# Supplementary Materials

# Remediation of emerging heavy metals from water using natural adsorbent: Adsorption performance and mechanistic insights

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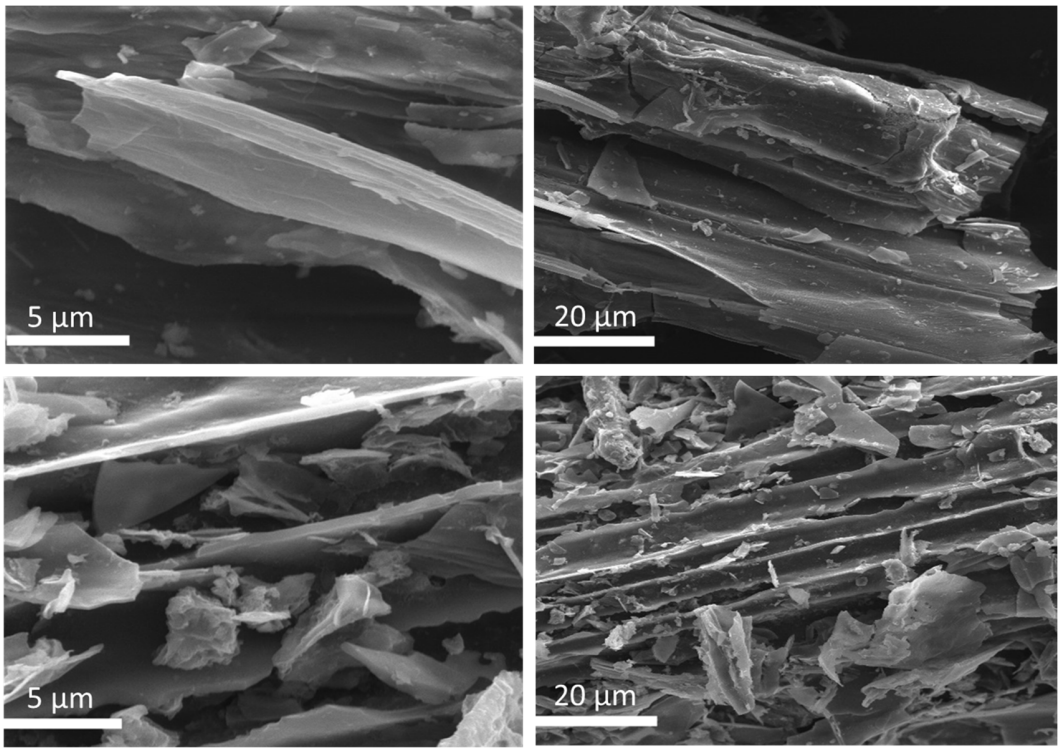


