

## Supplementary Material

### Preparation and application of alkali-activated cementitious materials in solidification/stabilization of chromite ore processing residue

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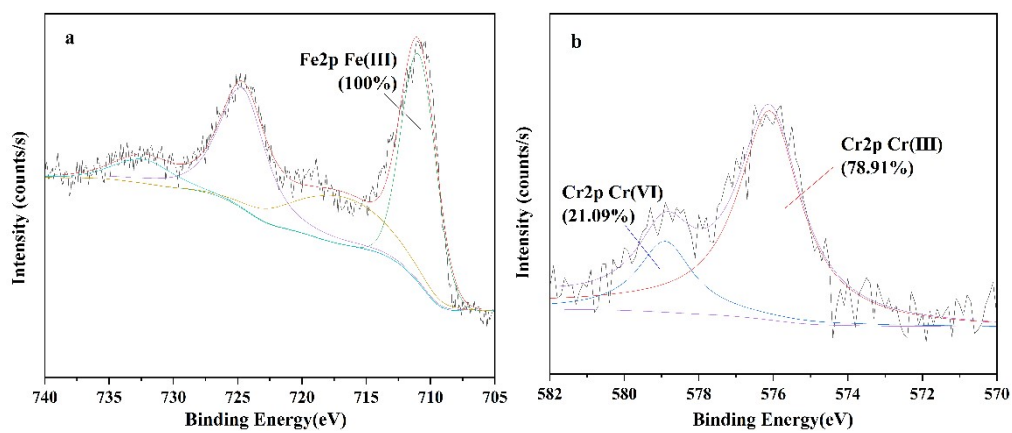
**Table S2.** The composition of COPR solidified body.

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**Table S1**

The composition of BFA, FA and COPR.

Materials	CaO	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	MgO	SO <sub>3</sub>	TiO <sub>2</sub>	Na <sub>2</sub> O	Fe <sub>2</sub> O <sub>3</sub>
BFS	36.69	29.75	15.93	9.94	3.35	1.37	0.79	0.63
FA	4.98	47.94	29.75	0.87	0.95	1.57	1.27	8.94
COPR	0.10	1.91	14.88	10.55	-	1.45	6.21	52.92
Materials	MnO	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	ZnO	Cr <sub>2</sub> O <sub>3</sub>	NiO	V <sub>2</sub> O <sub>5</sub>	Other
BFS	0.63	0.45	-	-	-	-	-	0.47
FA	-	2.61	0.26	0.21	0.03	-	0.07	0.55
COPR	0.47	-	-	0.28	10.53	0.33	0.23	0.14



**Fig. S1.** The XPS spectra of COPR: (a) Fe 2p for COPR; (b) Cr 2p for COPR.

**Table S2**

The composition of COPR solidified body.

Samples	COPR/g	BFS/g	FA/g	Alkali-solid content/g
W0	0	87.4	4.6	8
W10	10	78.7	4.1	7.2
W20	20	69.9	3.7	6.4
W30	30	61.2	3.2	5.6
W40	40	52.4	2.8	4.8
W50	50	43.7	2.3	4
W60	60	35.0	1.8	3.2

**Table S3**

The leaching concentrations of Cr in COPR.

Leaching method	Test type	Samples						
		COPR	W10	W20	W30	W40	W50	W60
SNAM	Cr(VI)/ (µg/mL)	67.39	0.27	0.55	0.94	1.62	2.95	5.44
	Total Cr/ (µg/mL)	81.24	0.55	0.93	1.69	2.50	4.40	7.63
TCLP	Cr(VI)/ (µg/mL)	32.41	0.07	0.11	0.32	0.38	0.59	1.8
	Total Cr/ (µg/mL)	49.21	0.18	0.25	0.41	0.45	0.68	1.90