

**Liquid-phase hydrodeoxygenation of guaiacol over Mo₂C supported on commercial CNF.
Effects of operating conditions on conversion and product selectivity**

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Supplementary Materials

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Table S1 – Operating conditions, conversions and product selectivities during the hydrodeoxygenation of guaiacol over the Mo₂C/CNF catalyst (T=temperature; t=time; P=pressure; ^(a) molybdenum load of 10.5 wt%; ^(b) pressure at the reaction temperature within parenthesis; ^(c) cresols=*o*-cresol+*p*-cresol; ^(d) xylenols=2,4-dimethyl-phenol+2,6-dimethyl-phenol; ^(e) catechols=catechol+3-methyl-catechol).

| Catalyst ^(a) | T (K) | t (h) | P ^(b) (MPa) | Toluene | Benzene | Anisole | Phenol | Cresols ^(c) | Xylenols ^(d) | Catechols ^(e) | Conversion | Mass balance |
|-------------------------|-------|-------|------------------------|---------|---------|---------|--------|------------------------|-------------------------|--------------------------|------------|--------------|
| CNF | 573 | 2 | 2.0 (3.6) | 2.91 | - | - | 8.57 | 12.07 | 6.95 | - | 3.81 | 97.18 |
| Mo ₂ C/CNF | 573 | 2 | 2.0 (3.6) | - | - | - | 35.62 | 6.22 | 14.79 | - | 9.68 | 94.87 |
| Mo ₂ C/CNF | 573 | 4 | 2.0 (3.6) | - | - | - | 44.25 | 1.24 | 13.62 | 2.54 | 15.04 | 92.50 |
| - | 623 | 2 | 2.0 (4.8) | - | - | - | 8.89 | 7.77 | 1.65 | - | 38.09 | 68.89 |
| CNF | 623 | 2 | 2.0 (4.8) | 5.79 | - | - | 8.08 | 9.09 | 1.41 | 3.51 | 39.71 | 71.37 |
| Mo ₂ C/CNF | 623 | 2 | 2.0 (4.8) | 3.90 | 0.26 | 0.40 | 32.54 | 15.39 | 3.85 | 2.72 | 50.68 | 79.12 |
| Mo ₂ C/CNF | 623 | 4 | 2.0 (4.8) | 2.31 | 0.48 | 1.44 | 46.72 | 17.23 | 5.86 | 2.81 | 79.36 | 69.86 |
| Mo ₂ C/CNF | 623 | 2 | 3.0 (6.4) | 3.00 | 0.34 | 1.54 | 62.57 | 20.58 | 8.62 | 3.43 | 59.12 | 88.58 |

