Supporting Information

Table S1 Physical properties and primary elemental components in dredged river sediment.

Parameters	Value
pH	5.99±0.06
Moisture (%)	60.19±0.17
N (%)	0.50±0.01
C (%)	5.94±0.01
H (%)	1.84±0.02
S (%)	0.19±0.01
C/N	11.97±0.30
C/H	3.23±0.04
Na_2O (%)	0.1
MgO (%)	0.21
K_2O (%)	1.46
Al_2O_3(%)	20.65
SiO_2 (%)	62.39
CaO (%)	1.22
Fe_2O_3 (%)	6.31
P_2O_5 (%)	0.12

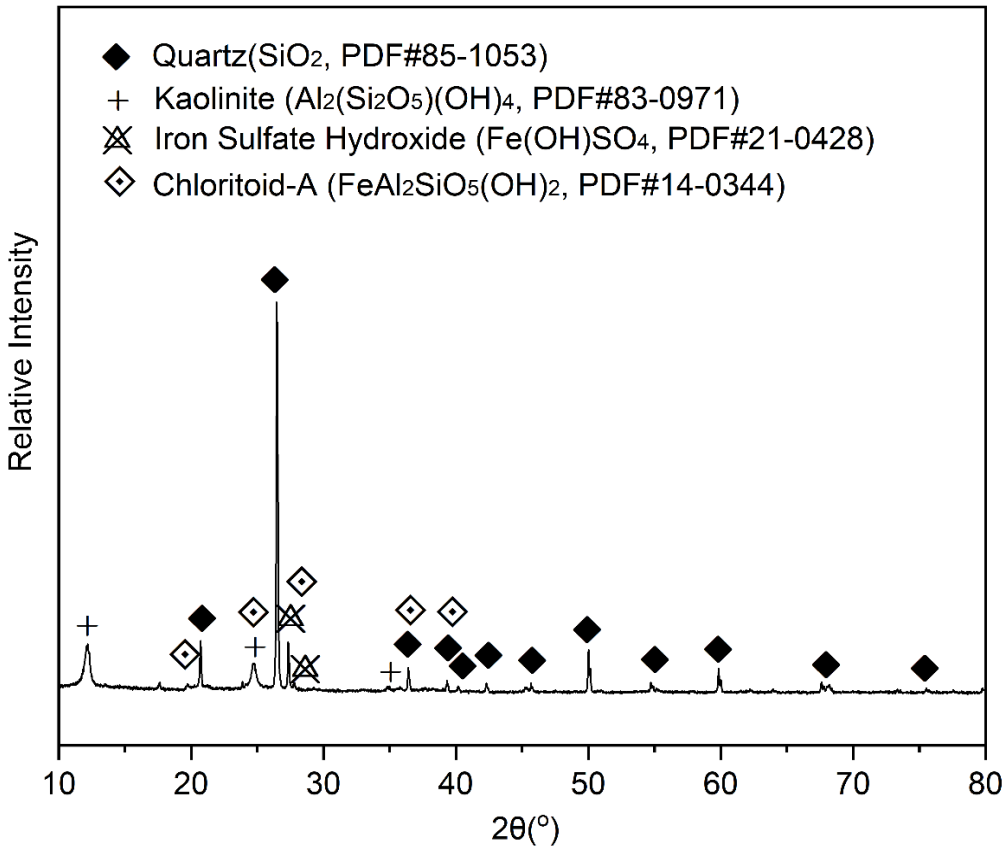

Fig. S1 Mineralogical compositions in the dredged river sediment.

