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Electronic Supplementary Information for 1 Long-term leaching behaviours of cement composites prepared by hazardous wastes 2 Zhenzhou Yang^a, Ji, Ru^d, Lili Liu^a, Xidong Wang^a and Zuotai Zhang^{b,c*}, 3 a Beijing Key Laboratory for Solid Waste Utilization and Management and Department of Energy and Resource Engineering, College of 4 Engineering, Peking University, Beijing 100871, P.R. China 5 b School of Environmental Science and Engineering, Southern University of Science and Technology of China, Shenzhen, 518055, P.R. China c The Key Laboratory of Municipal Solid Waste Recycling Technology and Management of Shenzhen City, Shenzhen, 518055, P.R. China 7 d School of Civil and Resource Engineering University of Science and Technology Beijing, Beijing, 100083, P.R. China 8 *Corresponding author. 9 10 E-mail address: zhangzt@sustc.edu.cn (Z.T. Zhang).

Table S1 The pH and electrical conductivity of leachates during the course of the experiment of 180 days

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1-	Parameter	Time (days)								
Sample		3	7	14	30	60	90	120	150	180
Deionized water:										
Compact Cc	рН	11.7	11.6	11.5	11.6	11.5	11.2	11.3	11.4	11.4
	Conductivity (mS cm ⁻¹)	0.6	0.8	0.9	1.0	0.9	1.0	1.0	1.0	0.9
Coarse Cc	рН	12.3	12.4	12.2	12.3	12.2	12	11.8	11.8	11.8
	Conductivity (mS cm ⁻¹)	3.3	4.8	5.8	6.4	6.7	6.5	6.1	6.1	5.7
Fine Cc	рН	12.5	12.4	12.3	12.2	12.2	12.1	11.9	11.8	11.8
	Conductivity (mS cm ⁻¹)	3.4	4.2	6.4	7.4	7.5	7.1	6.7	6.7	6.6
Saline water:										
Compact Cc	рН	11.8	11.9	11.9	11.5	12	11.9	11.6	11.8	11.8
	Conductivity (mS cm ⁻¹)	44.6	44.7	44.1	42.1	41.3	40.4	39.0	39.8	39.0
Coarse Cc	рН	12.4	12.3	12.4	12.2	12.3	12.3	11.8	12.1	12.1
	Conductivity (mS cm ⁻¹)	47.0	46.8	46.7	45.0	44.0	42.7	43.5	43.6	42.3
Fine Cc	рН	12.4	12.4	12.4	12.2	12.3	12.3	11.9	12.1	12.1
	Conductivity (mS cm ⁻¹)	47.0	46.9	47.1	45.3	44.2	42.9	43.7	44.0	42.6

Table S2 The porosity, average pore diameter and total instrusion volume of compact compistes prepared with EOPC, after 180 days of exposure to deionized water and saline water.

Sample	Porosity	Average pore diameter (nm)	Total pore volume (mL/g)			
	(%)					
Cc (Deionized water)	12.7	27.9	0.064			
Cc (Saline water)	11.7	33.7	0.051			

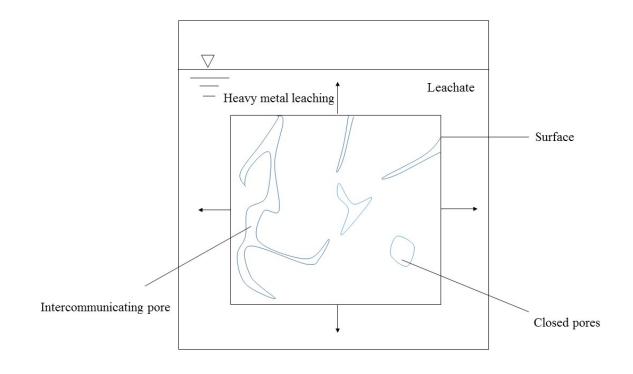


Fig. S1 Sketch of the leaching behavior of heavy metals in cement composites