**Table. 1.** Mix proportions for AAS paste

	Slag	$\rm H_2O$	Na <sub>2</sub> CO <sub>3</sub>	sorbent
CN 0 H	100	44	6.8	3.60
CN 1 H	100	44	6.8	4.00
CN 6 H	100	44	6.8	4.26
CN 12 H	100	44	6.8	4.71
CN 24 H	100	44	6.8	4.80
CN 72 H	100	44	6.8	5.49

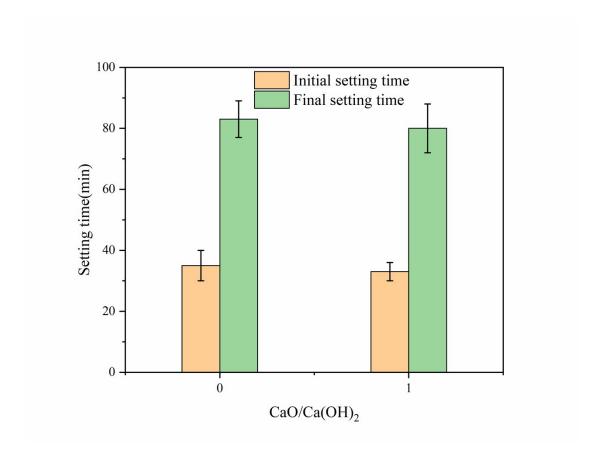
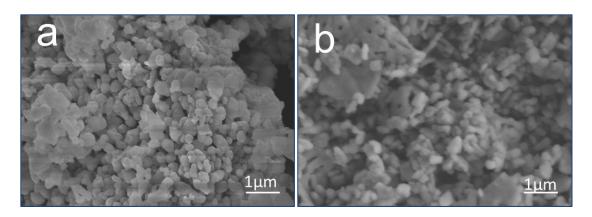


Figure.s.1 The setting time of the AAS paste activated by the pure CaO/Ca(OH)<sub>2</sub>.

**Figure.s.1** shows that the conversion of calcium oxide to calcium hydroxide has negligible effect on the setting time of the AAS paste.



**Figure.s.2** SEM image of different kinds of CaO for a (analytical grade CaO), b (calcined limestone)

**Figure.s.2** shows different kinds of calcined CaCO3 particle possesses a similar structure.