**Fig. S1.** Variation in Zn$^{2+}$ concentration with leaching time during semi-dynamic leaching test (Ding [31]) (a) Initial pH = 2, (b) Initial pH = 4, (c) Initial pH = 7.
Fig. S2. Total dissolved Zn$^{2+}$ on the surface of the solidified zinc-contaminated soil sample (Ding [31]), (a) Initial pH = 2, (b) Initial pH = 4, (c) Initial pH = 7.