



*Supplement of*

## **Soil-biodegradable plastic films do not decompose in a lake sediment over 9 months of incubation**

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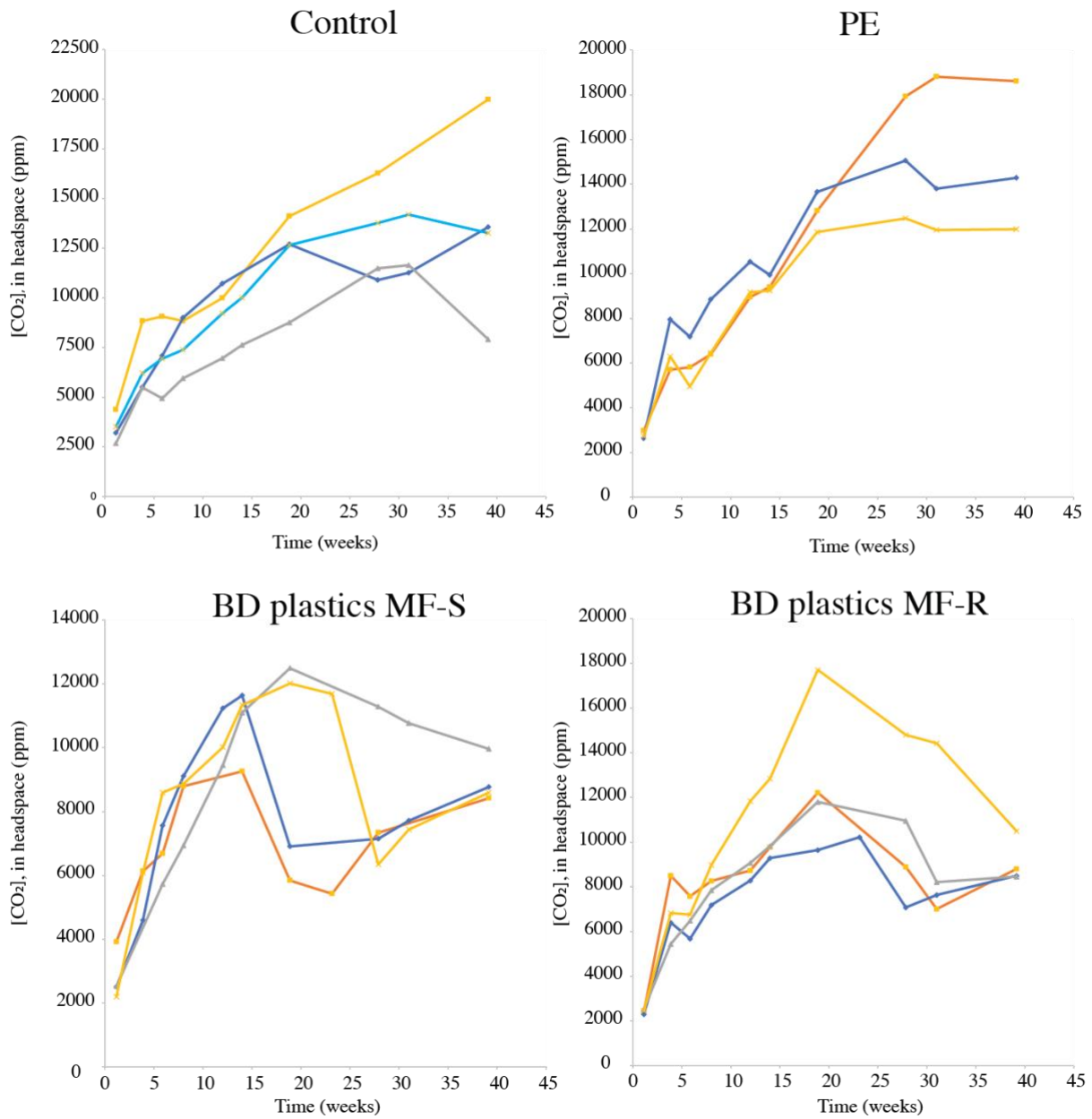
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**Fig. S1**

