

Surface and Bulk Modifications of Fibrous Erionite in Mimicked Gamble's Solution at Acidic pH

Table S1. Results of ICP-OES analyses of erionite fibres after incubation in the MGS at pH 4.5. Result of ICP-OES analyses of the pristine hand sample are also reported. Standard deviations (in parentheses) were calculated over three independent measurements.

Sample	Fe (mg/kg)	Ca (mg/kg)	K (mg/kg)	Mg (mg/kg)	Al (mg/kg)	Si (mg/kg)
E-1h	<50	10,209(434)	15,221(380)	564(28)	52(3)	147(1)
E-24h	<50	16,327(785)	18,465(878)	1961(61)	54(9)	446(34)
E-1W	<50	9505(1262)	11,558(1620)	1653(220)	85(8)	551(63)
E-1M	<50	8304(1191)	10,682(1518)	2064(277)	130(1)	1170(311)
Na (mg/kg)	Fe (mg/kg)	Ca (mg/kg)	K (mg/kg)	Mg (mg/kg)	Al (mg/kg)	Ti (mg/kg)
11,890(1046)	14,151(1017)	13,905(813)	38,453(2593)	7364(461)	69,584(4351)	19,811(672)

Table S2. Binding energy values (eV) of the main photoelectron lines in erionite samples. Average values and standard deviation (in parentheses) over three measurements are provided.

	Pristine (Pacella et al. 2017a)	E-1h	E-24h	E-1W	E-1M	
Si 2p_{3/2}	102.8 (0.1)	102.5 (0.2)	102.8 (0.2)	102.7 (0.1)	102.6 (0.2)	
Al 2p	74.7 (0.1)	74.5 (0.2)	74.6 (0.2)	74.6 (0.1)	74.6 (0.1)	
O 1s	O ²⁻					
	NB-O ⁺ and OH ⁻	531.3 (0.2)	531.3 (0.2)	531.4 (0.2)	531.5 (0.2)	531.5 (0.2)
	B-O [†]	532.3 (0.2)	532.1 (0.1)	532.3 (0.2)	532.4 (0.2)	532.4 (0.2)
	water	533.4 (0.2)	533.5 (0.2)	533.6 (0.1)	533.6 (0.2)	533.4 (0.1)
Fe 2p_{3/2}	Fe (II)-O	709.2(0.2)	709.0(0.2)	709.2(0.2)		
	Fe (III)-O	710.6 (0.2)	710.6 (0.2)	710.6 (0.2)	710.6 (0.2)	710.6 (0.1)
	FeOOH	711.9 (0.2)	711.7 (0.2)	711.7 (0.1)	711.6(0.2)	711.8 (0.2)
Na 1s	1072.9 (0.2)	1073.0 (0.1)	1073.0 (0.1)	1072.9 (0.2)	1073.1 (0.1)	
K 2p_{3/2}	294.0 (0.1)	293.9 (0.2)	293.8 (0.2)	293.8 (0.1)	293.9 (0.1)	
Ca 2p_{3/2}	348.9 (0.2)	n.d.	n.d.	n.d.	n.d.	

[†] NB-O: no bridging oxygen in silicates; [†] B-O: bridging oxygen in silicates.

Table S3. Relative intensities of Fe 2p_{3/2} components (area %) in the investigated samples from XPS data. Results from Pacella et al., 2017a are reported as a comparison.