**Figure S1.** Scanning electron micrographs (SEM) of pristine WSB and pre-adsorbed AWSB (pyrolyzed at 673 K).

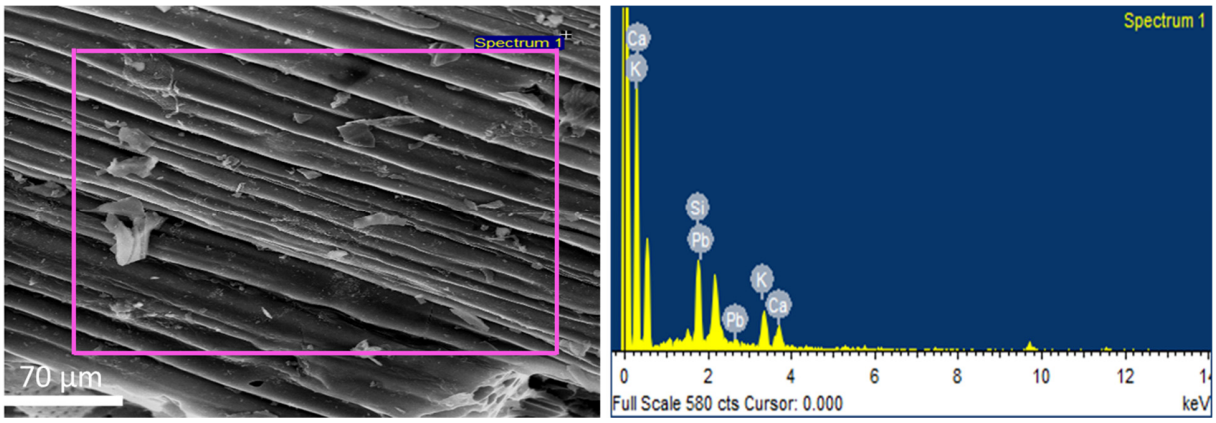


**Figure S2.** EDX mapping of the pristine WSB.

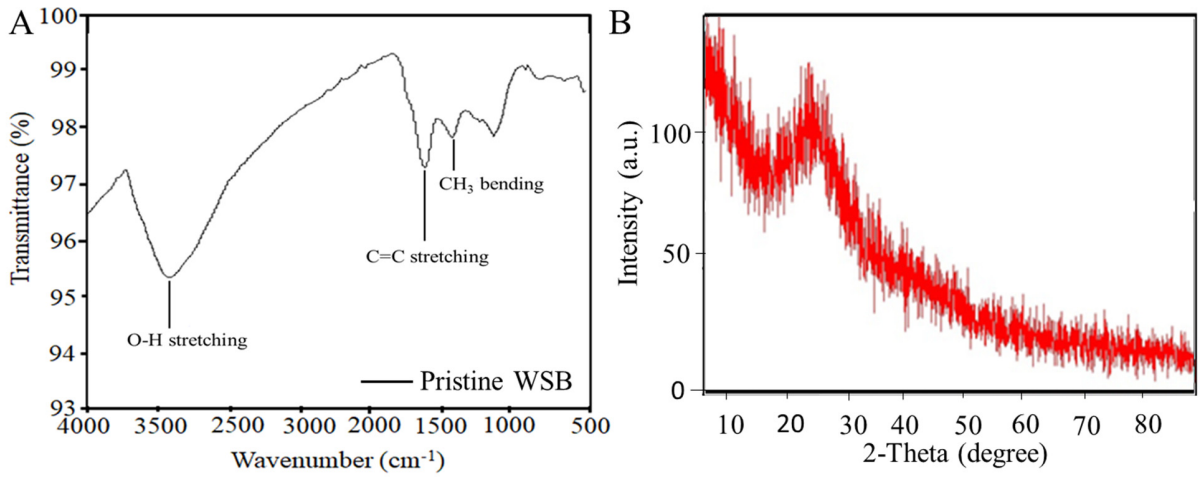


**Figure S3.** (A) FTIR spectra and (B) XRD pattern of the pristine WSB.

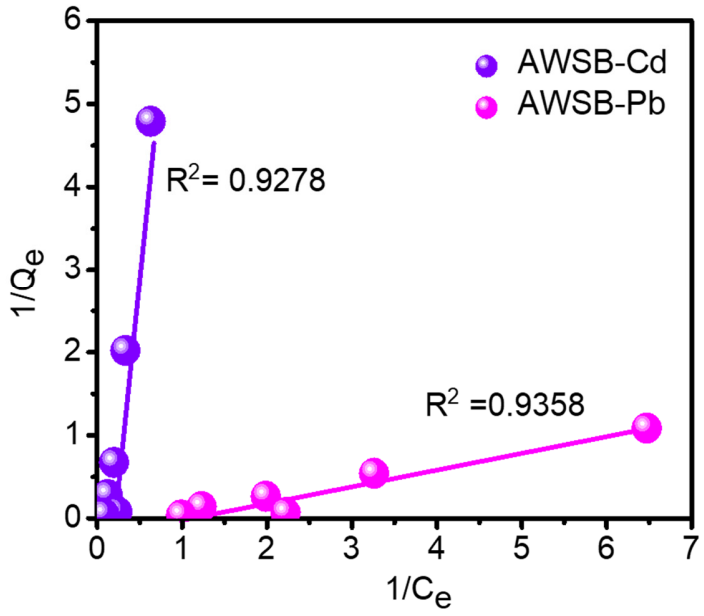


