

Hydrogenation and Hydrodeoxygenation of Oxygen-Substituted Aromatics over Rh/silica: Catechol, Resorcinol and Hydroquinone.

Kathleen Kirkwood and S. David Jackson*

Centre for Catalysis Research, School of Chemistry, University of Glasgow, Glasgow G12 8QQ, Scotland, UK.;
k.kirkwood.1@research.gla.ac.uk

* Correspondence: david.jackson@glasgow.ac.uk; Tel +44 (0)141 330 4443:

Received: 07 May 2020; Accepted: 18 May 2020; Published: date

Supplementary Information.

Catechol

Catalyst tests at different temperatures and activation energy plot.

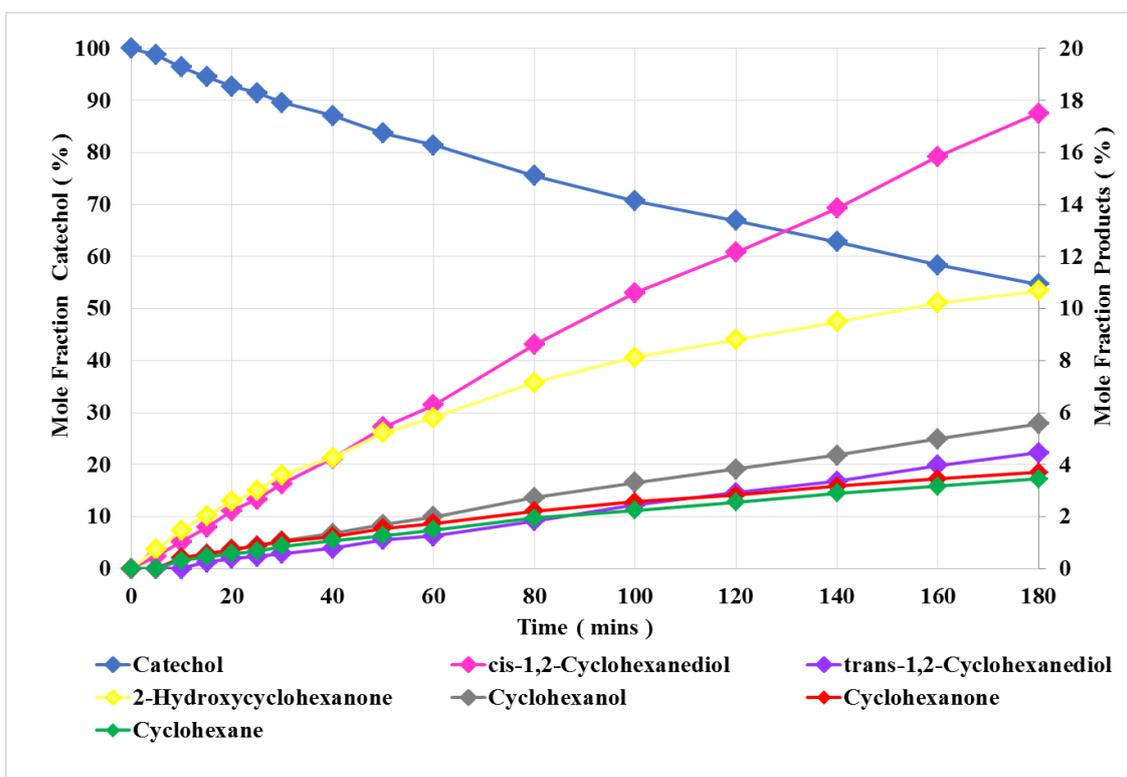


Figure S1. Reaction profile of catechol hydrogenation. Conditions, 303 K, 10 mmol, 3 barg

