**Supplementary material**

**Production of high-quality pyrolysis product by microwave–assisted catalytic pyrolysis of wood waste and application of biochar**

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**Fig.S1** Yield of pyrolysis product at different pyrolysis temperatures without additive.



**Fig.S2** The bio-gas component of WS without adding additive under different pyrolysis temperature.

**Table S1** Adsorption isotherm models adopted in this work and their parameters.

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| Isotherm | Equation | Parameters |
| Langmuir  |  | Ce is the equilibrium concentration(mg/L) Q0 (mg/g) is adsorption constant related to adsorption capacity KL (L/g) is adsorption constant related to energy of adsorption |
| Freundlich |  | KF is adsorption constant related to adsorption capacity (mg/g).(L/mg)1/nn is adsorption constant measuring the adsorption intensity |