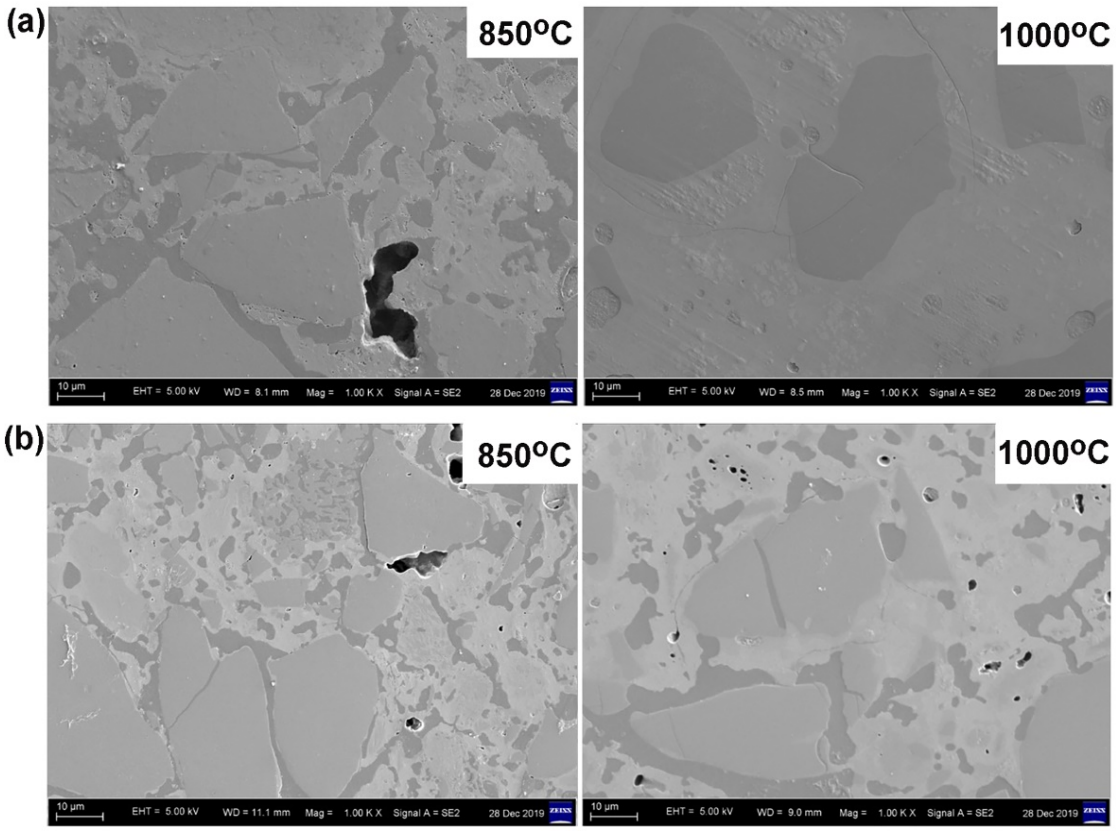

Fig. S2 SEM images of the samples with (Al+Si):Cd mole ratio of (a) 6:1 and (b) 12:1 sintered at 850℃ and 1000℃.