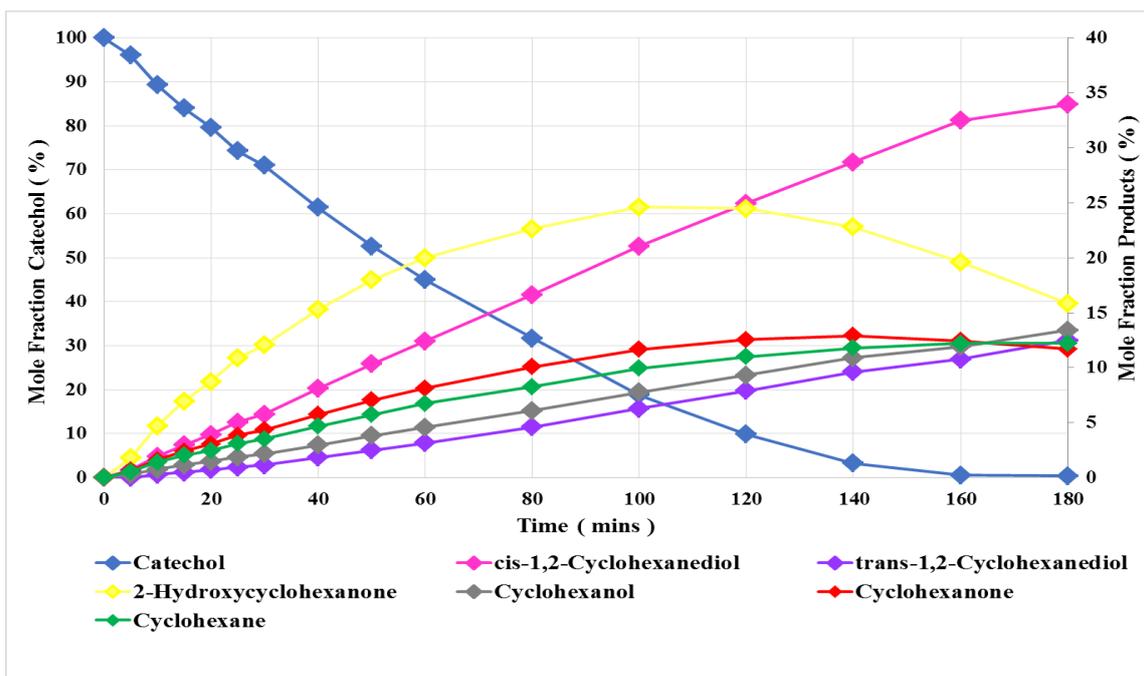


Figure S2. Reaction profile of catechol hydrogenation. Conditions, 343 K, 10 mmol, 3 barg

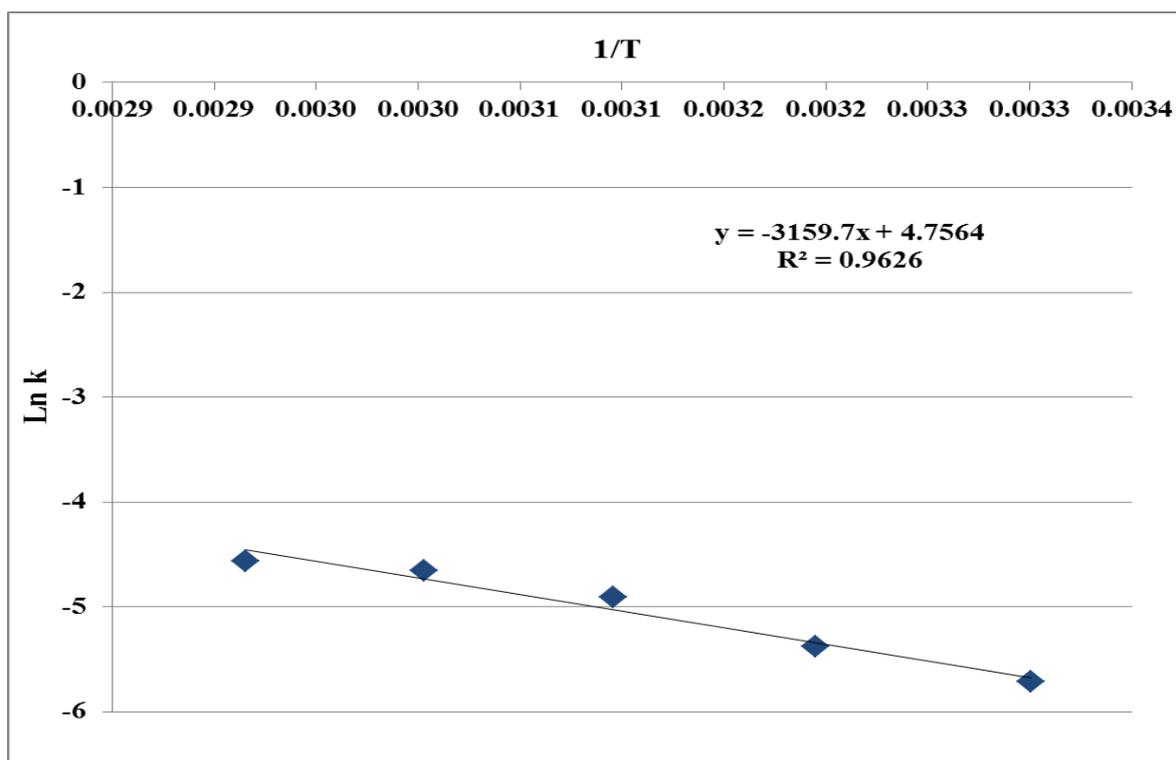


Figure S3. Activation energy plot for catechol hydrogenation.