**Figure S4.** Langmuir isotherm for the adsorption of Cd (II) and Pb (II) AWSB at 310K.

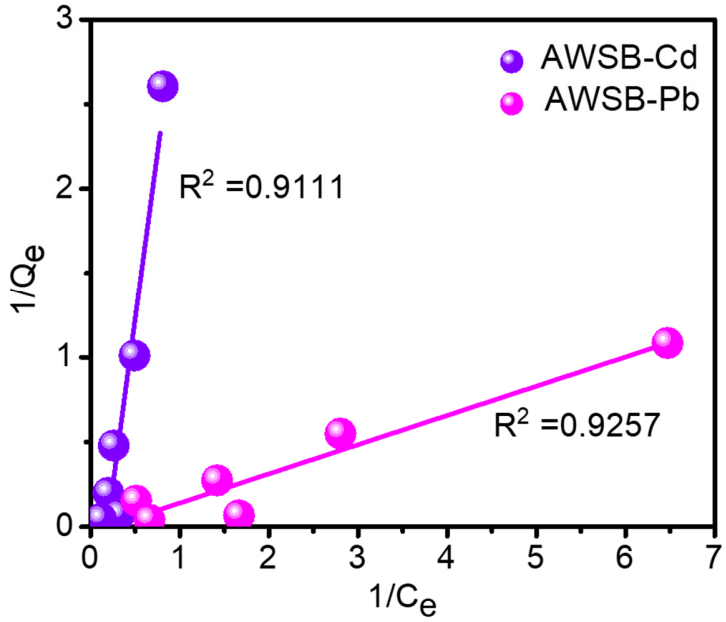


**Figure S5.** Langmuir isotherm for the adsorption of Cd (II) and Pb (II) on AWSB at 322K.

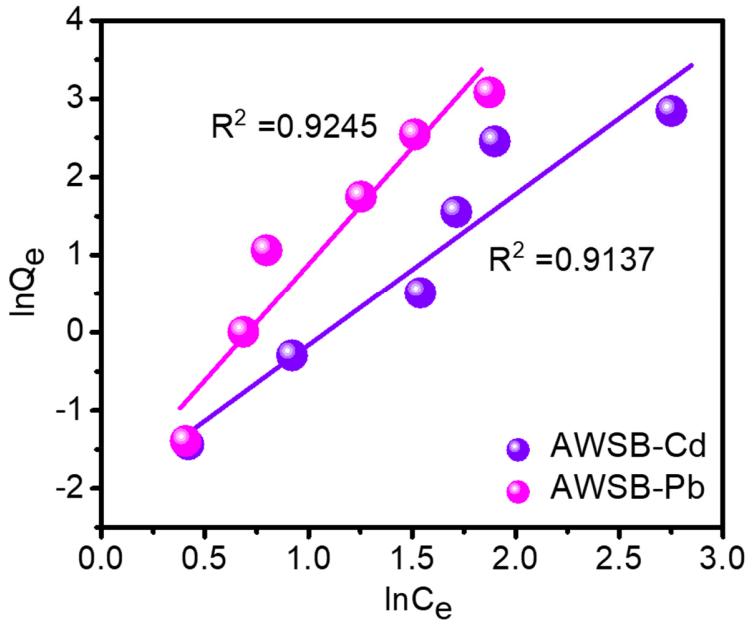


**Figure S6.** Freundlich isotherm for the adsorption of Cd (II) and Pb (II) on AWSB at 310K.

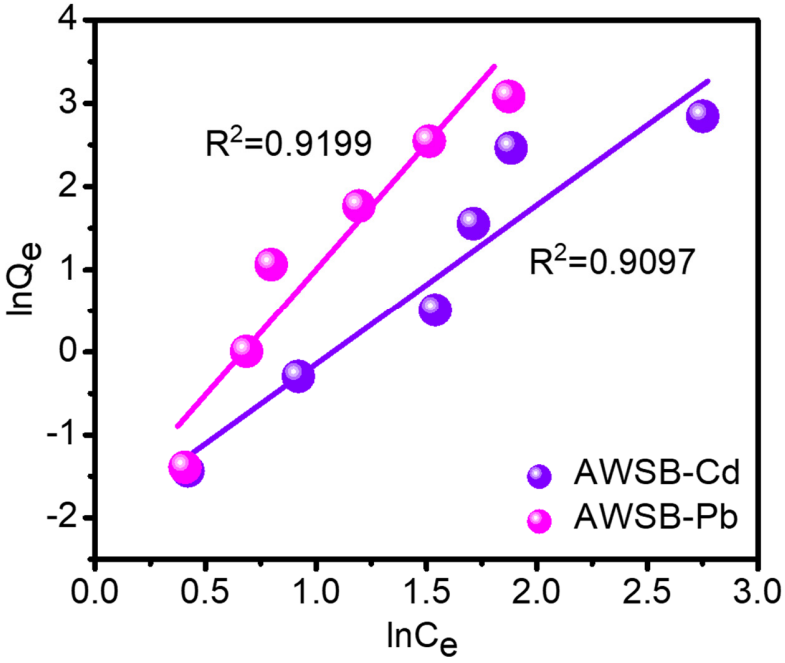


