

Supplementary information

Stress-assisted clustering-triggered emission of cellulose-based materials

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Content

1. PL emission spectra for determination of PLQY
2. 3D excitation-emission map for EC spin-coated film for deep UV excitation
3. PL emission spectra for determination of PLQY of the compressed samples
4. SEM image of the BC film
5. TGA and GPS of EC powder and EC pellets

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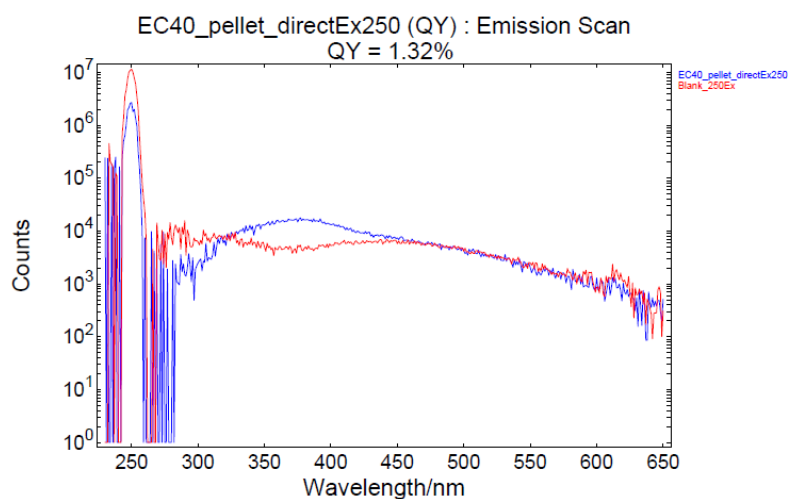


Fig. S1. PL emission spectra for determination of PLQY of the EC powder compressed under 5 tons, λ_{exc} = 250 nm.

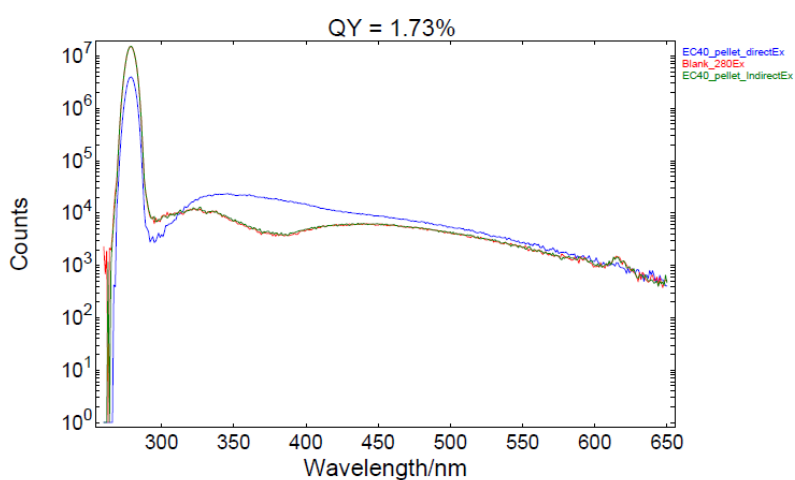


Fig. S2. PL emission spectra for determination of PLQY of the EC powder compressed under 5 tons, λ_{exc} = 280 nm.

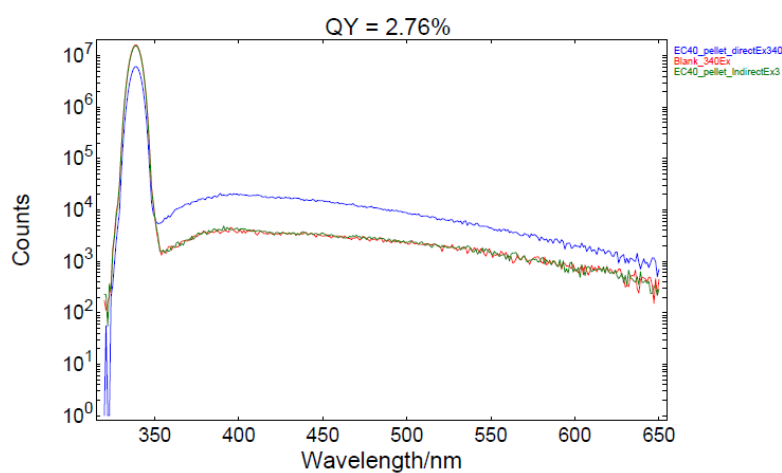


Fig. S3. PL emission spectra for determination of PLQY of the EC powder compressed under 5 tons, λ_{exc} = 340 nm.

