

Table 1. The estimated amount of the cross-linker (S_2Cl_2) in contact with 1 g of 2.5 wt% NR aerogels

S_2Cl_2 concentrations (% v/v)	2.5 wt% NR aerogels ($q_b = 9.45$)		
	$n * 10^3$ (mol g ⁻¹)	Dry weight (g g ⁻¹)	Weight percentage (%)
0.25	0.34	0.05	4.4
0.5	0.67	0.09	8.3
1.0	1.34	0.18	15.3
5.0	6.71	0.91	47.5

Table 2. EDX spectroscopy results of the 2.5 wt% NR aerogels formed at $T_{prep} = -18^\circ C$ under various S_2Cl_2 concentrations

S_2Cl_2 concentrations (% v/v)	Elemental composition (wt %)				
	C	Al	Si	S	Cl
0	37.0 ± 0.6	7.8 ± 0.2	22.2 ± 0.3	-	-
0.25	38.3 ± 0.4	6.6 ± 0.2	15.9 ± 0.2	3.7 ± 0.1	1.3 ± 0.1
0.5	38.1 ± 0.6	6.2 ± 0.2	17.4 ± 0.2	6.5 ± 0.2	1.9 ± 0.1
1	29.8 ± 0.4	5.5 ± 0.1	15.0 ± 0.1	12.4 ± 0.1	7.9 ± 0.2
5	30.9 ± 0.5	3.9 ± 0.1	10.3 ± 0.1	23.7 ± 0.2	8.5 ± 0.3

Table 3. The estimated amount of the cross-linker (S_2Cl_2) in contact with 1 g of the NR aerogels

NR concentrations (wt%)	q_b (g g ⁻¹)	1 % (v/v) of S_2Cl_2		
		$n * 10^3$ (mol g ⁻¹)	Dry weight (g g ⁻¹)	Weight percentage (%)
2.5	9.45	1.34	0.18	15.3
5.0	9.61	1.36	0.18	15.5
10.0	10.19	1.45	0.20	16.3

Table 4. Theoretical and actual values of the organic matter in the dried composites

Samples	Theoretical value ^a (%)	Measured value ^b (%)
2.5 wt% NR aerogel	34.3	43.3
w 1% S ₂ Cl ₂	44.4	55.9
5 wt% NR aerogel	51.1	62.4
w 1% S ₂ Cl ₂	58.7	66.9
10 wt% NR aerogel	67.6	71.7
w 1% S ₂ Cl ₂	72.9	80.2

^a Determined gravimetrically (weight measurement)

^b Calculated using the thermogravimetric analysis