (1.6 mol %), 200 mL.min⁻¹, 1-2 min. a T=-78°C, b T=0°C, c T=25°C, d from FAME issued from rapeseed oil.