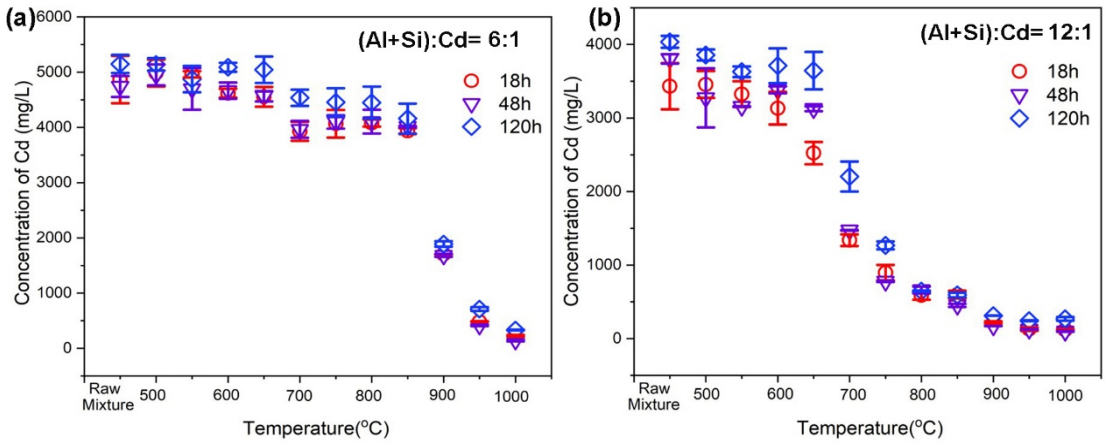

Fig. S3 Cd concentrations in the leachates of raw mixtures and sintering products with (Al+Si):Cd mole ratio of (a) 6:1 and (b) 12:1.

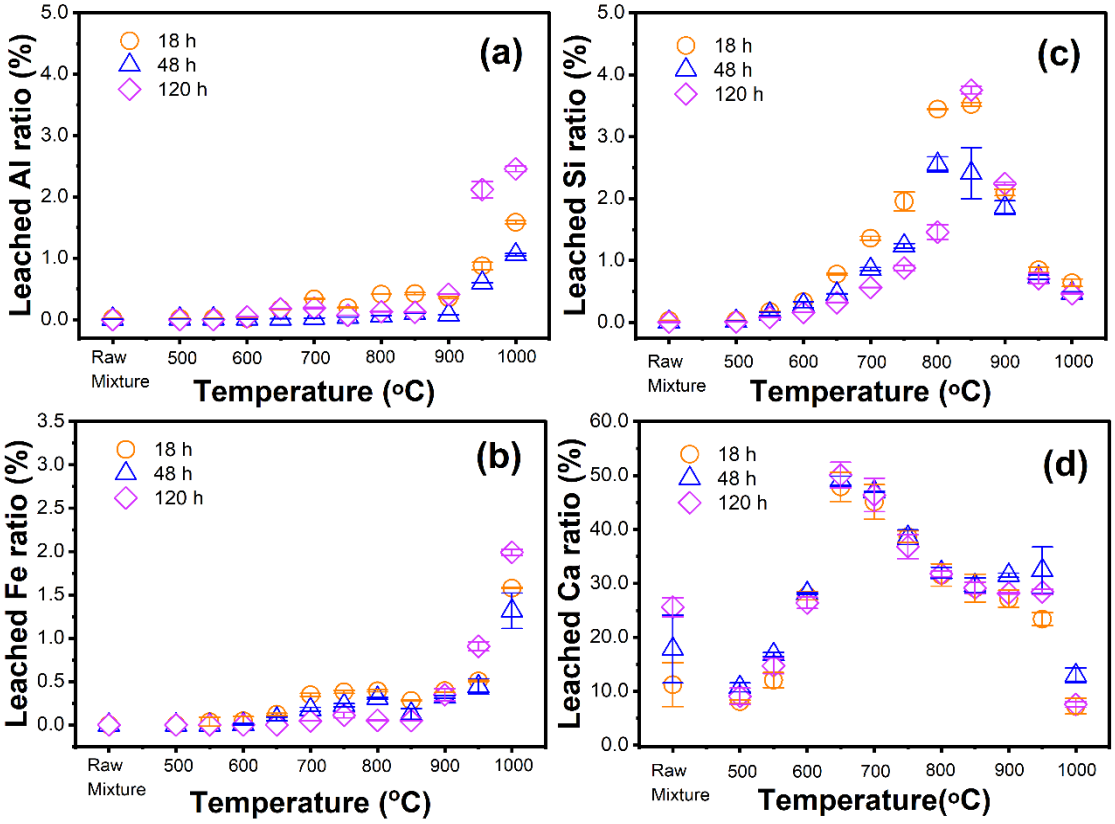

Fig. S4 Leached ratios of Al, Fe, Si and Ca in the leachates of raw mixtures and sintering products of high-Cd series with (Al+Si):Cd mole ratio at 6:1. (a) leached Al ratio; (b) leached Fe ratio; (c) leached Si ratio; (d) leached Ca ratio.