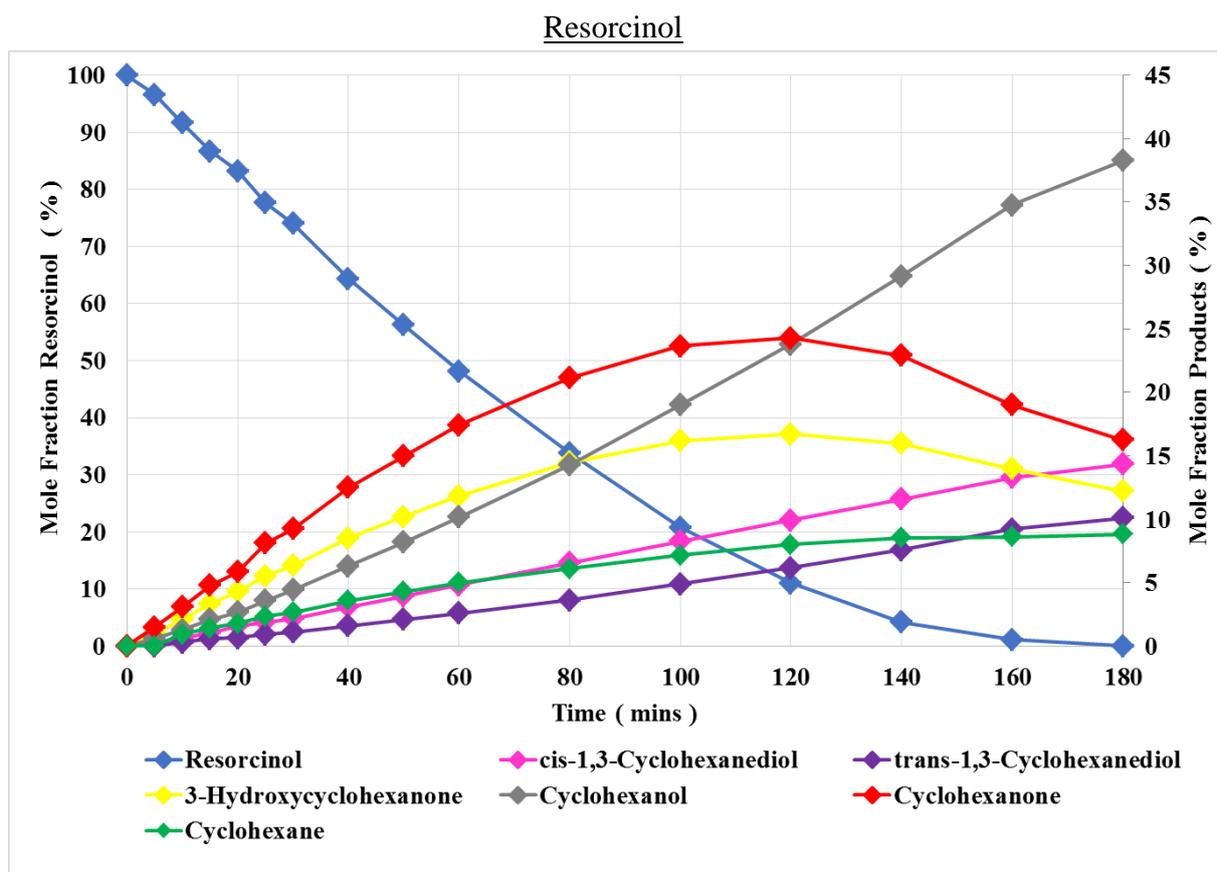


Figure S4. Reaction profile of resorcinol hydrogenation. Conditions, 333 K, 10 mmol, 3 barg