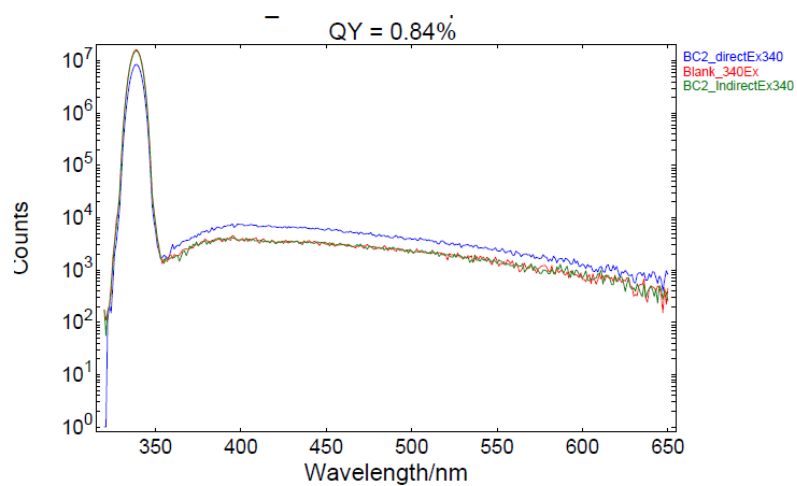


Fig. S4. PL emission spectra for determination of PLQY of the BC sample, $\lambda_{\text{exc}} = 340$ nm.

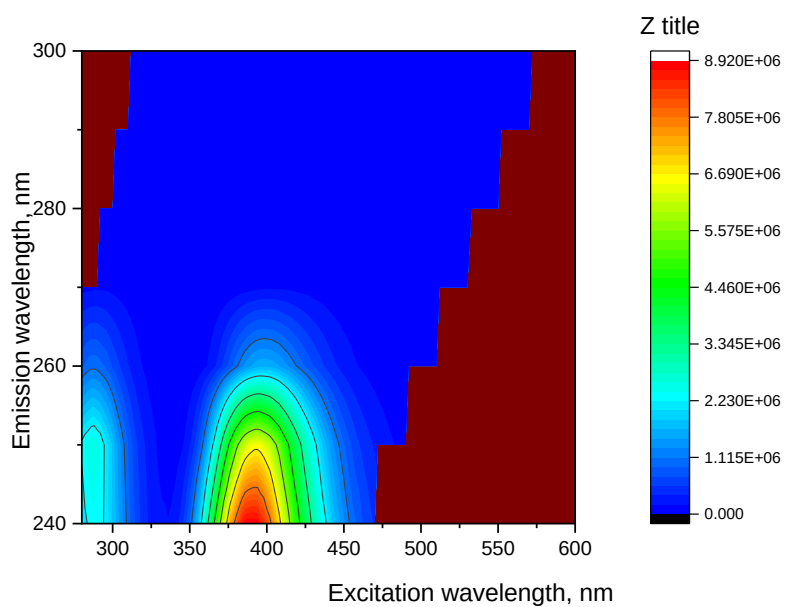


Fig. S5. 3D excitation-emission map for EC spin-coated film for UV excitation from 240 to 300 nm.

