

# Supplementary information

**Supplementary Table S1.** XRF analysis of different biochar samples.

Element	Rice husk	Sunflower husk	Wood
TiO <sub>2</sub> , %	0.41	0.37	0.26
CaO, %	5.90	5.22	26.30
Al <sub>2</sub> O <sub>3</sub> , %	5.02	4.16	7.20
SiO <sub>2</sub> , %	47.52	3.77	8.80
Fe <sub>2</sub> O <sub>3</sub> , %	3.16	3.44	4.17
P <sub>2</sub> O <sub>5</sub> , %	6.93	20.96	9.40
K <sub>2</sub> O, %	0.46	24.33	3.94
MgO, %	3.33	4.20	3.47
V, mg/kg	n.d.	n.d.	n.d.
Cr, mg/kg	22.55±1.15	24.51±1.25	18.04±0.92
Mn, mg/kg	295.13±14.46	301.50±14.77	407.66±10.18
Co, mg/kg	10.64±0.47	10.97±0.48	6.52±0.29
Ni, mg/kg	12.12±0.56	15.24±0.70	20.10±0.92
Cu, mg/kg	20.51±0.87	24.23±1.02	23.47±0.99
Zn, mg/kg	34.76±1.64	29.80±1.40	27.70±1.30
Sr, mg/kg	45.70±1.89	56.49±2.33	31.07±1.28
Pb, mg/kg	n.d.	0.40±0.02	n.d.

n.d.: not detected