Chromium Distribution, Leachability and Speciation in a Chrome Plating Site

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Abstract:

Table S1: Heavy metal contents and pollution assessment results of contaminated soils at sampling point S2.

Table S2: Heavy metal contents and pollution assessment results of contaminated soils at sampling point S3.

Table S3: Heavy metal contents and pollution assessment results of contaminated soils at sampling point S5.

Figure S1: X-ray diffraction (XRD) powder pattern of the three soil layers.

Figure S2: The vertical distribution of copper and zinc in soils at sampling points S3 and S5.

Table S1. pH, $CaCO_3$ contents, I_{geo} and Cr concentrations extracted by TCLP of soils at contaminated sampling point S2.

Soil samples	Depth (m)	pH	Soil texture	$CaCO_3$ %	I_{geo}	Concentrations extracted by TCLP	
						Total Cr	Cr(VI)
S2-1	0~0.2	8.25	Backfill soil	6.14	0	17.42	13.48
S2-2	0.2~0.4	8.35			0	1.28	0.84
S2-3	0.4~0.6	8.47			0	1.16	0.77
S2-4	0.6~0.8	8.54	Loam	5.42	0	0.27	0.22
S2-5	0.8~1.0	8.66			1	0.44	0.28
S2-6	1.0~1.4	8.60			1	5.73	3.57
S2-7	1.4~1.8	8.00			1	19.76	15.41
S2-8	1.8~2.2	8.33			0	18.81	16.72
S2-9	2.2~2.6	8.14	Sandy loam	6.17	0	43.37	33.40
S2-10	2.6~3.0	8.00			1	63.28	58.85

Table S2. pH, $CaCO_3$ contents, I_{geo} and Cr concentrations extracted by TCLP of soils at contaminated sampling point S3.

Soil samples	Depth (m)	pH	Soil texture	$CaCO_3$ %	Igeo	Concentrations extracted by TCLP	
						Total Cr	Cr(VI)
S3-1	0~0.2	8.10	Backfill soil	3.13	6	174.16	127.45
S3-2	0.2~0.4	8.91			4	79.30	63.44
S3-3	0.4~0.6	8.04			3	107.53	96.64
S3-4	0.6~0.8	6.33	Loam	1.47	4	128.79	110.59
S3-5	0.8~1.0	4.00			5	208.53	204.21
S3-6	1.0~1.4	3.79			6	335.86	311.26
S3-7	1.4~1.8	5.98			6	430.23	421.09
S3-8	1.8~2.2	3.58			6	362.51	338.06
S3-9	2.2~2.6	7.93	Sandy loam	6.21	0	26.57	24.76
S3-10	2.6~3.0	8.04			0	28.11	27.43

Table S3. pH, $CaCO_3$ contents, I_{geo} and Cr concentrations extracted by TCLP of soils at contaminated sampling point S5.

Soil samples	Depth (m)	pH	Soil texture	$CaCO_3$ %	Igeo	Concentrations extracted by TCLP	
						Total Cr	Cr(VI)
S5-1	0~0.2	8.21	Backfill soil	3.24	4	40.93	30.06
S5-2	0.2~0.4	8.07			5	58.82	48.67
S5-3	0.4~0.6	8.13			2	52.77	32.03

S5-4	0.6~0.8	8.46			1	14.90	12.10
S5-5	0.8~1.0	8.51			1	18.75	10.86
S5-6	1.0~1.4	8.75	Loam	4.07	1	1.86	1.46
S5-7	1.4~1.8	8.78			0	4.08	3.76
S5-8	1.8~2.2	8.80			0	7.25	4.17
S5-9	2.2~2.6	8.57	Sandy	6.88	0	5.93	4.55
S5-10	2.6~3.0	8.45	loam		1	6.85	9.71

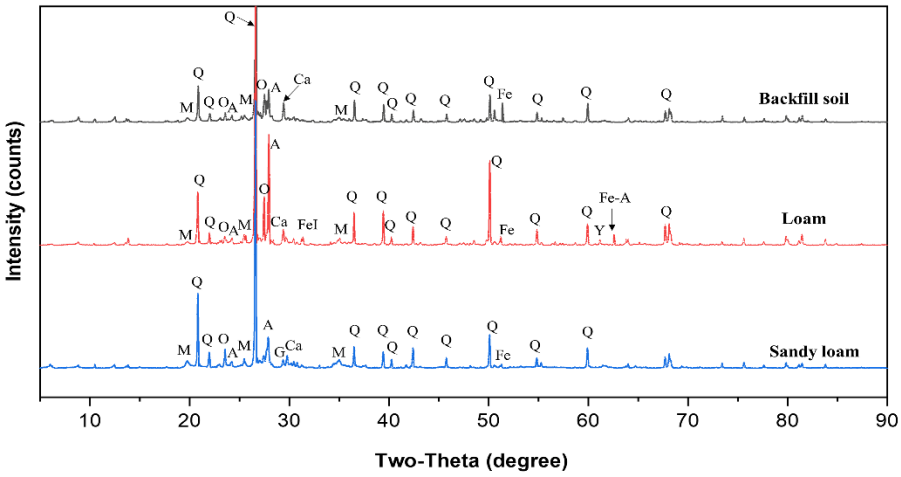

Figure S1. X-ray diffraction (XRD) powder pattern of the three soil layers. (Q=quartz SiO_2, A=albite, M=muscovite-2M1, O=orthoclase, Fe=fayalite, Fe-A=andradite, G=gedrite, Ca=calcite, Y=yedlinite).

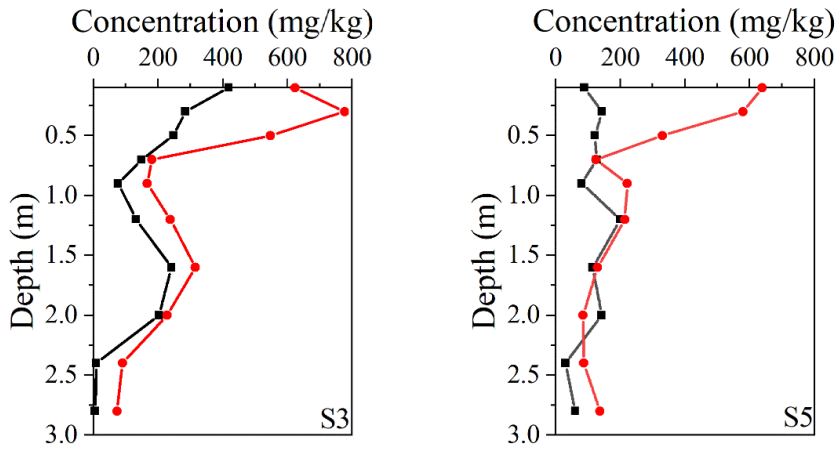

Figure S2. The vertical distribution of copper and zinc in soils at sampling points S3 and S5.

Reference

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