

1 **Hydrogels formed by anammox extracellular polymeric substances: structural and**
2 **mechanical insights.**

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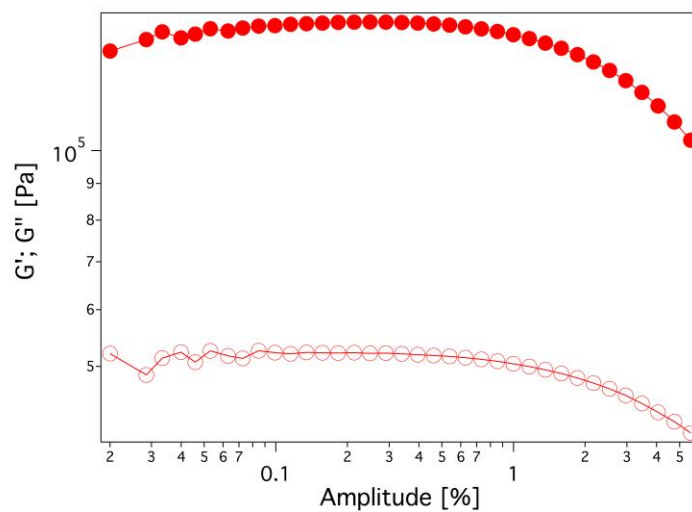
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Supplementary information

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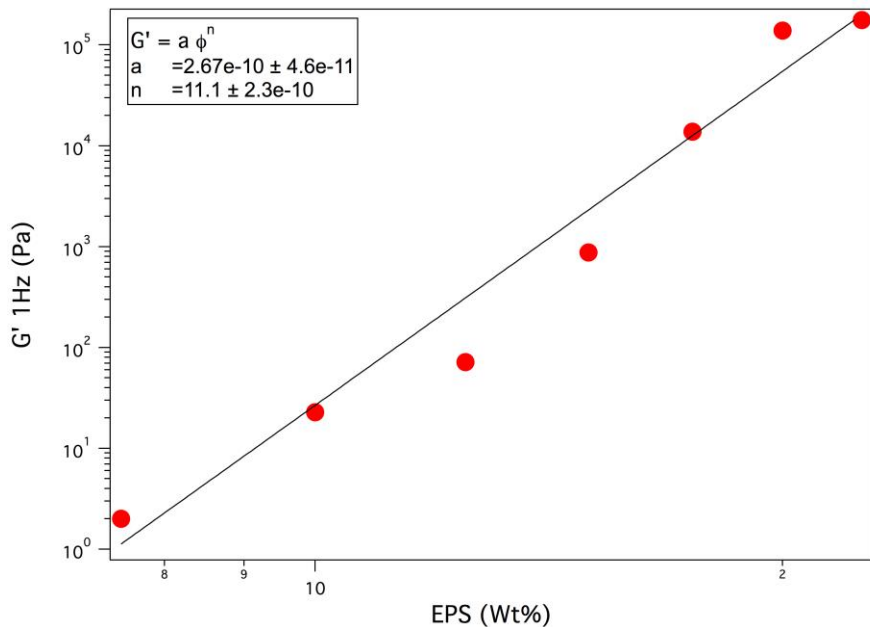


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26 **Figure A1.** Amplitude sweep curve of the 20 wt% EPS based system (oscillation frequency, ω :

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1 Hz).



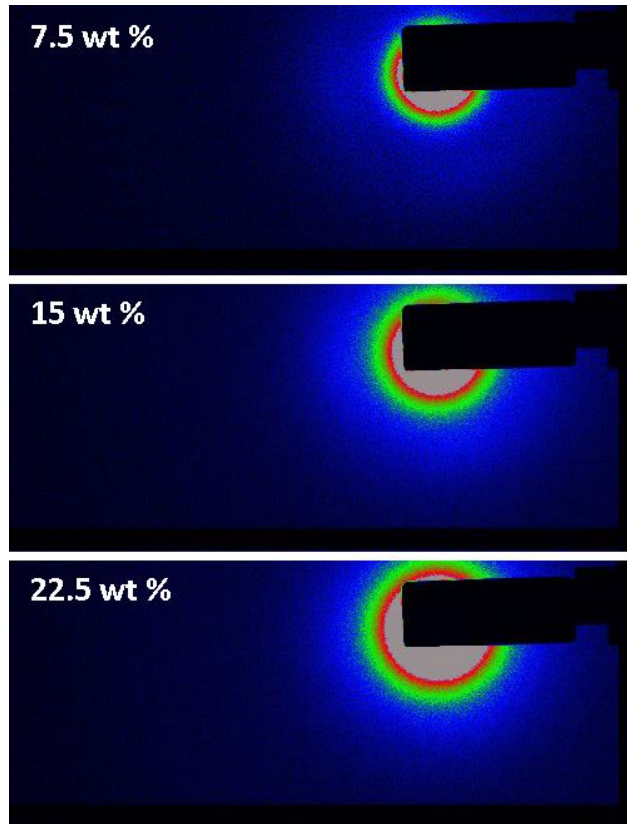
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29 **Figure A2.** Double-logarithmic scale representation describing the effect of the concentration

30 of EPS network on the value of the elastic modulus G' at $\omega=1$ Hz. The line represents the best

31 linear fitting.

