

SUPPLEMENTARY DOCUMENT

Table S1 Levels of Pb and Cd in urban soils of different cities in China (mg kg⁻¹)

Location	Samples	Pb		Cd		References
		Mean	Range	Mean	Range	
All the cities from China		1350.51	28.6-25380.55	1.58	0.15-8.59	Luo et al.,2012
Shanghai	273	70.69±5.09	-	0.52±0.05		Shi et al., 2008
						Xiangdong Li,
					0.02-	Poon, & Liu,
Hongkong	594	93.4±37.3	5.27-404	2.18±1.02	5.89	2001
					0.028-	
Guangzhou	40	108.55±78.28	18.50-348.40	0.495±0.491	2.408	(Lu et al., 2007)
						(Chen et al.,
					0.29-	2005; M. Zhang
Hangzhou	25	202.16±197.62	54.00-845.00	1.59±1.41	5.70	& Wang, 2009)
					0.05-	(H. Wang & Lu,
Lishui	126	63.15±21.96	29.18-166.93	0.53±0.52	1.90	2011)
						(X. S. Luo et
						al., 2012; Z.
						Yang et al.,
Changchun	352	35.4±26.3		0.132±0.589		2011)

Table S2.

Number of Collembola in different ecosystem services

Country	Type of sample	Number of Collembola	References
England	Urban soil	6040	(M.T. FOUNTAIN & HOPKIN, 2004)
East-China	Paddy field	792	(M. Liu et al., 2018)
South-Sueden	Forest	11.127	(Vanhee & Devigne, 2018)

Southern-equador Iztaccihua volcano,mexico	Protected forest area	18737	(Sun et al., 2020)
	Temperate forest	24,028	(García-Gómez et al., 2009)

Table S3

Comparative summary of pyrolysis system involving biochar production

Pyrolysis system	Parent material	Main products	By-products	Temperature (°C)	Sources
Slow pyrolysis	biomass	Biochar, biogas	Bio-oil	300–550	(Zhuanxi Luo et al., 2020)
Fast pyrolysis	wheat residue	Gas	Liquid and very low biochar	500-700	(Tang, Zhu, Kookana, & Katayama, 2013)

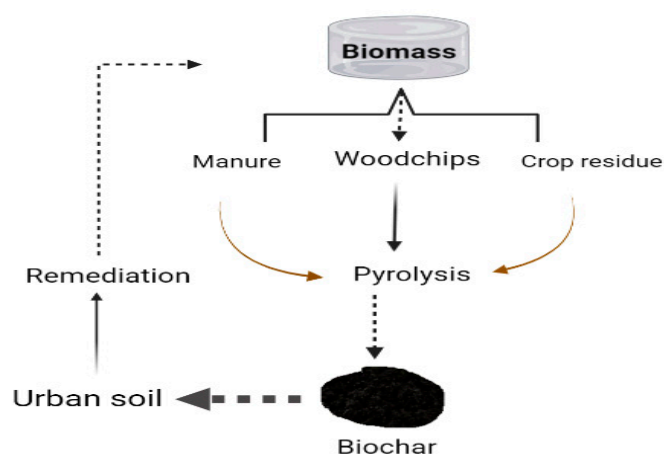


Figure S1 Summarize the process of biochar production from waste recycling, and urban soil remediation.