Sample	Fe (II)-O	Fe (III)-O	Fe-OOH
Pristine (Pacella et al., 2017a)	3	42	55
E-1h	9 (1)	14 (3)	77 (3)
E-24h	9 (1)	18 (5)	73 (4)
E-1W	0	27 (3)	73 (3)
E-1M	0	35 (2)	65 (2)

Figures

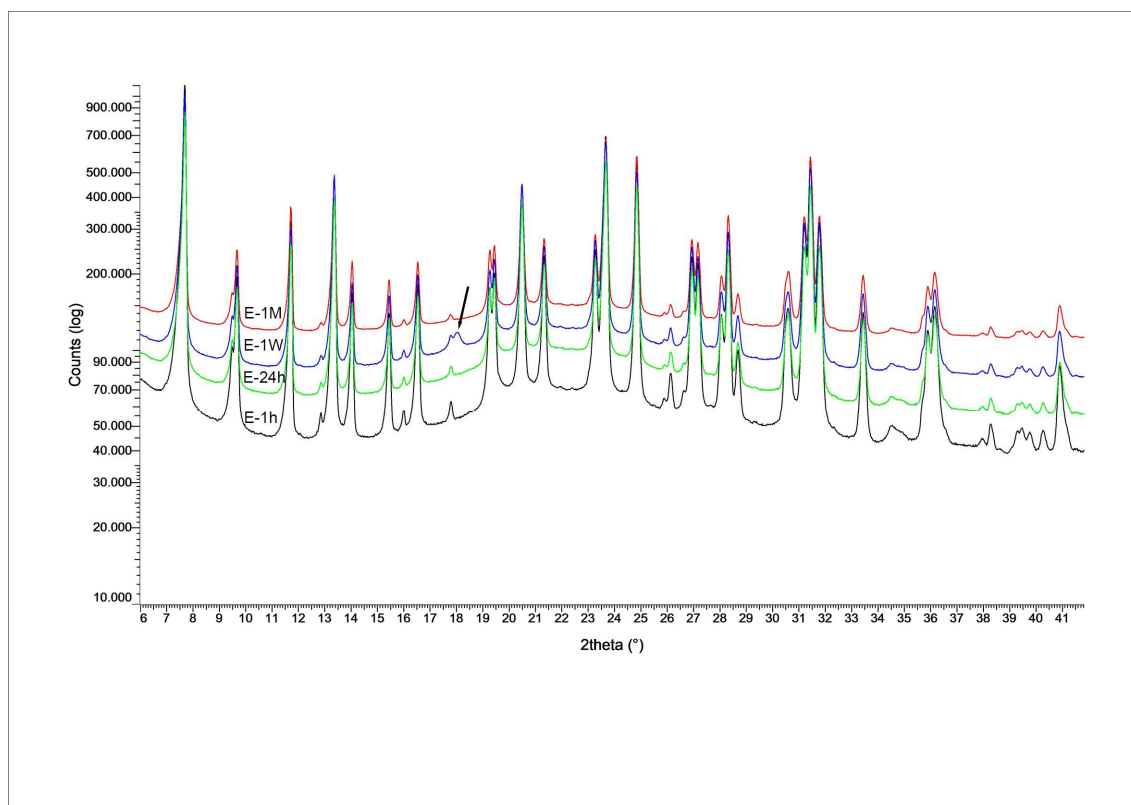


Figure S1. Magnified view of the XRPD patterns of the incubated samples. The arrow indicates the peak assigned to hydrated sulphates of Mg and Fe. Patterns are vertically displaced for clarity.

