

Table S1. changes of product composition during temperature-rise period.

Name	Time (RT/min)	Temperature (°C)				
		260	280	300	320	340
Furfural	3.6	•	•	•	•	•
2-Furancarboxaldehyde, 5-methyl-	6.0		•	•	•	•
Ethanone, 1-(2-furanyl)-	4.9				•	•
2-Furancarboxaldehyde, 5-(hydroxymethyl)-	12.8	•	•	•	•	•
2-Cyclopenten-1-one, 2-methyl-	4.8					•
2-Cyclopenten-1-one, 2-hydroxy-3-methyl-	7.5				•	•
2-Cyclopenten-1-one, 2-(2-butenyl)-4-hydroxy-3-methyl-, (Z)-	15.1	•				
2(4H)-Benzofuranone, 5,6,7,7a-tetrahydro-4,4,7a-trimethyl-	20.9	•	•	•	•	•
Ethyl citrate	25.6	•				
2-Cyclohexen-1-one, 2,4,4-trimethyl-3-(3-oxo-1-butenyl)-	25.8	•	•	•	•	
Benzeneacetaldehyde	8.0			•	•	•
2-Pentadecanone, 6,10,14-trimethyl-	29.3	•	•	•		
3,7,11,15-Tetramethyl-2-hexadecen-1-ol	29.6	•	•	•	•	
Hexadecanoic acid, methyl ester	30.5	•	•			
1-Hexadecen-3-ol, 3,5,11,15-tetramethyl-	30.8	•	•	•		
Hexadecanoic acid	30.9	•	•	•	•	•
Pyrrolo[1,2-a]pyrazine-1,4-dione, hexahydro-3-(phenylmethyl)-	30.6	•	•	•	•	
2,5-Piperazinedione, 3-benzyl-6-isopropyl-	33.8				•	•
Hexadecanamide	33.4					•
2-Hexadecene,3,7,11,15-tetramethyl-, [R*,R*-(E)]-	29.3					•

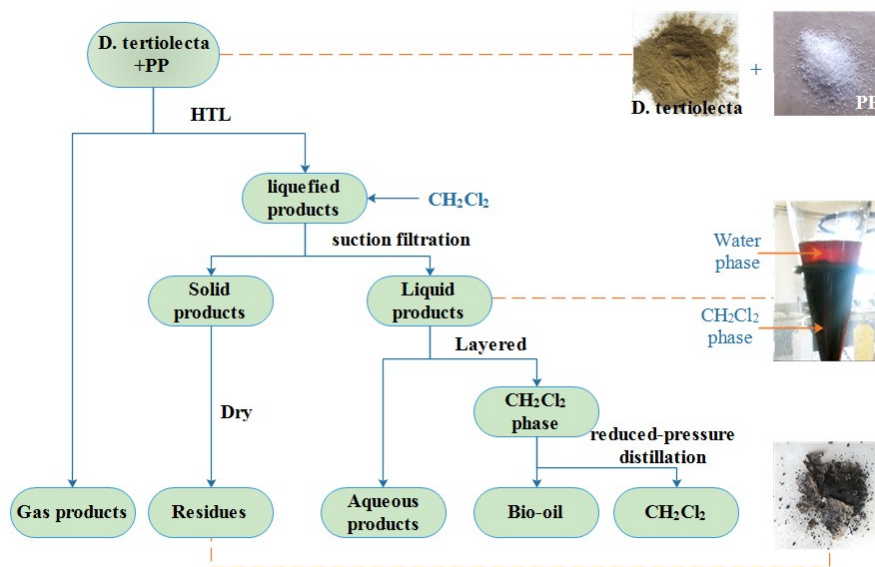


Fig. S1. Flow diagram of co-liquefaction experiment.