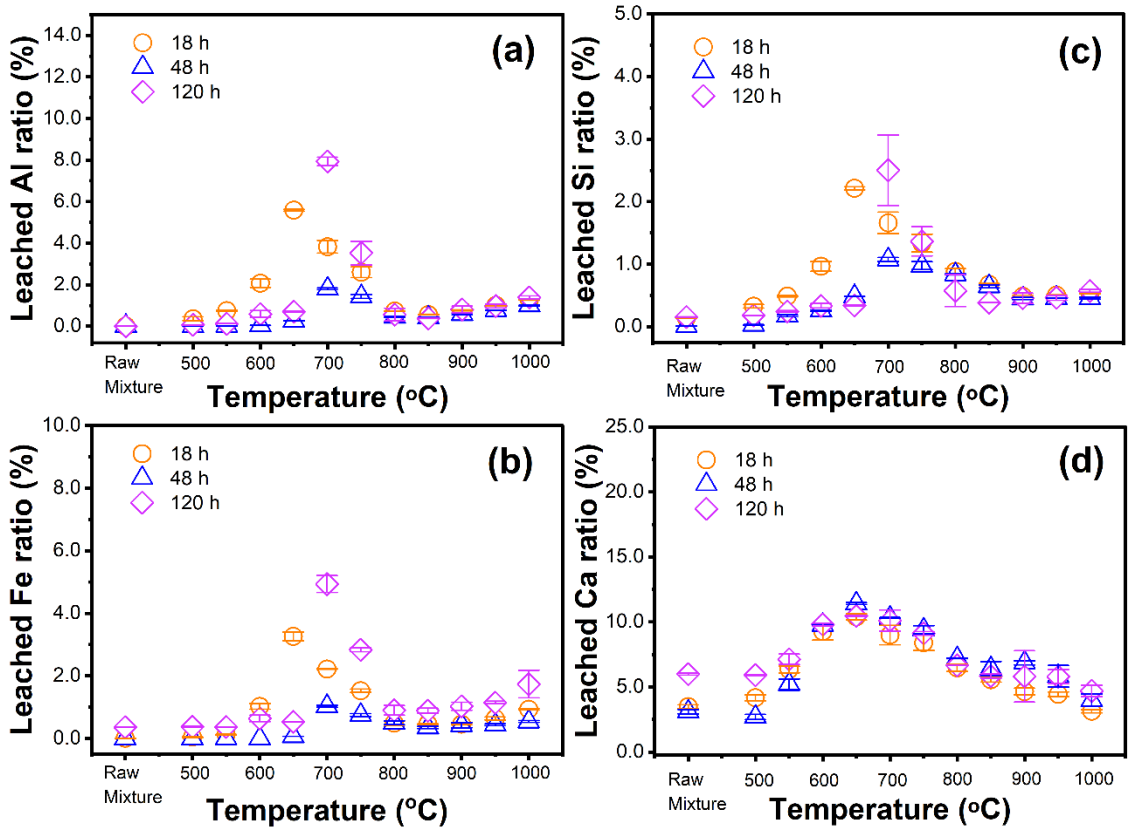

Fig. S5 Leached ratios of Al, Fe, Si and Ca in the leachates of raw mixtures and sintering products of low-Cd series. (a) leached Al ratio; (b) leached Fe ratio; (c) leached Si ratio; (d) leached Ca ratio.

