Electronic Supplementary Material

Effect of *cis*-/*trans* molecular structures on pyrolysis performance and heat sink of decalin isomers

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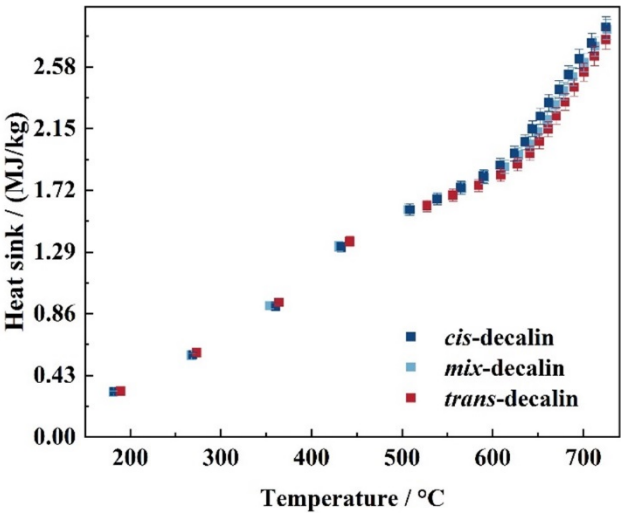

Fig. S1. Total heat sink values of pyrolysis of *cis*-, *mix*-, and *trans*-decalin.

Table S1. Comparison for the pyrolysis process of the decalin fuels under different conditions in flow reactors.

Fuel	Reaction condition	Residence time/s	Conversion /%	Gas yield/%	Heat sink/ MJ/kg	Refs.
Decalin (*trans:cis*=6:4)	550 ºC, 5.0 MPa	82.2	9.94	-	1.63	[1]
Decalin (*trans:cis*=6:4)	650 ºC, 5.0 MPa	59.8	62.75	-	2.17	[1]
Decalin	590 ºC, 3.5 MPa	21.4	28	-	-	[2]
Decalin	700 ºC, 3.5 MPa	-	92	35	-	[3]
Decalin	650 ºC, 4.0 MPa	-	10	5	2.1	[4]
Decalin (*cis*:*trans*-decalin=1:2)	650 ºC, 4.0 MPa	1.4	23.2	5	2.13	This work

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