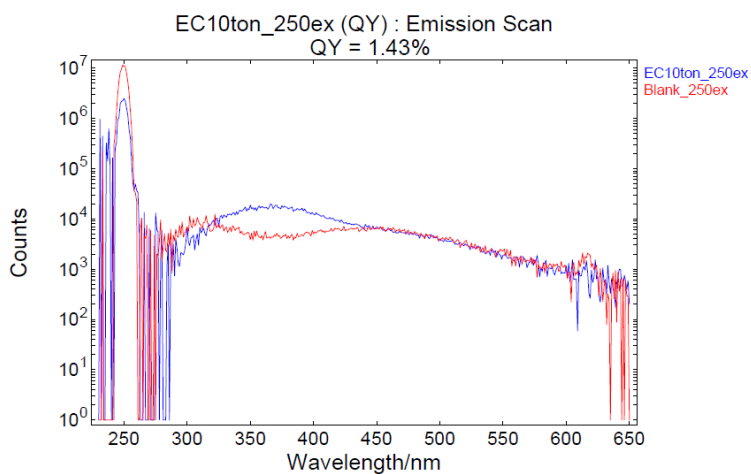


Fig. S6. PL emission spectra for determination of PLQY of the EC powder compressed under 5 tons, λ_{exc} = 250 nm.

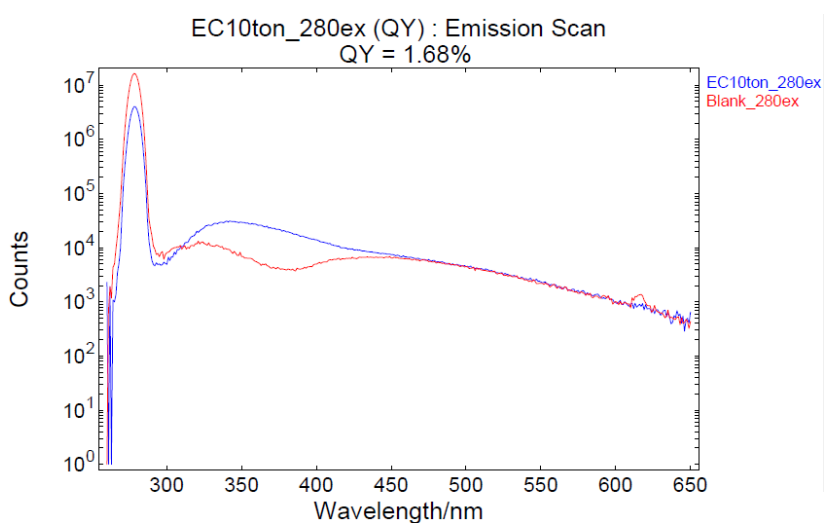


Fig. S7. PL emission spectra for determination of PLQY of the EC powder compressed under 10 tons, λ_{exc} = 280 nm.

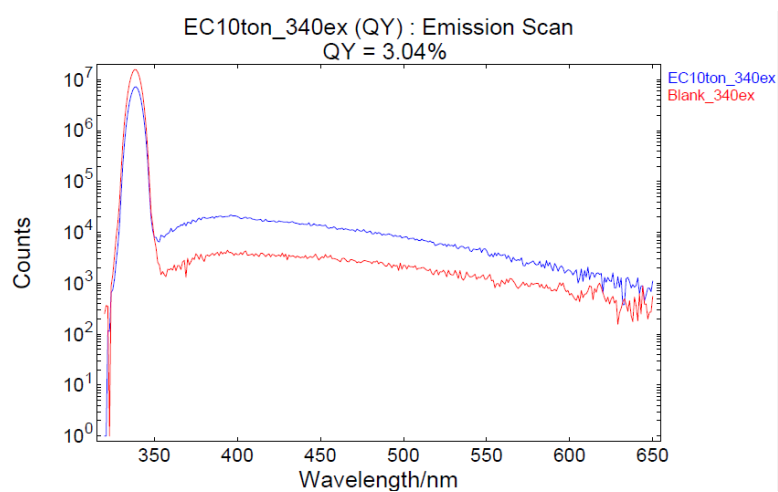


Fig. S8. PL emission spectra for determination of PLQY of the EC powder compressed under 5 tons, λ_{exc} = 340 nm.