**Figure S7.** Freundlich isotherm for the adsorption of Cd (II) and Pb (II) on AWSB at 322K.

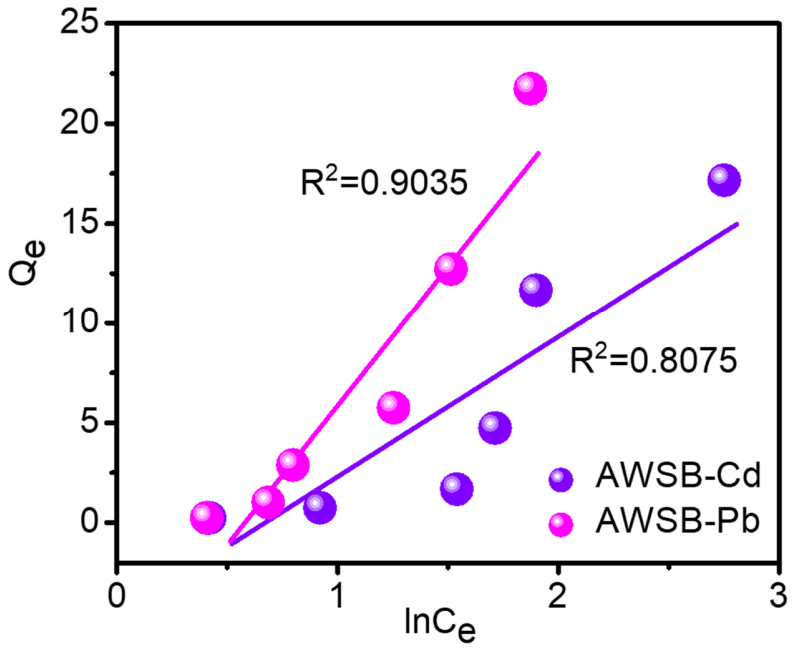


**Figure S8.** Temkin isotherm for the adsorption of Cd (II) and Pb (II) on AWSB at 310K.

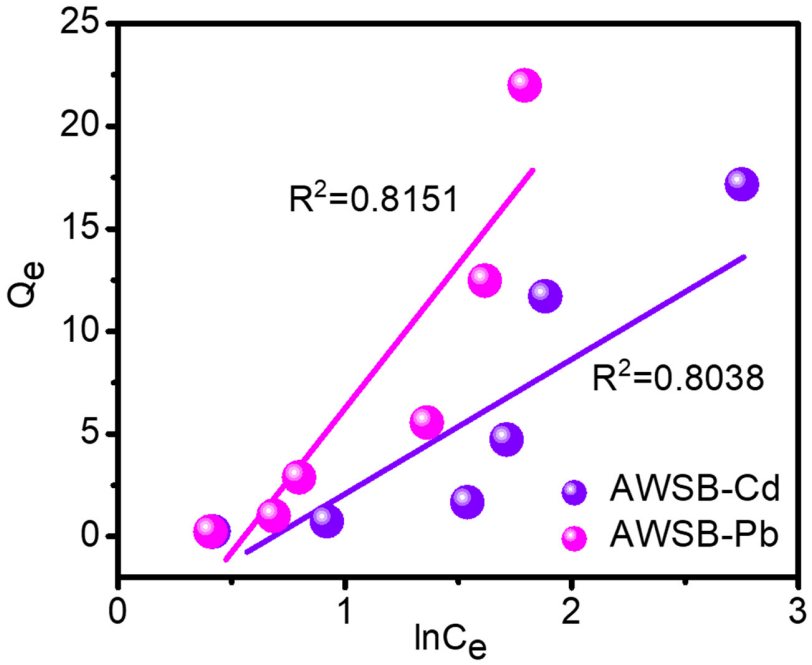


**Figure S9.** Temkin isotherm for the adsorption of Cd (II) and Pb (II) on AWSB at 322K.

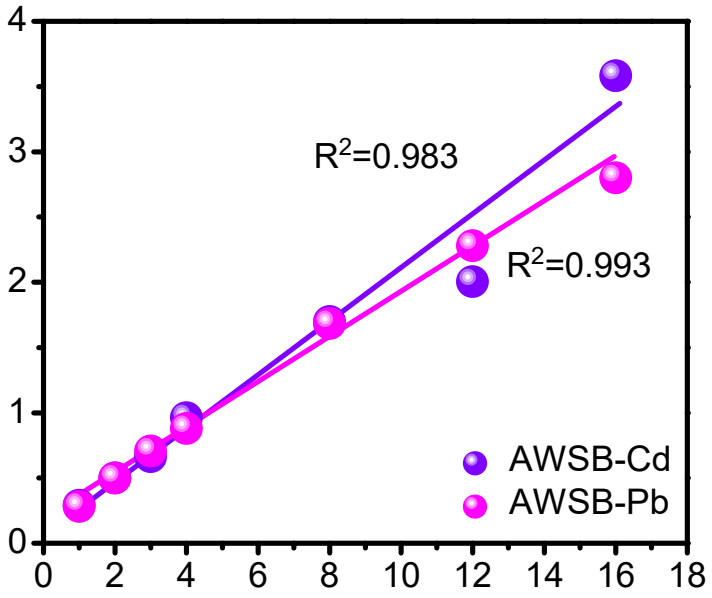