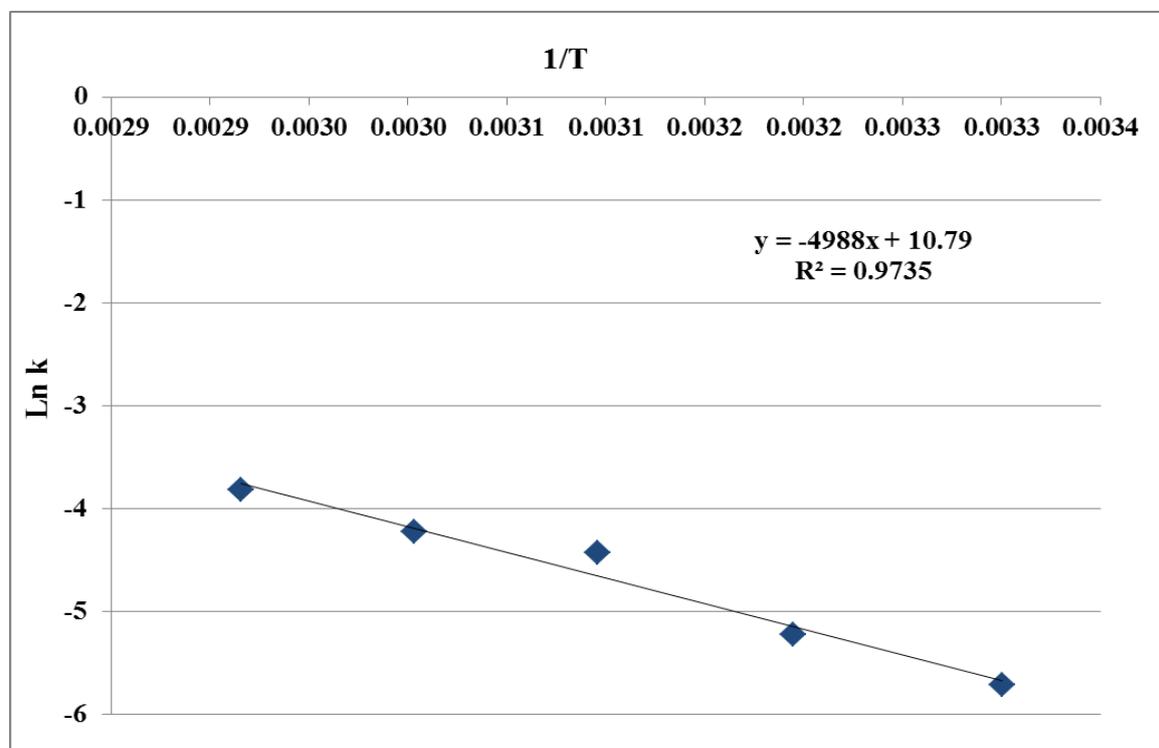


Figure S5. Activation energy plot for resorcinol hydrogenation.

Hydroquinone

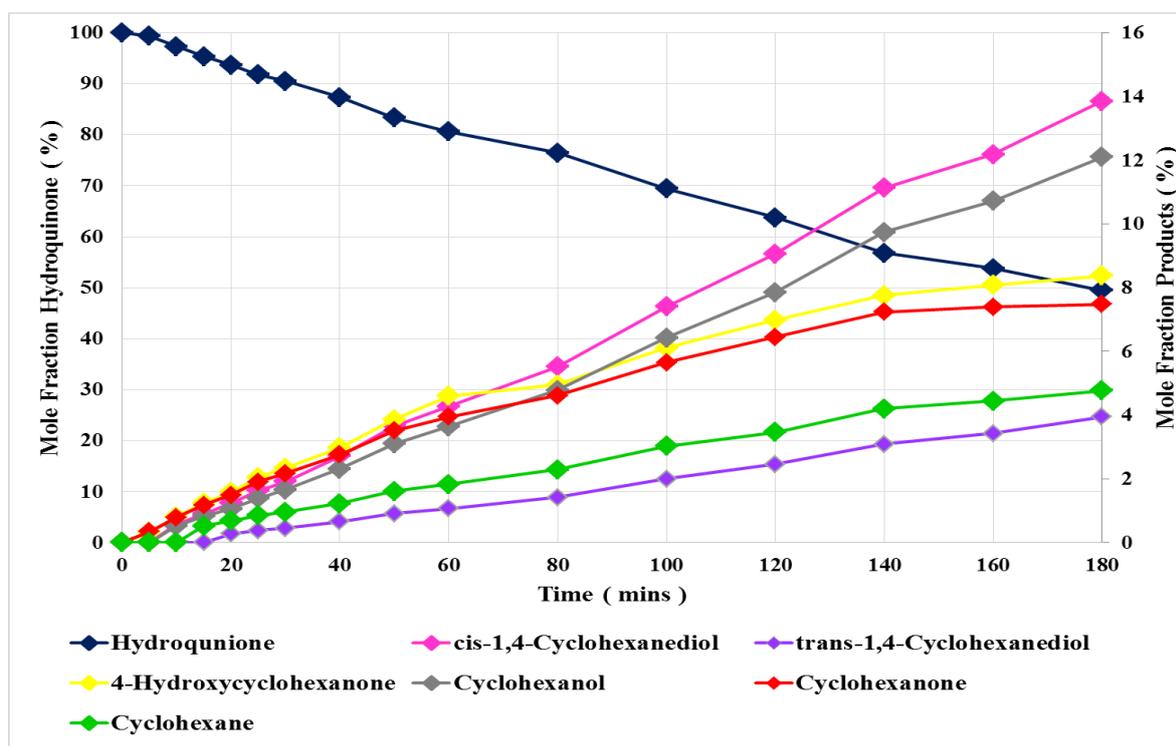


Figure S6. Reaction profile of hydroquinone hydrogenation. Conditions, 303 K, 10 mmol, 3 barg

