

# Supplementary Material

## **The effect of pre-pyrolysis chemical treatment of waste tyre rubber crumbs: comparison between pre-treated and conventional waste tyre derived oil**

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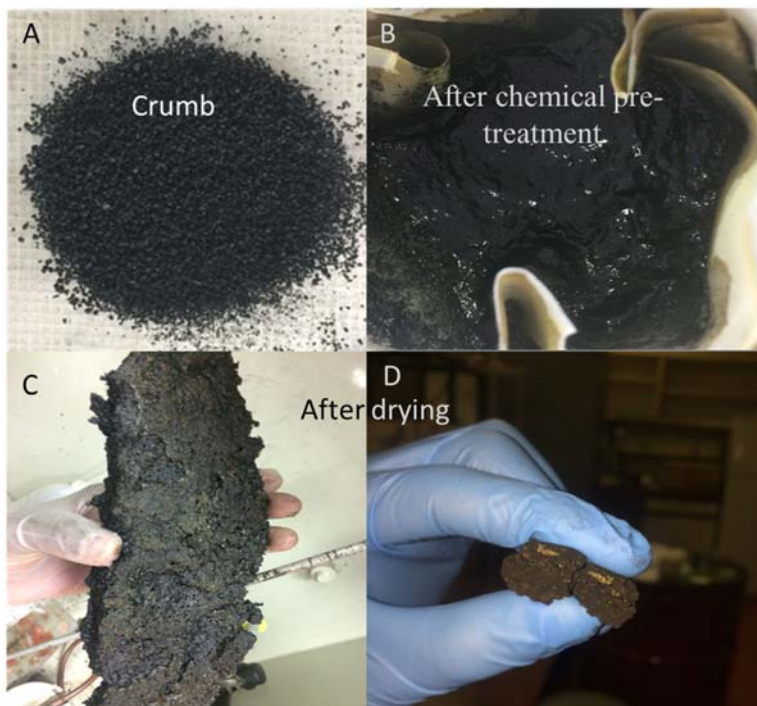


Figure S1: Pictorials of rubber crumbs from pre- to post chemical-treatment process. A - 30 mesh rubber crumbs: untreated, B – rubber crumbs after chemical treatment, C and D are dried samples.

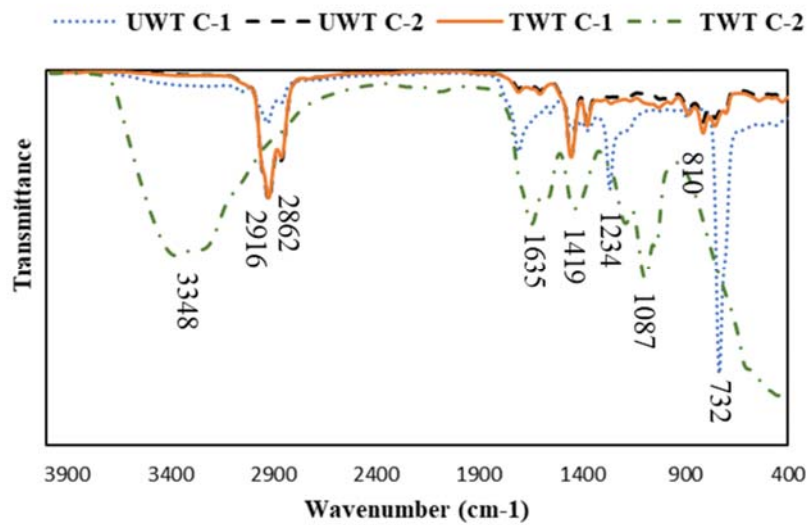


Figure S2: FTIR spectra of untreated and treated TDO produced from 600 °C and 280 °C pyrolysis respectively