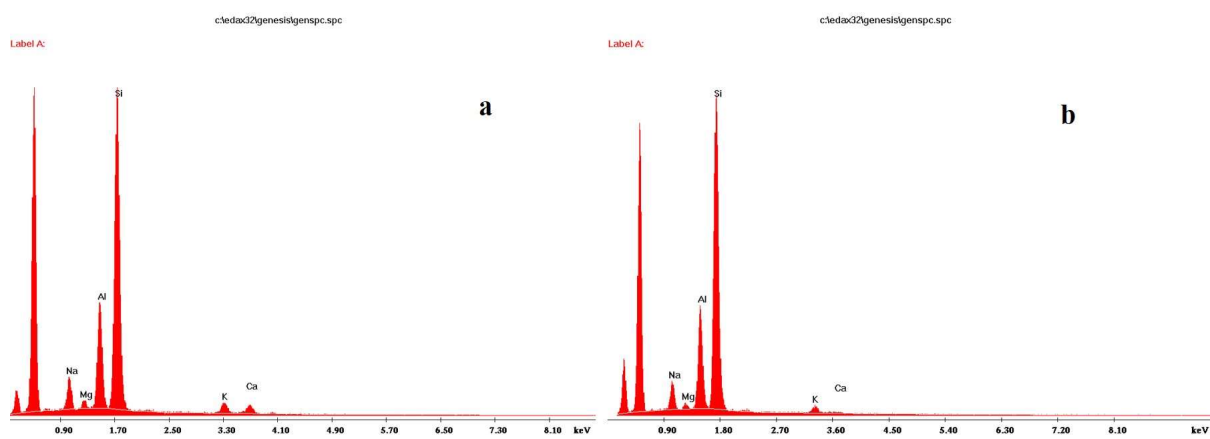


Figure S2. SEM-EDS spectra of chabazite: (a) pristine sample; (b) sample incubated in the MGS for 1 month.

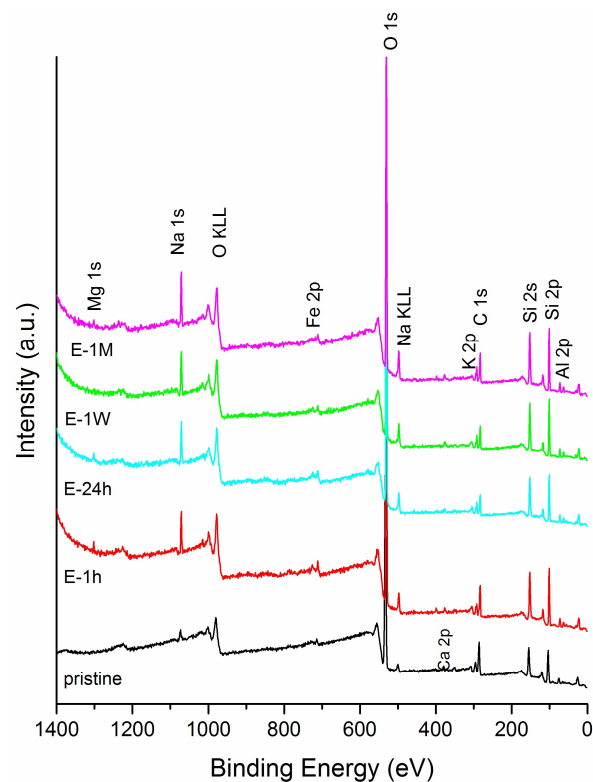


Figure S3. Survey spectra of erionite samples. X-ray source: Al K α .

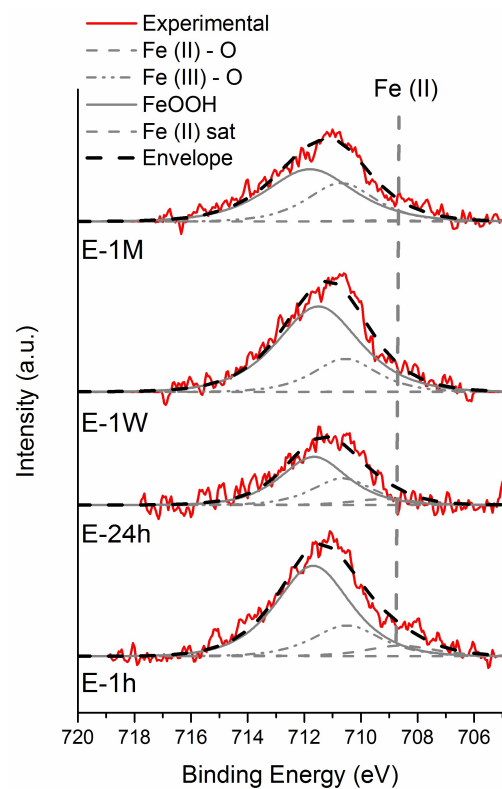


Figure S4. Fe 2p_{3/2} peaks of the incubated samples.