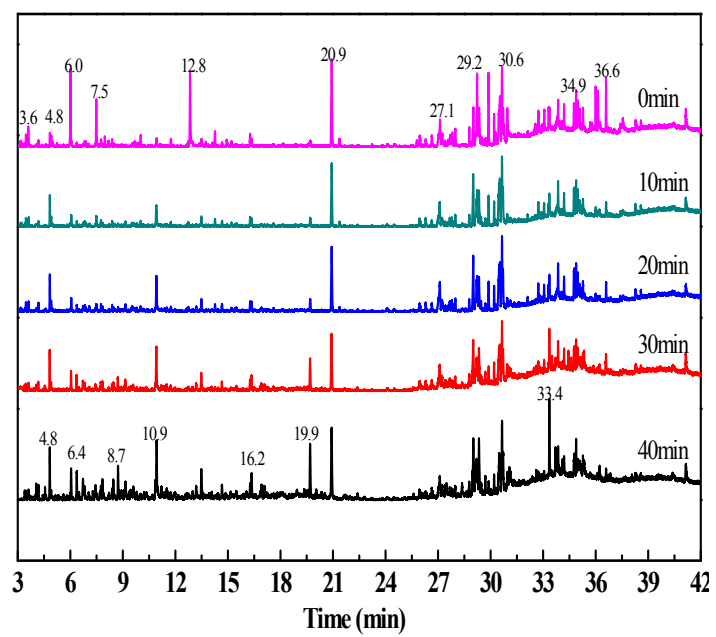


Fig. S2. Total ion chromatograms of bio-oil.

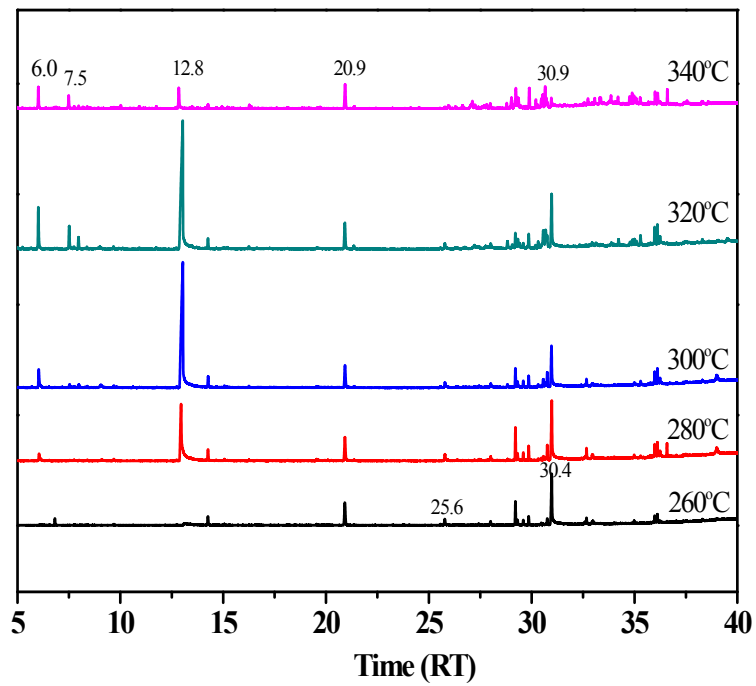


Fig. S3. Total ion chromatograms of bio-oil.

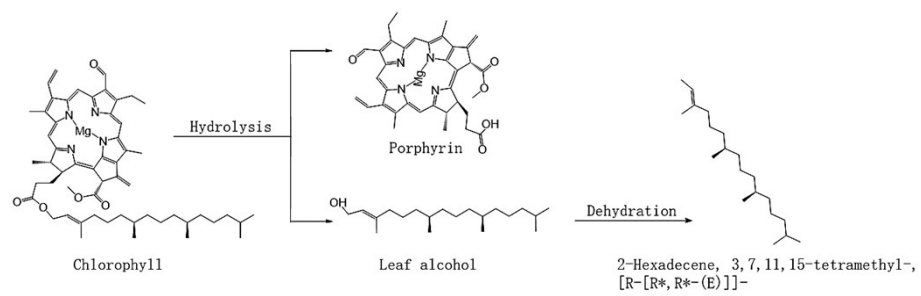


Fig. S4. Decomposition process of chlorophyll.