Supporting information

Cellulose fibre rejects as raw material for integrated production of *Pleurotus* spp. mushrooms and activated biochar for removal of emerging pollutants from aqueous media

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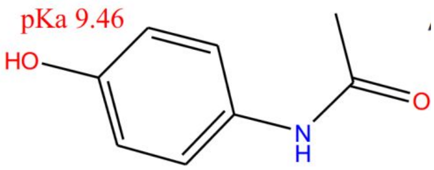
Figure S1. Photograph of the cyclone dryer experimental setup.

a) Acetaminophen



b) Amoxicillin

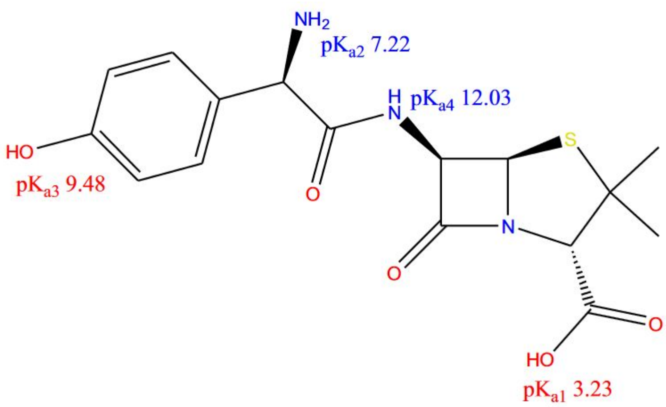


Figure S2. Structural formula of acetaminophen and amoxicillin. pKa values are indicated in the figures.

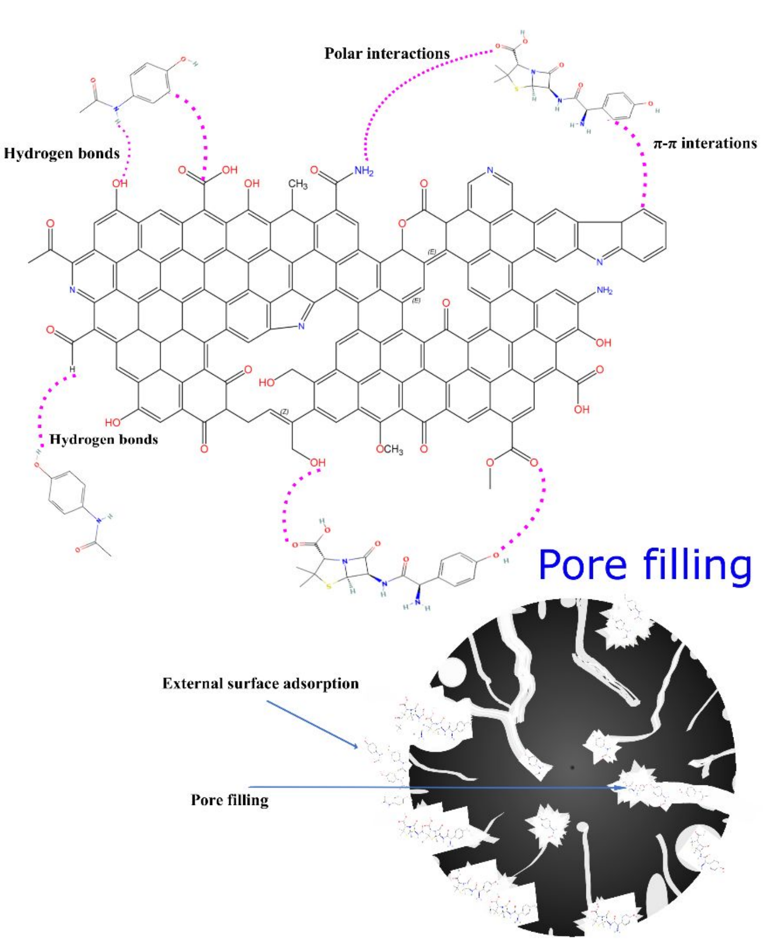


Figure S3. Diagrammatic scheme of the adsorption mechanism

Kinetic of adsorption models

Pseudo-first-order: $q_t = q_e\,(1 - \exp^{-\,k_1.t})$ S1

pseudo-second-order: $q_t = \frac{k_2.q_e^2.t}{1 + q_e.k_2.t}$ S2

General order: $q_t = \left(q_e - \frac{q_e}{\left[k_N.(q_e)^{n-1}.t.(n-1) + 1\right]^{1/(1-n)}}\right)$ S3

where, ***t*** denotes the contact time (min); $\boldsymbol{q_t}$, $\boldsymbol{q_e}$ are the adsorption capacities at time *t* and at equilibrium, respectively (mg/g); $\boldsymbol{k_1}$ is the pseudo-first-order rate constant (L/min); $\boldsymbol{k_2}$ is the pseudo-second-order rate constant (g/mg min); $\boldsymbol{k_N}$ is the general-order constant rate $[(g/mg)^{n-1})/min]$, and **n** is the dimensionless general-order adsorption rate.

Equilibrium of adsorption isotherms

Langmuir: $q_e = \frac{q_{max}.K_L.C_e}{1 + K_L.C_e}$ S4

Freundlich: $q_e = K_F.C_e^{1/n_F}$ S5

Sips: $q_e = \frac{q_{max}.K_S.{C_e}^{1/n_S}}{1 + K_S.{C_e}^{1/n_S}}$ S6

where, $\mathbf{q_e}$ denotes the amount of adsorbate adsorbed at the equilibrium (mg/g); $\boldsymbol{C_e}$ is the adsorbate concentration at equilibrium (mg/L); $\boldsymbol{q_{max}}$ is the maximum adsorption capacity of the adsorbent (mg/g); $\mathbf{K_L}$ and $\mathbf{K_s}$ are the Langmuir and Sips equilibrium constant (L/mg), respectively; $\mathbf{K_F}$ is the Freundlich equilibrium constant [(mg/g) (mg/L)$^{-1/n_F}$]; $\mathbf{n_F}$ and $\mathbf{n_S}$ are the dimensionless exponents of the Freundlich and Sips model, respectively.