

Biodepolymerization of polyamide fibers using *Yarrowia lipolytica* as whole-cell biocatalyst

Supplementary Materials

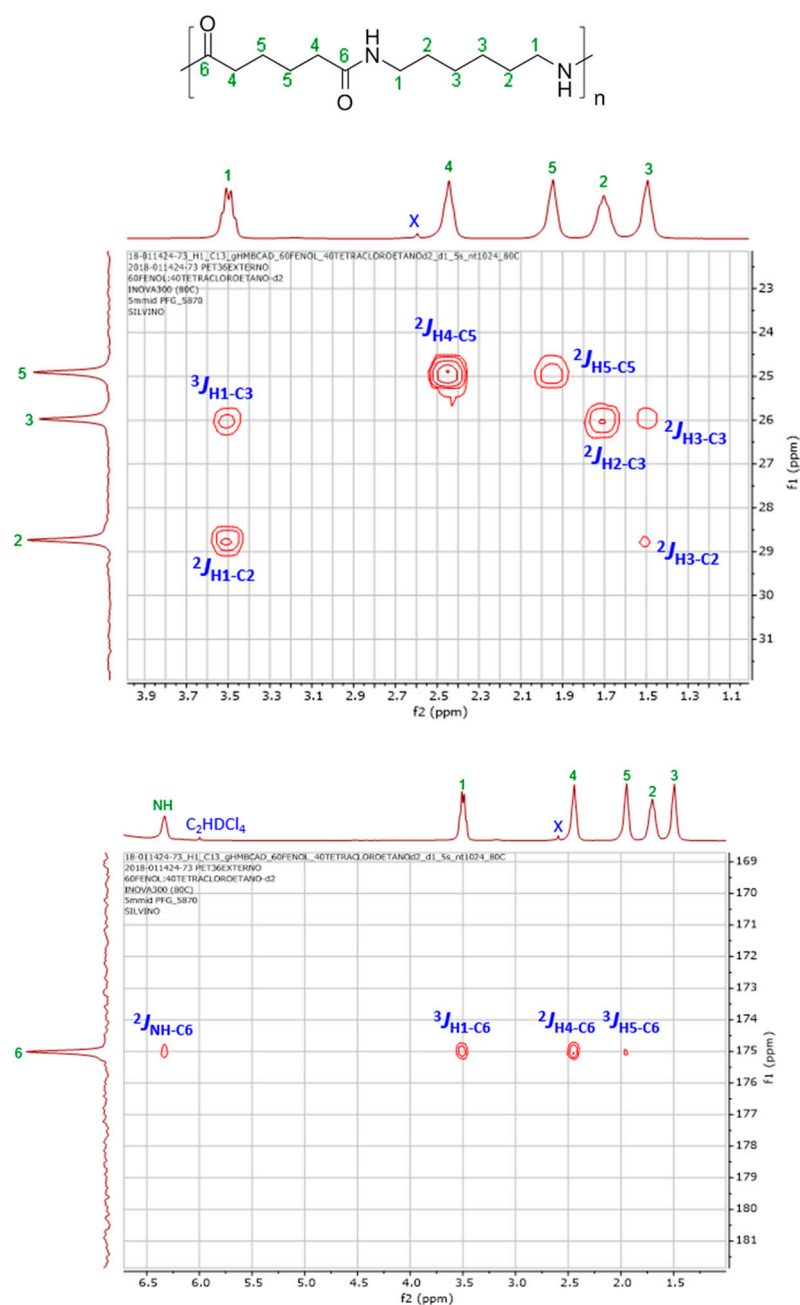


Figure S1. Labeled polyamide-6,6 chemical structure and gHMBC NMR spectrum expanded regions of PAF. X = impurity.