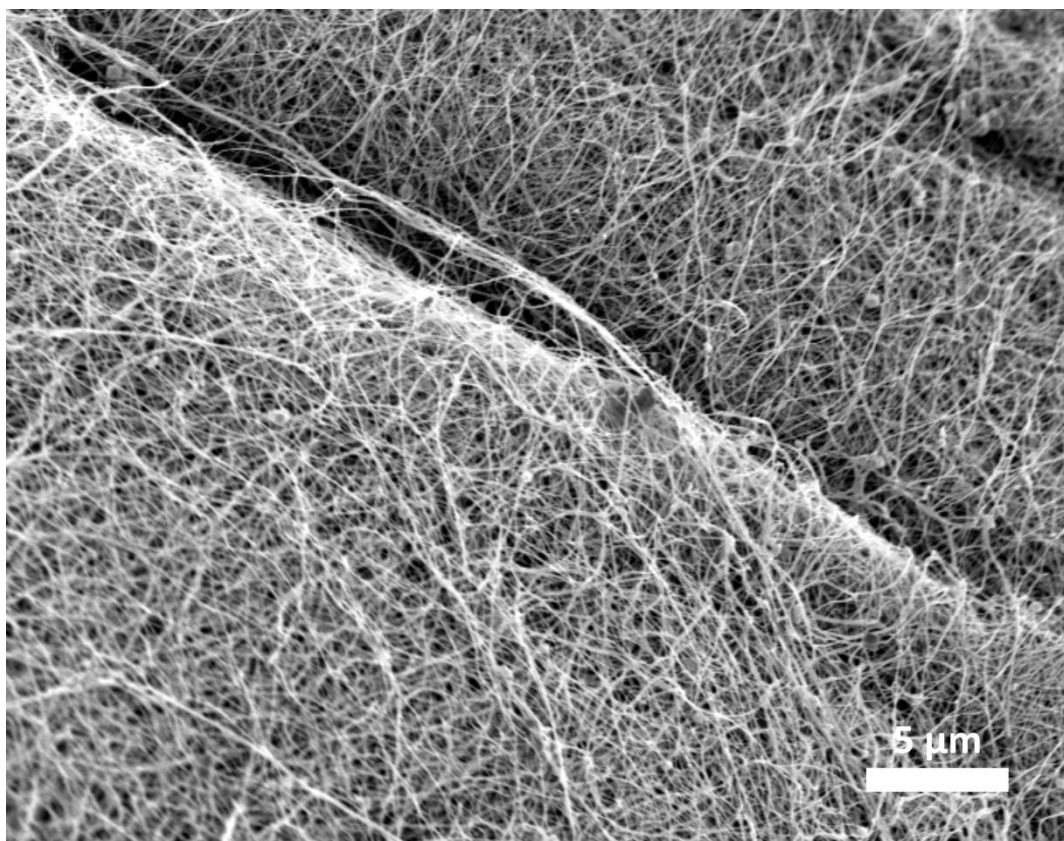


Fig. S6. SEM image of the BC film.

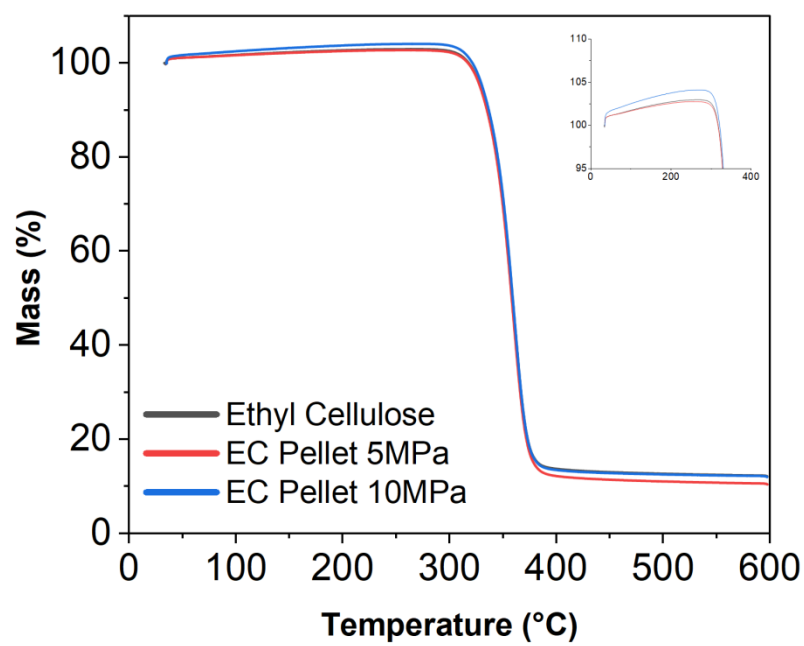


Fig. S7. TGA of EC powder and EC pellets compressed at 5 and 10 tons. *Comment:* Same degradation profile and no weight loss due to moisture.

