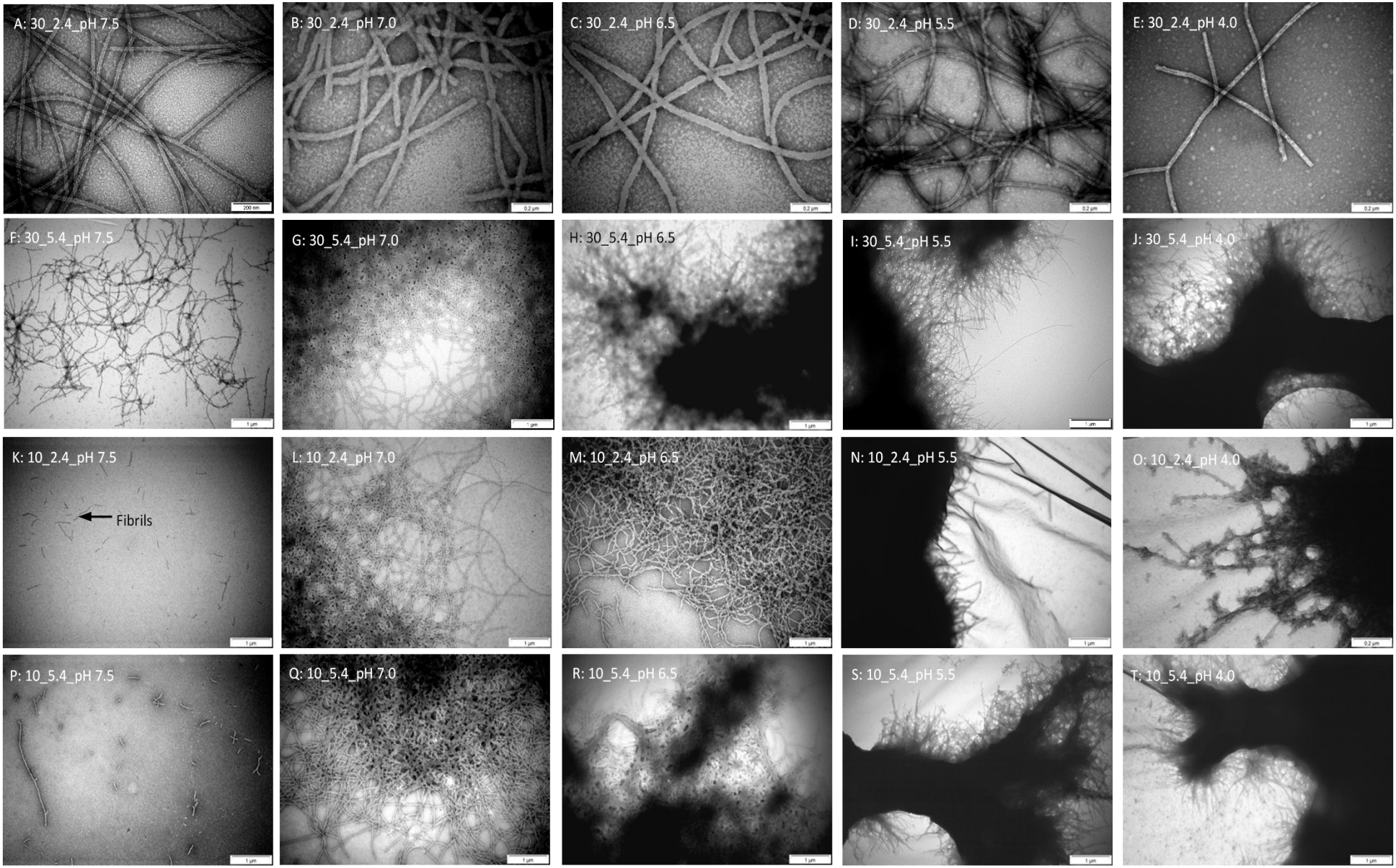
Electronic Supplementary Material (ESI) for Soft Matter.

Electronic Supplementary Information:

Supplementary table 1. The extracted values based on log-normal distribution from SAXS fitting equation 4.

Sample name*	Mu	Sigma	Mean (R in Å)	Coefficient of variation (%)
30_2.4_pH7.5	2.9	0.6	20.8	21.0
30_2.4_pH7.0	2.3	0.7	12.3	30.2
30_2.4_pH6.5	2.2	0.8	12.5	33.2
30_2.4_pH5.5	2.6	0.6	15.8	21.4
30_2.4_pH4.0	2.5	0.6	14.3	25.1
30_5.4_pH7.5	1.8	1	10.6	55.6
30_5.4_pH7.0	1.8	0.9	9.4	49.4
30_5.4_pH6.5	2.8	0.5	17.9	18.0
30_5.4_pH5.5	2.2	0.8	12.0	34.2
30_5.4_pH4.0	2.1	0.8	11.3	38.3
10_2.4_pH7.5	3.1	0.6	25.4	18.5
10_2.4_pH7.0	3.0	0.5	22.3	15.6
10_2.4_pH6.5	2.6	0.7	17.9	28.1
10_2.4_pH5.5	2.1	1.1	13.9	50.7
10_2.4_pH4.0	2.4	0.9	17.3	37.7
10_5.4_pH7.5	2.8	0.7	21.1	24.5
10_5.4_pH7.0	2.9	0.5	20.4	18.6
10_5.4_pH6.5	2.0	1	12.4	52.1
10_5.4_pH5.5	2.0	1.1	12.7	54.2
10_5.4_pH4.0	2.0	1.2	16.7	60.7

*The first number is the α-La concentration (30 or 10 g l^{-1}), the second number is the calcium ratio (R=2.4 or 5.4, R is the molar ratio between calcium and α-La), and the third is the pH value.



Supplementary Fig. 1. Negative stained transmission electron microscopy images of mapping of the formation of nanotubes and gels upon hydrolysis of α-La with *Bacillus licheniformis* at different levels of α-La concentration, calcium ratio and pH (A-T). The first number indicates the α-La concentration (30 or 10 g l^{-1}), the second number indicates the calcium ratio, R= 2.4 or 5.4, followed by the pH value.