

Speciation of Zn and Cd in Sierozem Soil, Northwest China: Bulk EXAFS, and Micro Synchrotron X-ray Fluorescence

Xiaolan Zhao^{a,b}, Yoshio Takahashi^c, Wangsuo Wu^a, Qiaohui Fan^{b,d*},

^a *School of Nuclear Science and Technology, Lanzhou University, Lanzhou 730000, China*

^b *Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences, Lanzhou 730000, China*

^c *Department of Earth and Planetary Science, Graduate School of Science, The University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan*

^d *Key Laboratory of Petroleum Resources, Gansu Province, Lanzhou 730000, China*

* *Corresponding author. E-mail: fanqh@lzb.ac.cn or fanqiaohui@126.com*

Table SI1. Zn and Cd concentrations (mg kg⁻¹), pH values, *CEC* values, and *TOC* contents

<i>Sample Name</i>	<i>pH</i>	<i>CEC</i> <i>meq/100g</i>	<i>TOC</i> %	<i>Zn</i> <i>mg kg⁻¹</i>	<i>Cd</i> <i>mg kg⁻¹</i>	Vermiculite %	Illite %	Chlorite %	Chlorite %	Quartz %	Feldspar %	Calcite %
s1	8.32	6.41	2.36	274.9	8.480	1	3	-	3	58	21	14
s2	8.13	4.76	2.23	409.8	6.580	1	4	1	5	59	21	9
s3	8.53	4.77	1.32	73.36	1.870	2	4	1	5	59	16	13
s4	8.15	8.92	0.86	164.2	5.795	-	-	-	-	-	-	-
s5	7.64	9.62	1.37	108.8	2.160	-	-	-	-	-	-	-
s6	8.66	4.58	0.17	49.41	0.530	-	-	-	-	-	-	-
s7	8.57	8.61	0.53	111.9	3.450	-	-	-	-	-	-	-
s8	8.22	11.0	1.11	251.7	20.25	-	-	-	-	-	-	-
s9	7.94	10.1	0.84	210.7	3.465	-	-	-	-	-	-	-
s10	8.10	9.47	1.24	73.97	1.740	-	-	-	-	-	-	-
s11	8.08	6.59	0.41	78.48	1.060	-	-	-	-	-	-	-
s12	8.65	6.76	0.21	70.40	1.493	-	-	-	-	-	-	-
s13	8.34	6.99	0.85	69.55	6.406	-	-	-	-	-	-	-
s14	8.43	8.08	0.88	79.70	0.717	-	-	-	-	-	-	-
s16	8.33	4.68	1.28	80.34	1.480	-	-	-	-	-	-	-
s17	8.42	7.06	1.17	84.93	3.005	-	-	-	-	-	-	-
s18	7.81	10.3	1.98	135.4	1.570	-	-	-	-	-	-	-
s19	7.78	11.4	1.32	101.4	1.170	-	-	-	-	-	-	-
s20	7.80	9.40	2.08	157.3	2.260	-	-	-	-	-	-	-
s21	7.91	9.36	1.93	80.70	0.620	-	-	-	-	-	-	-
s22	7.68	8.98	1.17	65.27	0.180	-	-	-	-	-	-	-
s23	8.69	5.84	0.81	63.46	3.211	-	-	-	-	-	-	-
s24	7.95	7.12	1.09	62.71	1.785	-	-	-	-	-	-	-
s25	8.16	5.99	0.53	67.16	0.482	-	-	-	-	-	-	-
s26	8.26	6.18	0.35	63.40	3.028	-	-	-	-	-	-	-
s27	8.39	6.13	0.98	79.13	2.561	-	-	-	-	-	-	-
s28	8.03	7.64	0.39	62.16	0.849	-	-	-	-	-	-	-
s29	8.22	5.66	1.84	98.09	1.275	-	-	-	-	-	-	-
s30	8.29	6.08	0.25	84.86	0.255	-	-	-	-	-	-	-
s31	8.44	7.57	1.08	110.6	4.954	-	-	-	-	-	-	-
s32	8.82	6.68	0.94	117.0	1.163	-	-	-	-	-	-	-
s33	8.09	7.02	0.21	101.8	3.474	-	-	-	-	-	-	-

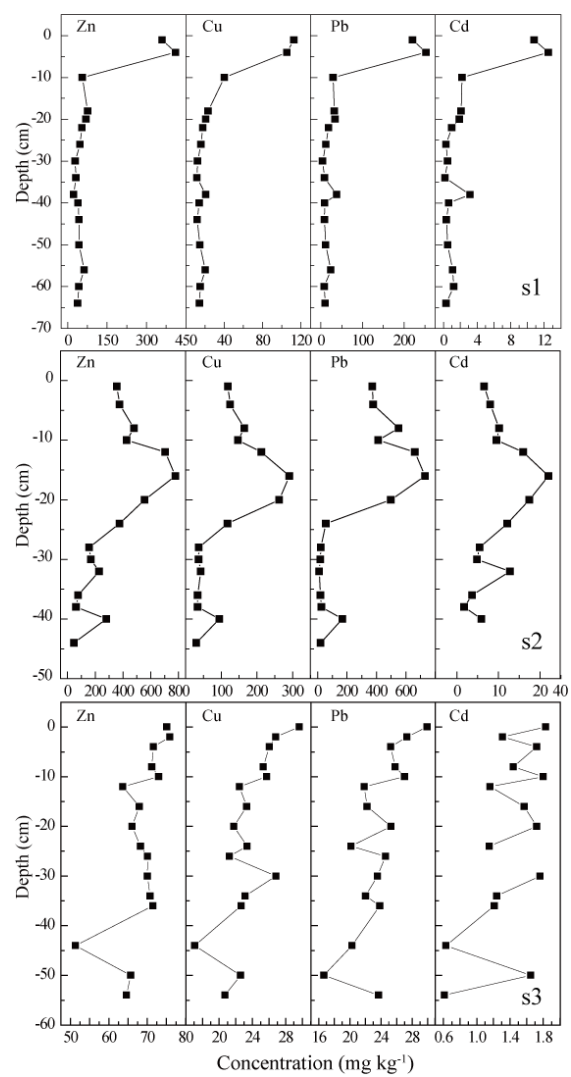


Fig. SI-1 The vertical profile of column samples in the study area.