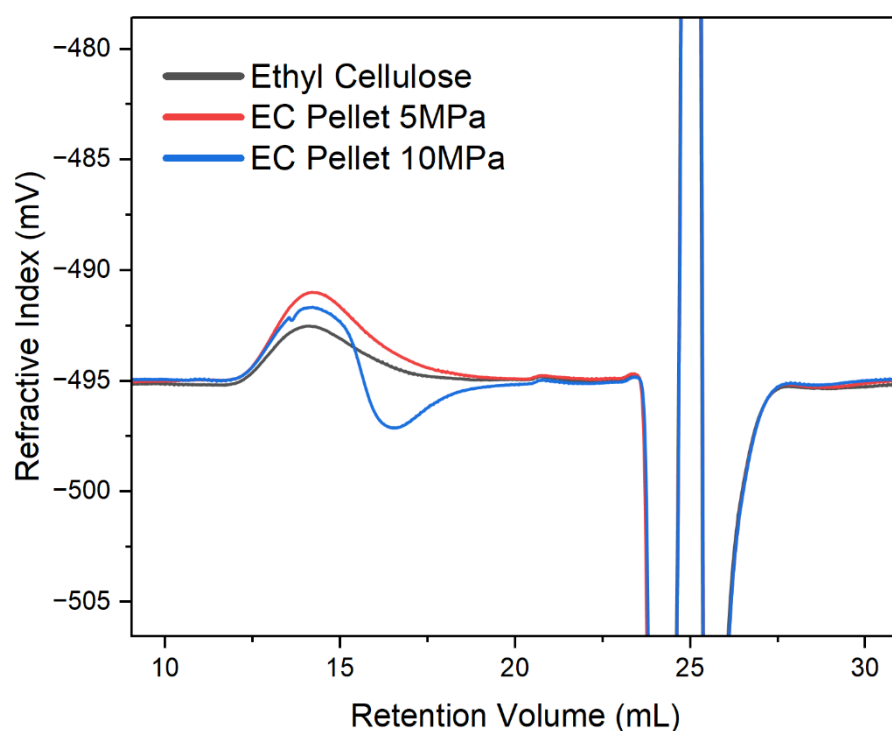


Fig. S8. GPS of EC powder and EC pellets compressed at 5 and 10 tons. *Comment:* practically the same Mw and polydispersity

Table S1.

2024-06-12_07:46:59_LMC182_EC_5MPa_01.vdt - Result View			2024-06-12_08:48:04_LMC182_EC_10MPa_01.vdt - Result View		
Conventional Calibration - Homopolymers results			Conventional Calibration - Homopolymers results		
Peak	1	2	Peak	1	2
Ret Vol (mL)	14.210	25.040	Ret Vol (mL)	14.150	25.040
Mn (Da)	53 147	28	Mn (Da)	123 631	28
Mw (Da)	131 512	28	Mw (Da)	178 691	28
Mz (Da)	220 597	28	Mz (Da)	269 811	28
Mp (Da)	131 677	28	Mp (Da)	137 601	28
Mw/Mn	2.474	1.012	Mw/Mn	1.445	1.012
% Above 0	100.0000	100.0000	% Above 0	100.0000	100.0000
% Below 0	0.0000	0.0000	% Below 0	0.0000	0.0000
Wt Fr (Peak)	0.2039	0.7961	Wt Fr (Peak)	0.1509	0.8491
RI Area (mVmL)	11.66	45.51	RI Area (mVmL)	8.20	46.18
UV Area (mVmL)	0.00	0.00	UV Area (mVmL)	0.00	0.00