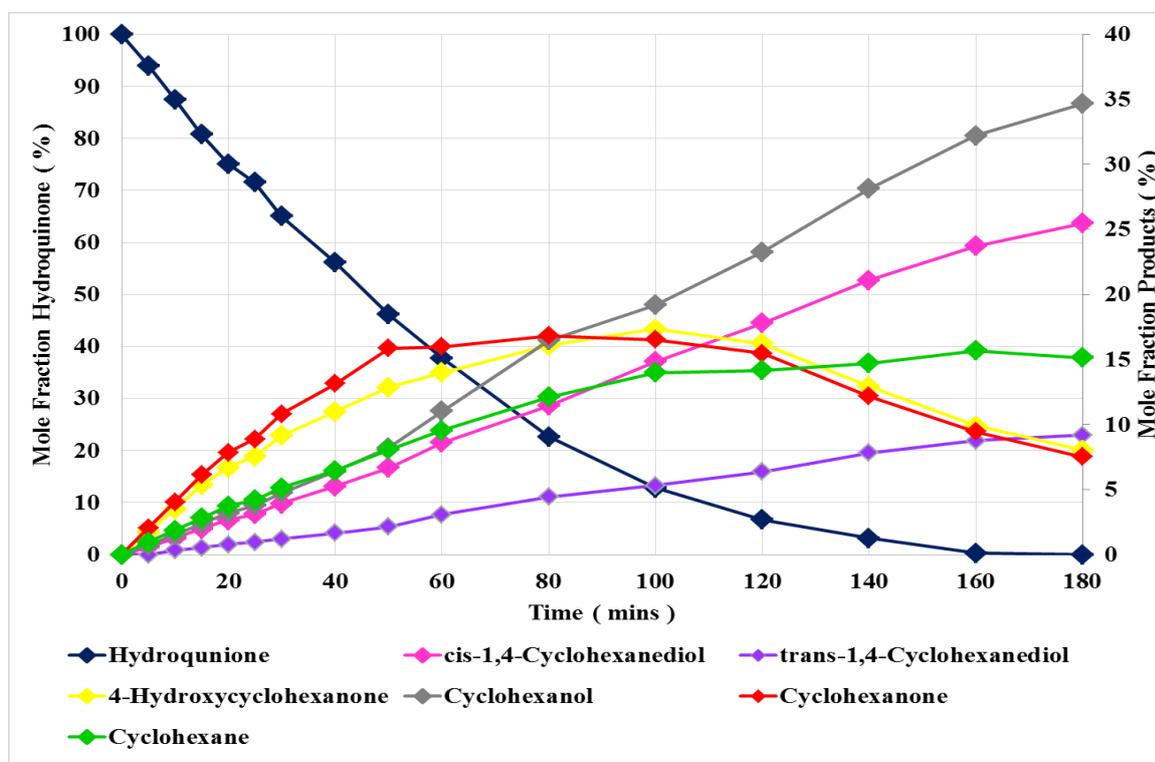


Figure S7. Reaction profile of hydroquinone hydrogenation. Conditions, 343 K, 10 mmol, 3 barg