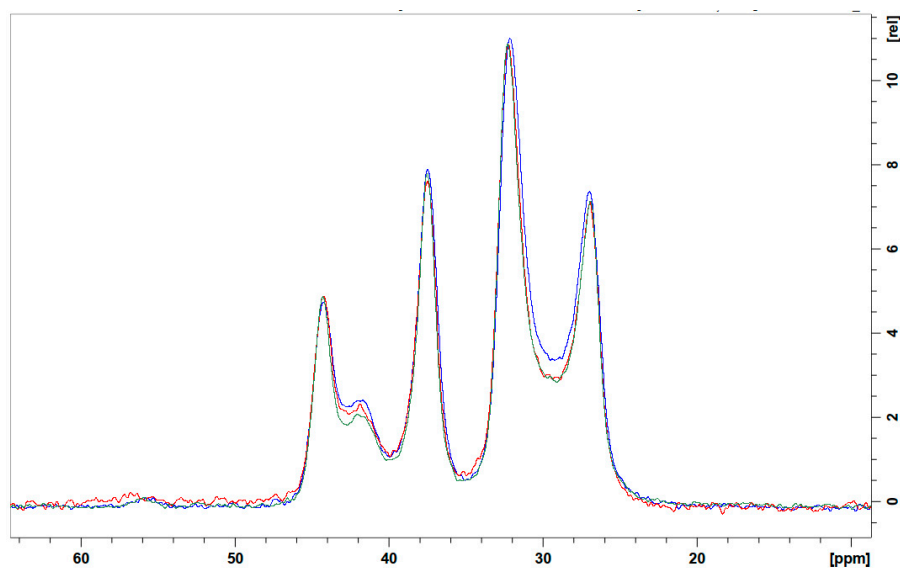
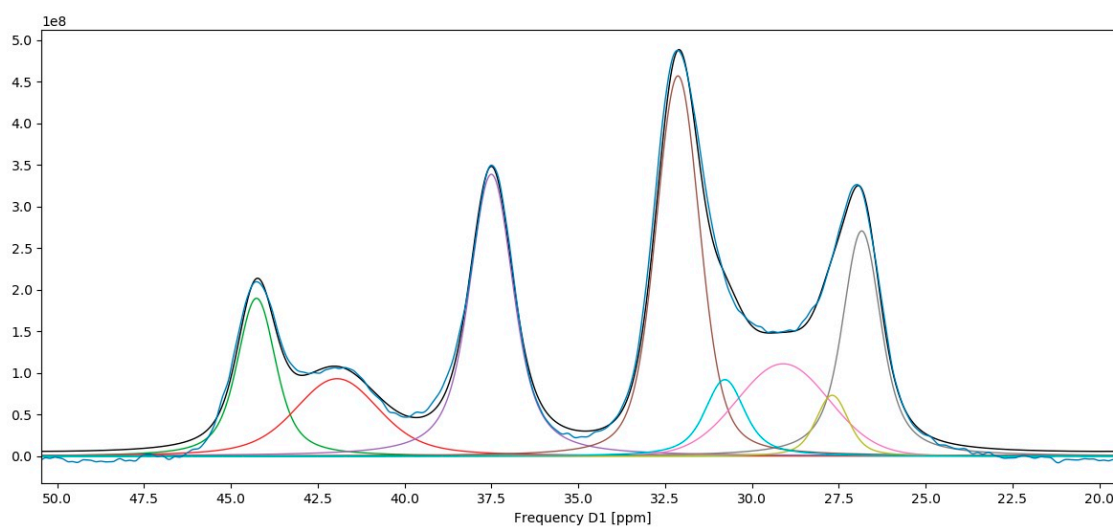


Figure S2. Aliphatic region of ^{13}C CP/MAS NMR spectra of PAF: Control $< 0.5 \text{ g.L}^{-1} < 2 \text{ g.L}^{-1}$.