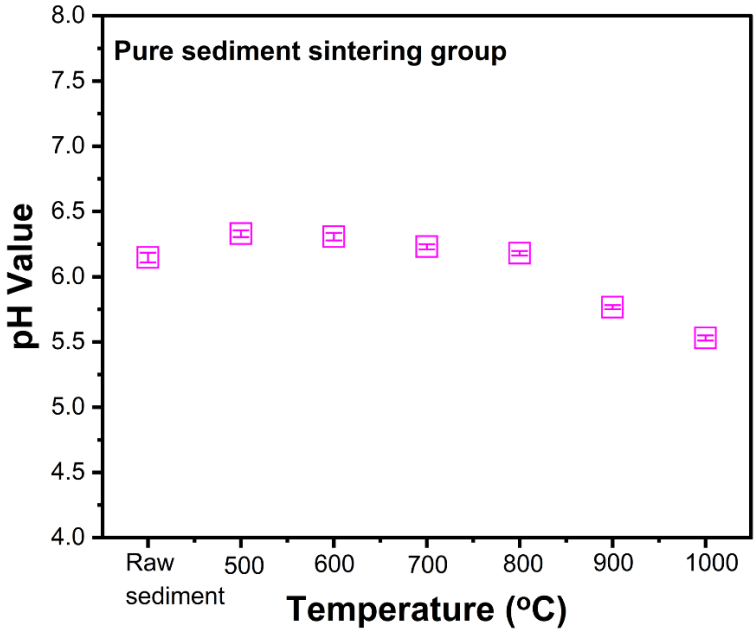

Fig. S6 pH value of the leachates of raw sediment and its sintering products at 500–1000℃ with a leaching period of 18 h.

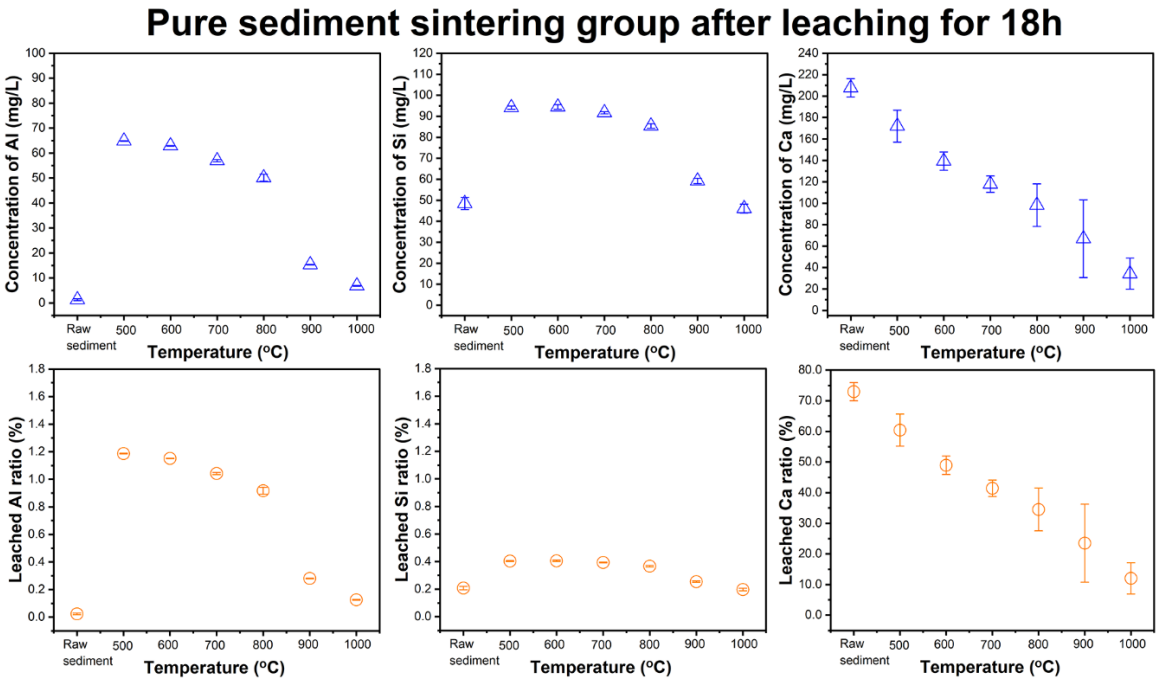

Fig. S7 Concentrations of Al, Si and Ca, and their leached ratios in the leachates of raw sediment and its sintering products at 500–1000℃ with a leaching period of 18 h.