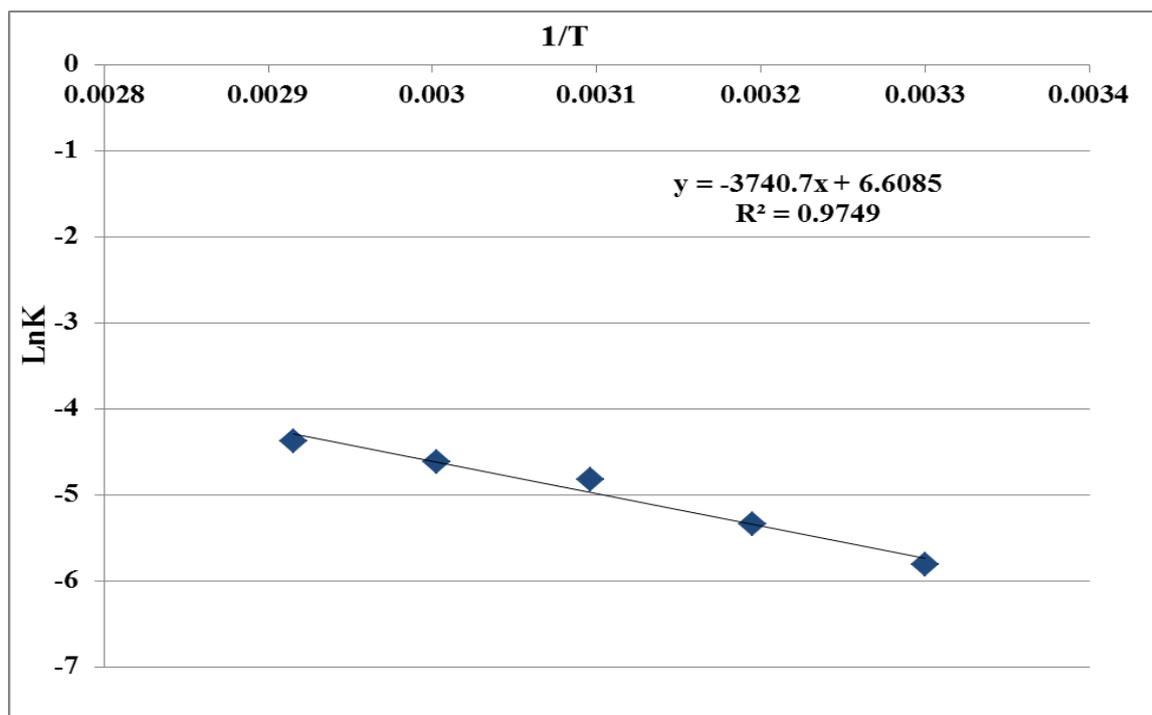


Figure S8. Activation energy plot for hydroquinone hydrogenation.

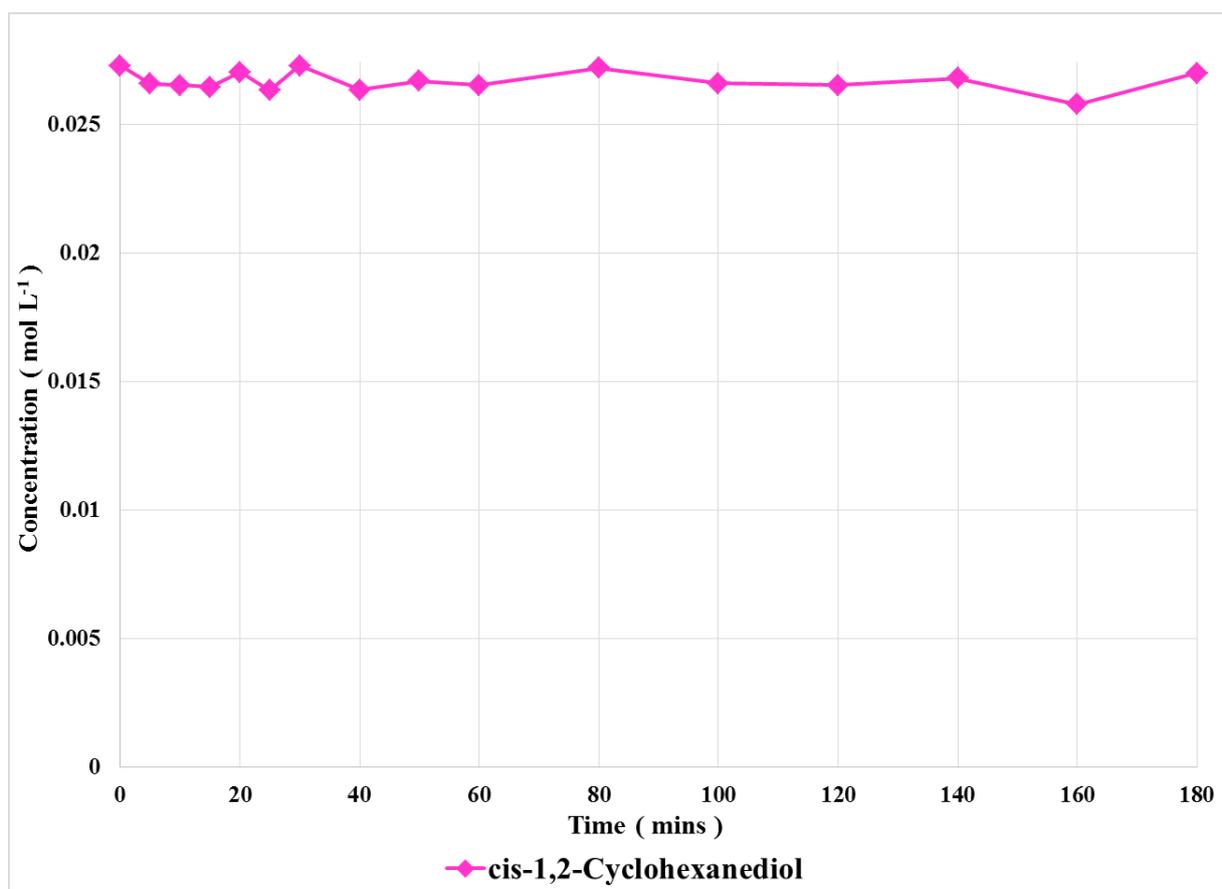


Figure S9. Reaction profile of cis-1,2-cyclohexanediol hydrogenation. Conditions, 333 K, 10 mmol, 3 barg

Catalyst deactivation.