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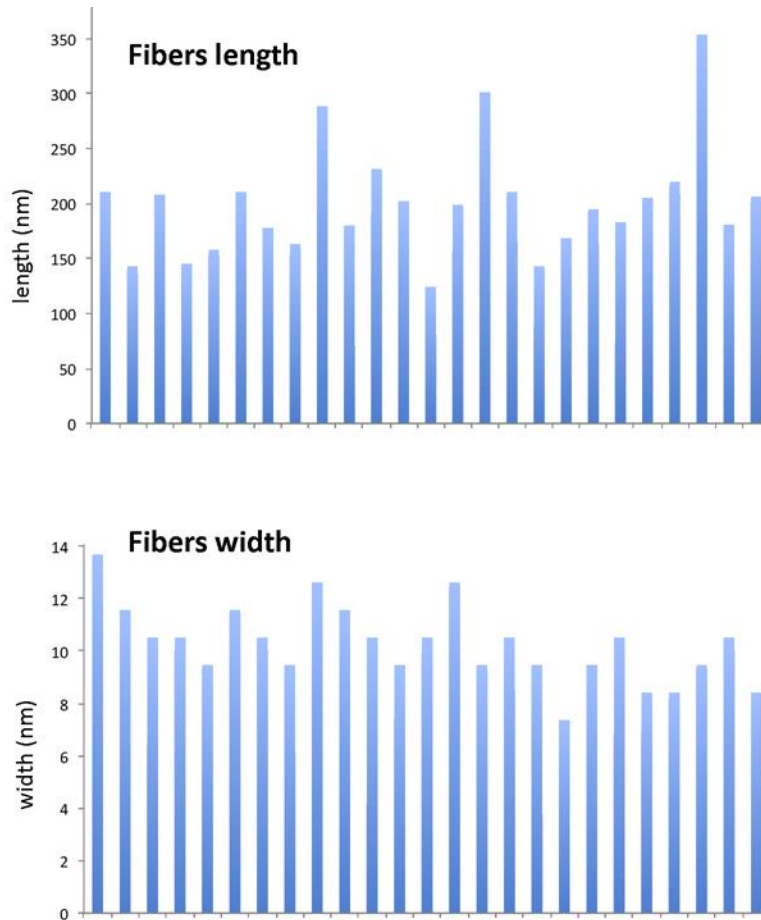
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Figure A3. SAXS raw data: detector 2D images of of EPS/water samples with increasing amounts of EPS (7.5, 15, 22.5 wt%).



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Figure A4. Size analysis of fibers in the native globule: length (upper panel) and width (lower panel) of 25 different fibers, from 5 different TEM images where evaluated. Image J was employed for size analysis. The resulting estimated values are: fibers length 200 ± 50 nm, fibers width 10 ± 1 nm.

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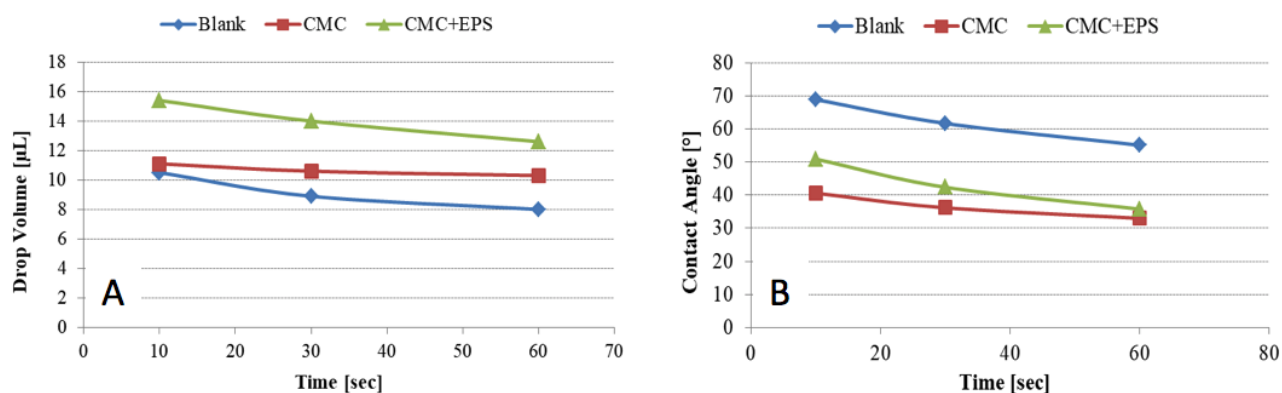
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49 **Figure A5.** Evolution in time of the volume (left) and contact angle (right) of a water drop
50 deposited on paper sheets untreated (Blank) and coated with CMC or CMC/EPS mixture.
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Table A1. Water absorptiveness (Cobb method).

Sample	Coating	Water absorbance [g/m ²]	
		Coated side	Back side
Blank	none	45.3	60.3
Control	CMC	43.0	51.8
Test	EPS+CMC	31.5	40.0

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56 **Table A2.** Grease resistance in terms of permeability and surface repellency.

Sample	Coating	Permeability [sec]	Surface Repellency Degree	
			Coated side	Back side
Blank	none	< 30	1	1
Control	CMC	30	3	3
Test	EPS+CMC	120	5	3

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