**Figure S10.** Pseudo 1st order fittings of Cd and Pb adsorption data.

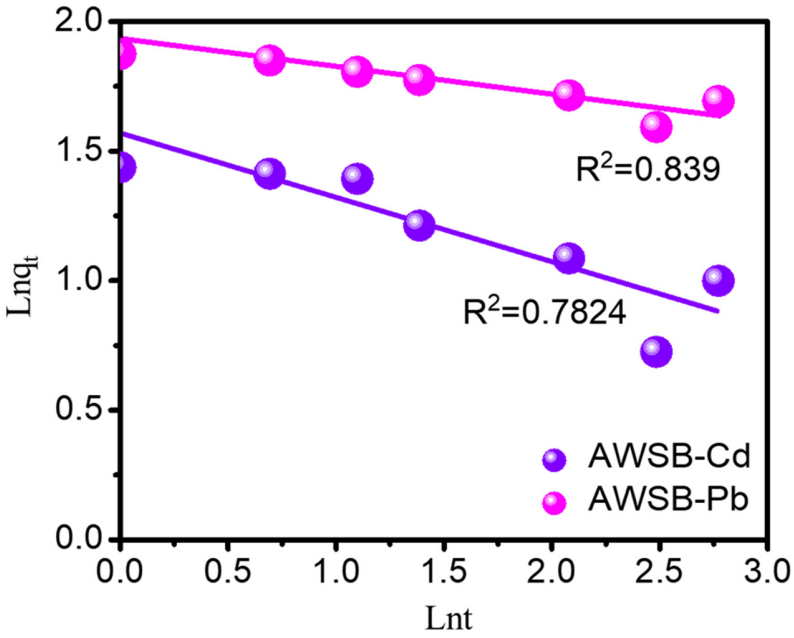


**Figure S11.** Power function fittings of Cd (II) and Pb (II) adsorption data for AWSB.

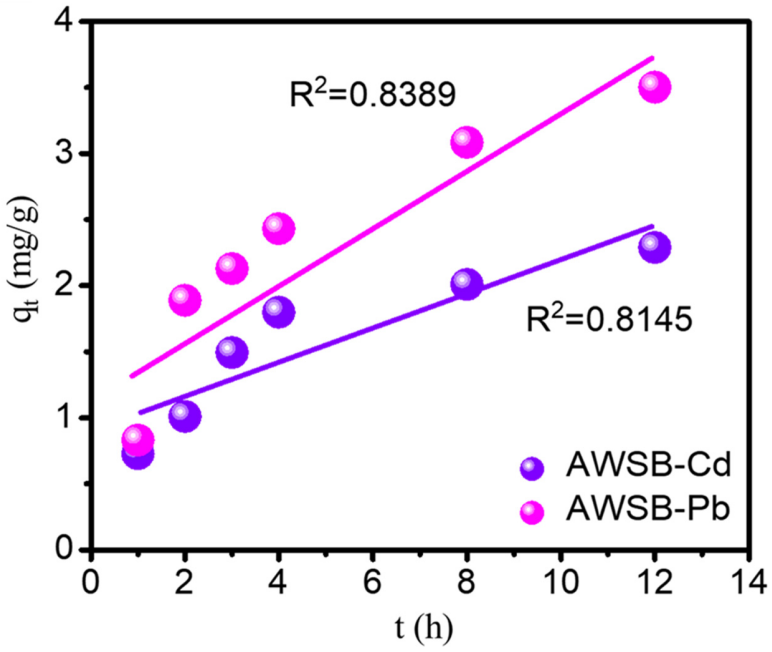


**Figure S12.** Intraparticle diffusion fittings of Cd (II) and Pb (II) adsorption data for AWSB.