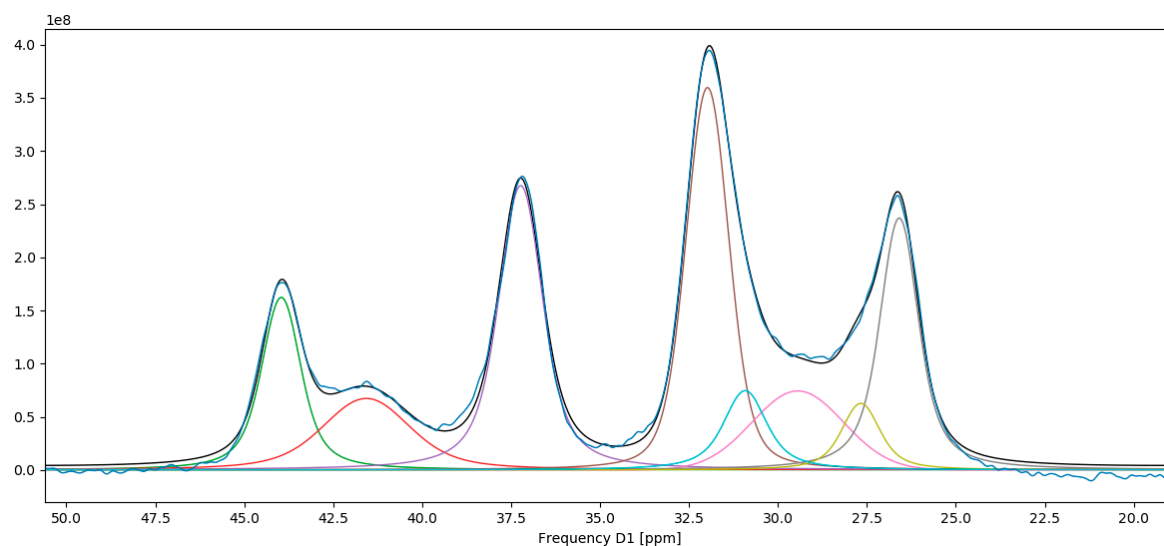


Position	Integral	Lorentz	Gauss
44.26	4.160e+10	91.26	*108.0
41.94	4.240e+10	152.6	*270.0
37.50	8.522e+10	107.9	*120.0
32.13	1.053e+11	65.57	*150.0
29.10	4.798e+10	26.58	*380.0
26.84	6.057e+10	100.9	*100.0
27.69	1.300e+10	63.64	*100.0
30.78	2.141e+10	107.5	*100.0

Crystalline phase = 49.5%

Amorphous phase = 50.5%

Figure S3. Deconvoluted aliphatic region of ^{13}C CP/MAS NMR spectrum of PAF control.

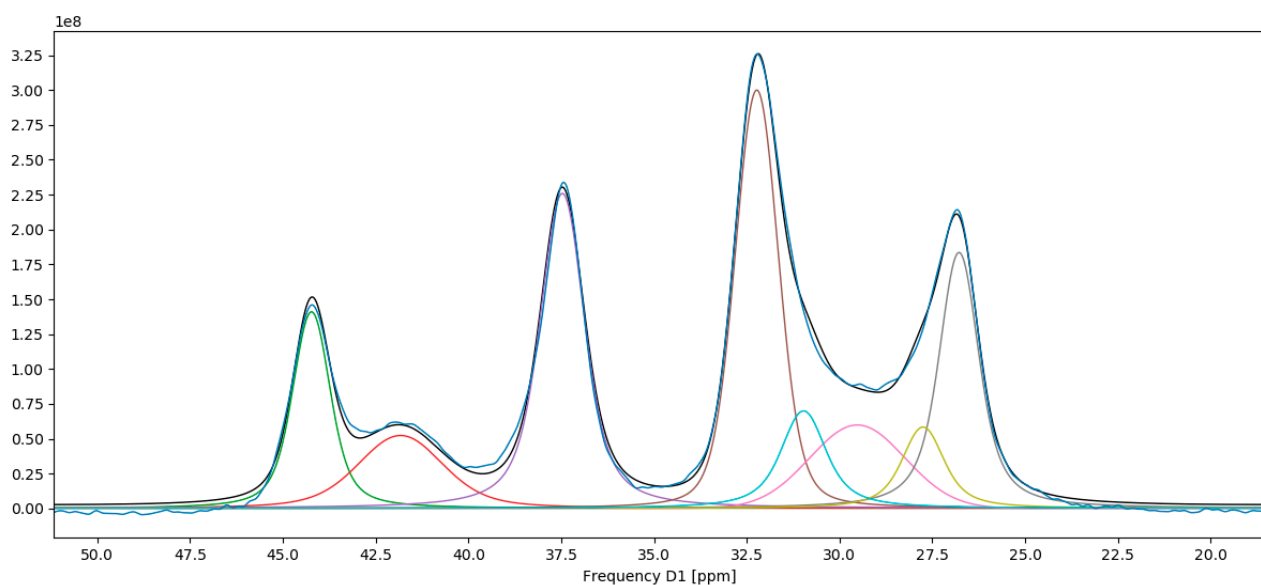


Position	Integral	Lorentz	Gauss
43.96	3.530e+10	89.98	*108.0
41.57	3.129e+10	161.2	*270.0
37.23	6.613e+10	104.6	*120.0
31.98	7.732e+10	52.03	*150.0
29.44	3.009e+10	1.268e-08	*380.0
26.59	5.219e+10	98.24	*100.0
27.67	1.363e+10	95.98	*100.0
30.92	1.878e+10	122.2	*100.0

Crystalline phase = 53.0%

Amorphous phase = 47.0%

Figure S4. Deconvoluted aliphatic region of ^{13}C CP/MAS NMR spectrum of the sample with 0.5 g.L^{-1} of PAF.



Position	Integral	Lorentz	Gauss
44.23	2.735e+10	70.94	*108.0
41.83	2.191e+10	121.9	*270.0
37.47	5.320e+10	95.15	*120.0
32.23	6.127e+10	42.35	*150.0
29.52	2.421e+10	6.524e-11	*380.0
26.78	3.971e+10	95.19	*100.0
27.75	1.347e+10	106.3	*100.0
30.97	1.760e+10	122.3	*100.0

Crystalline phase = 55.5%

Amorphous phase = 44.5%

Figure S5. Deconvoluted aliphatic region of ^{13}C CP/MAS NMR spectrum of the sample with 2 g.L^{-1} of PAF.