

## Supporting Information

**Table S1.** Microbial community composition at genus level in samples of different treatment groups (Top 11).

Treatments	Fir-Hea		Fir-Lig		Sec-Hea		Sec-Lig	
Samples	LJ-45h- 13C-1-10	LJ-45h- 13C-2-09	LJ-45h- 12C-1-14	LJ-45h- 12C-2-14	LJ-96h- 13C-1-09	LJ-96h- 13C-2-10	LJ-96h- 12C-1-15	LJ-96h- 12C-2-16
<i>Acinetobacter</i>	30.13%	42.08%	2.47%	1.36%	4.80%	4.89%	0.54%	7.25%
<i>Aquabacterium</i>	0.65%	1.01%	5.98%	5.71%	0.55%	0.27%	4.91%	3.43%
<i>Arenimonas</i>	0.72%	0.27%	1.04%	0.43%	1.89%	3.67%	1.54%	0.46%
<i>Dechloromonas</i>	0.96%	1.58%	10.27%	6.64%	1.04%	0.74%	9.40%	5.94%
<i>Hydrogenophaga</i>	2.37%	1.36%	0.47%	0.39%	4.62%	5.82%	1.85%	1.10%
<i>Novosphingobium</i>	5.31%	1.64%	6.16%	2.37%	2.44%	6.69%	4.19%	3.10%
<i>Others</i>	34.88%	24.05%	29.83%	35.51%	20.54%	20.51%	25.22%	31.02%
<i>Phenylobacterium</i>	0.80%	0.54%	2.32%	2.02%	0.57%	0.36%	1.59%	1.23%
<i>Prostheco bacter</i>	0.14%	0.05%	0.61%	0.20%	14.73%	17.96%	3.70%	1.97%
<i>Pseudomonas</i>	2.79%	1.65%	2.18%	0.92%	1.03%	1.19%	0.38%	0.06%
<i>Unassigned</i>	19.74%	23.13%	38.34%	44.07%	29.30%	24.08%	42.05%	43.43%
<i>Zoogloea</i>	1.49%	2.63%	0.32%	0.38%	18.50%	13.80%	4.62%	1.00%