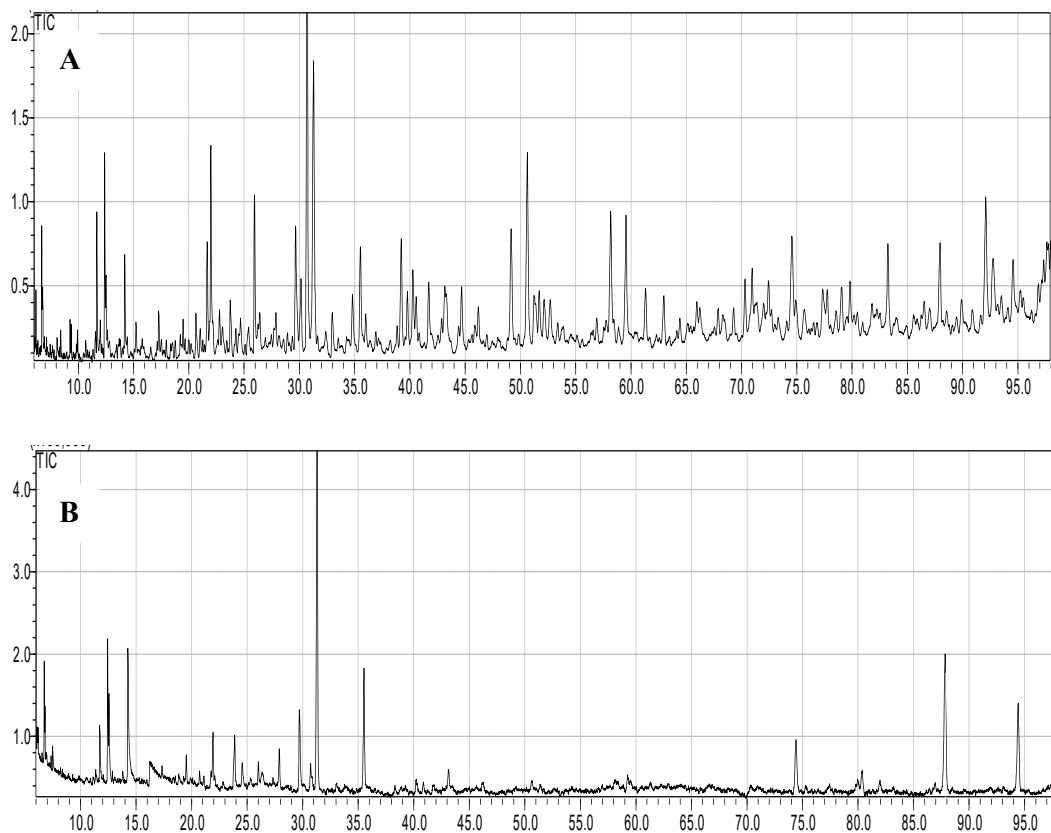


Figure S3: GC-MS chromatogram of Untreated (A) and Treated (B) waste tyre rubber crumb derived oil.

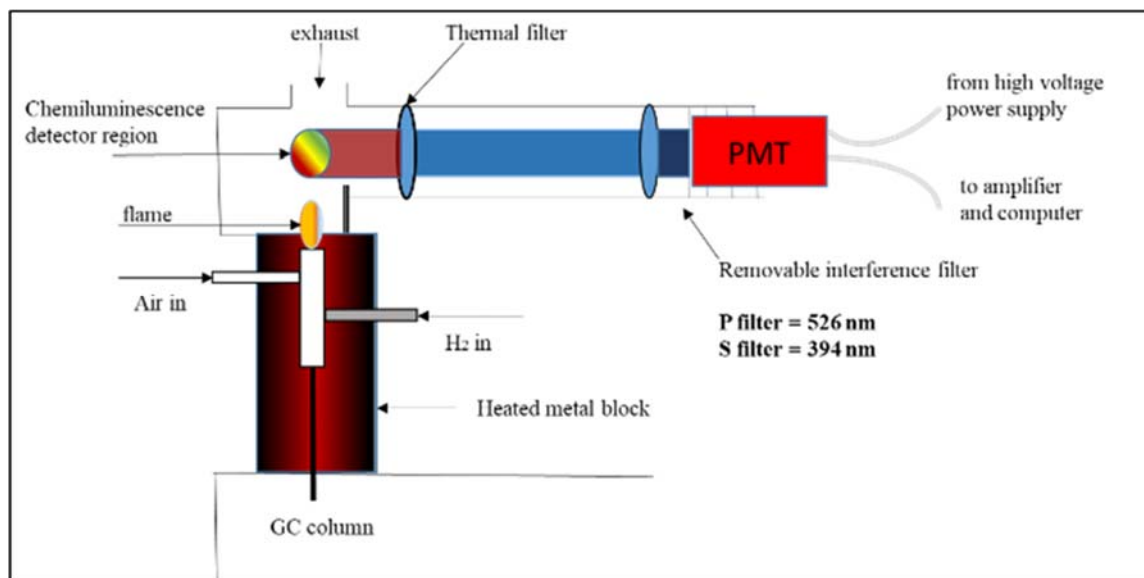


Figure S4: Flame Photometer Detector illustration



Figure S5: Pictorial image of waste tyre rubber crumb pre-treatment showing the yellowish-brown gas emitted during the process

Table S1: Sulphur content calculated for TDO in different collectors for both untreated and treated TDO.

	<b>UWT TDO (ppm)</b>	<b>TWT TDO (ppm)</b>
Collector 1	1807.3	1634.4
Collector 2	4658.7	128.2
Collector 3	263.0	460.4
<b>Total sulphur content (ppm)</b>	<b>6729</b>	<b>2223</b>
<b>Weight percentage (wt %)</b>	<b>0.67</b>	<b>0.22</b>