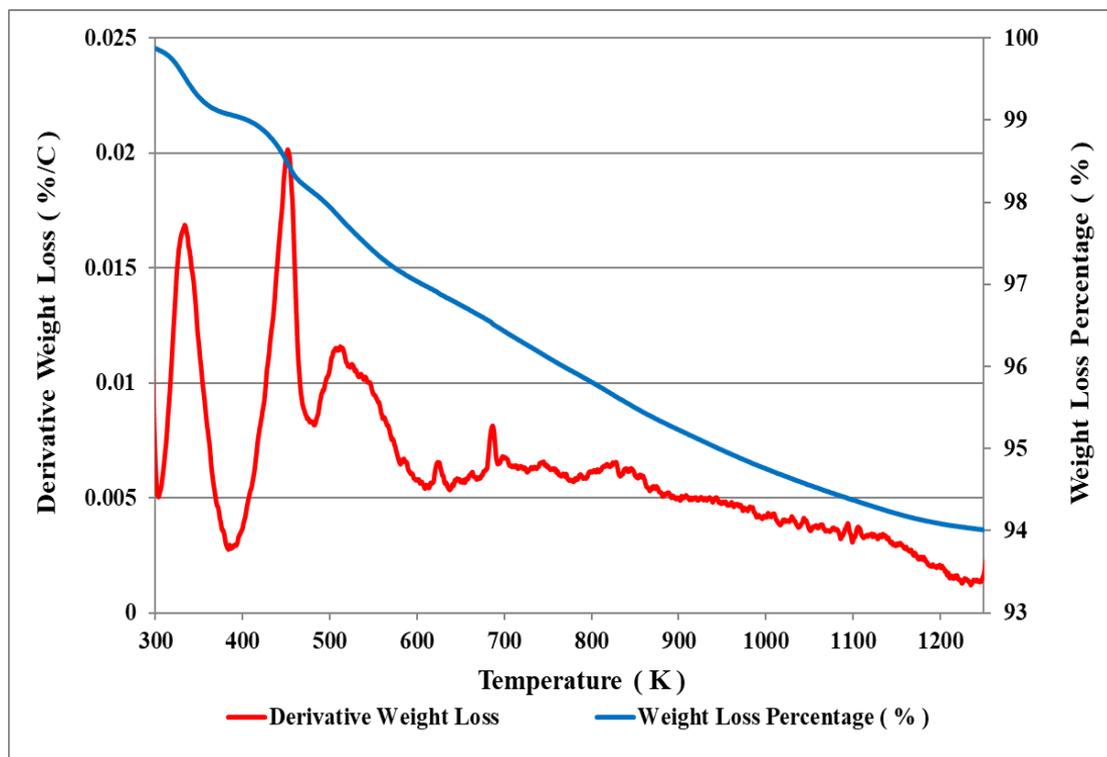


Figure S10. TGA of Rh/SiO₂ catalyst after catechol hydrogenation reaction. Conditions, 10 mmol catechol, 323 K, 3 barg.

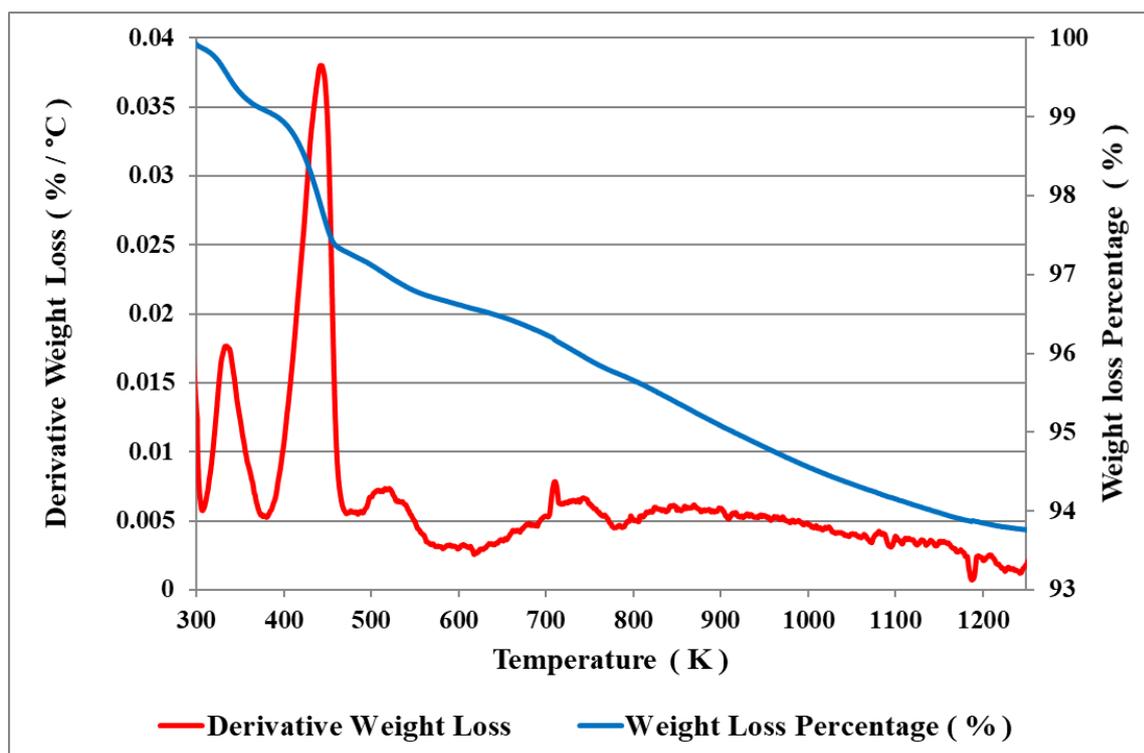


Figure S11. TGA of Rh/SiO₂ catalyst after resorcinol hydrogenation reaction. Conditions, 10 mmol catechol, 323 K, 3 barg.

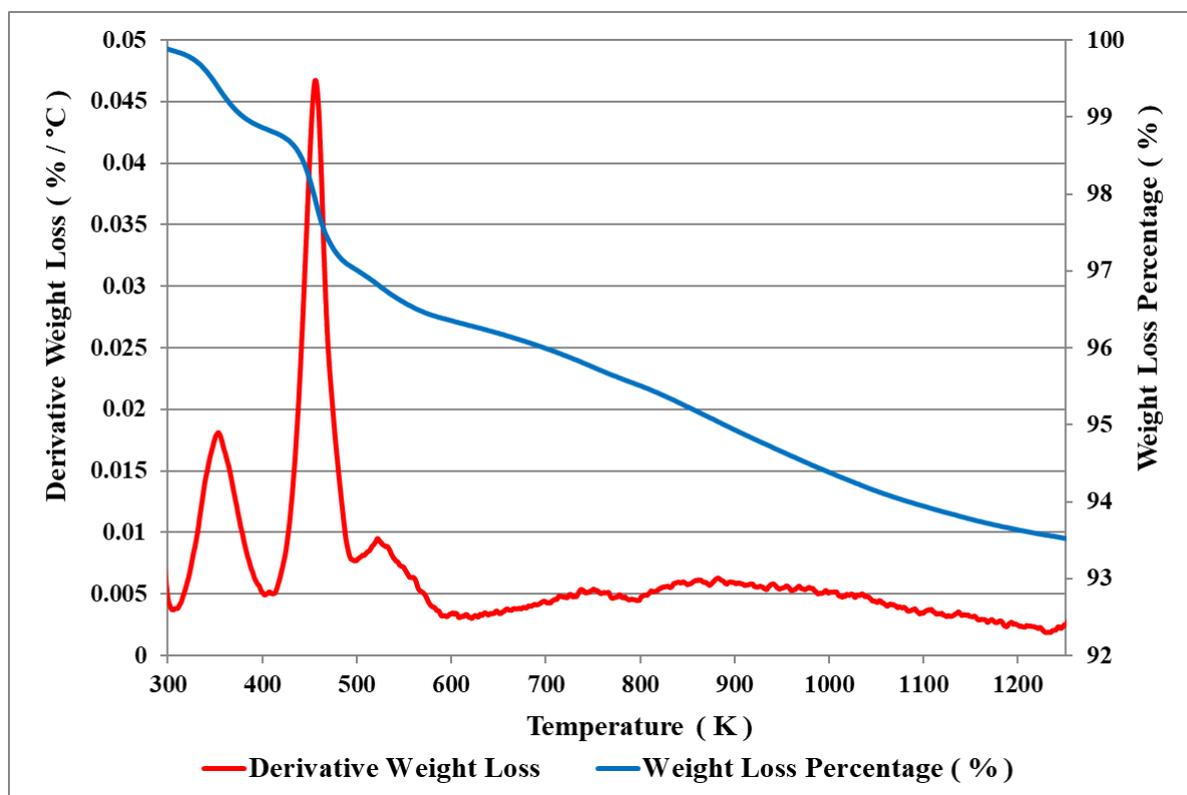


Figure S12. TGA of Rh/SiO₂ catalyst after hydroquinone hydrogenation reaction. Conditions, 10 mmol catechol, 323 K, 3 barg.