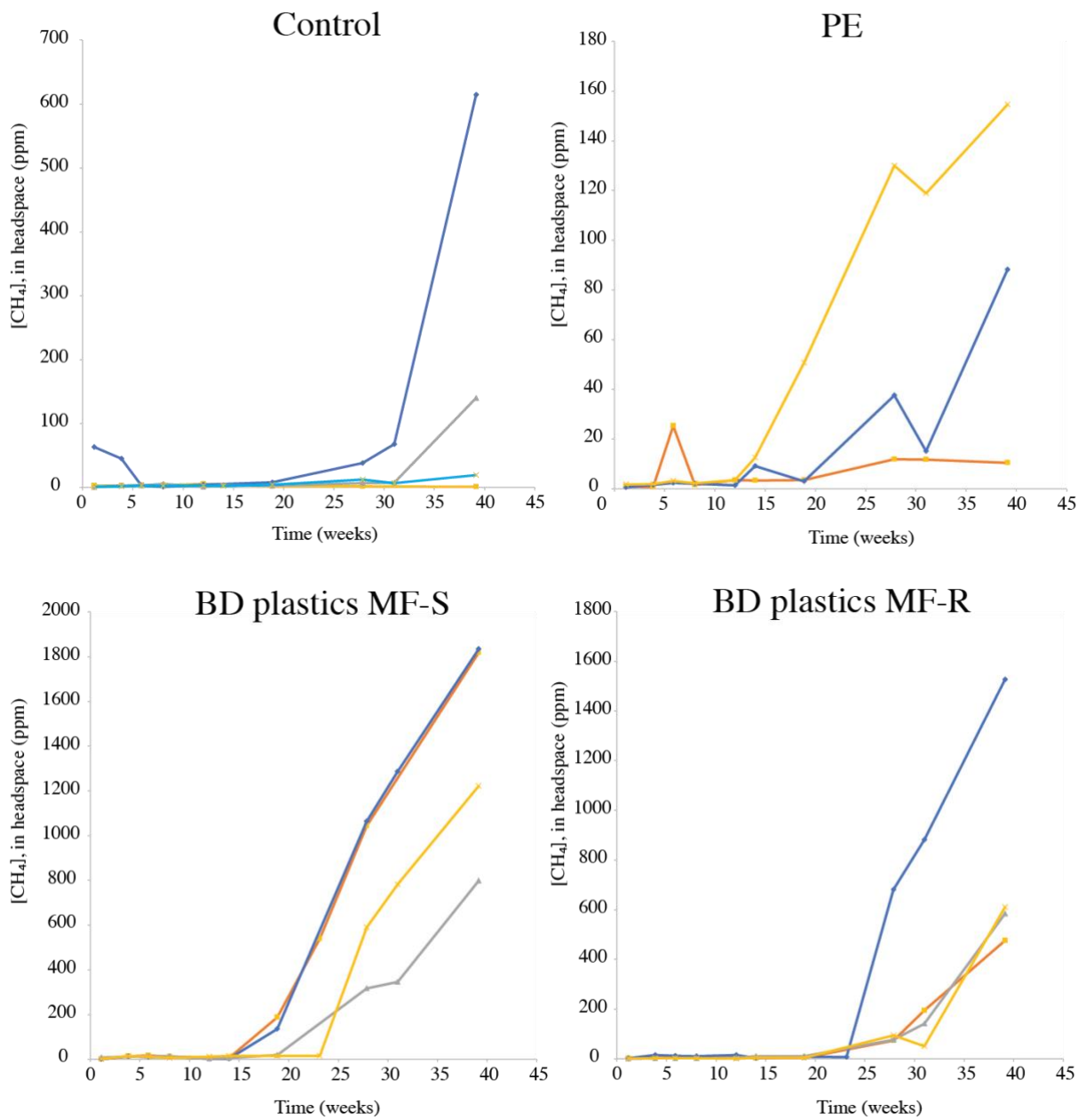
Weight of plastics at addition at start of experiment (mg)		
PE	1	304
	2	307
	3	294
	4	317
Biodegradable 'MF-R'	1	309
	2	307
	3	284
	4	296
Biodegradable 'MF-S'	1	305
	2	302
	3	324
	4	267



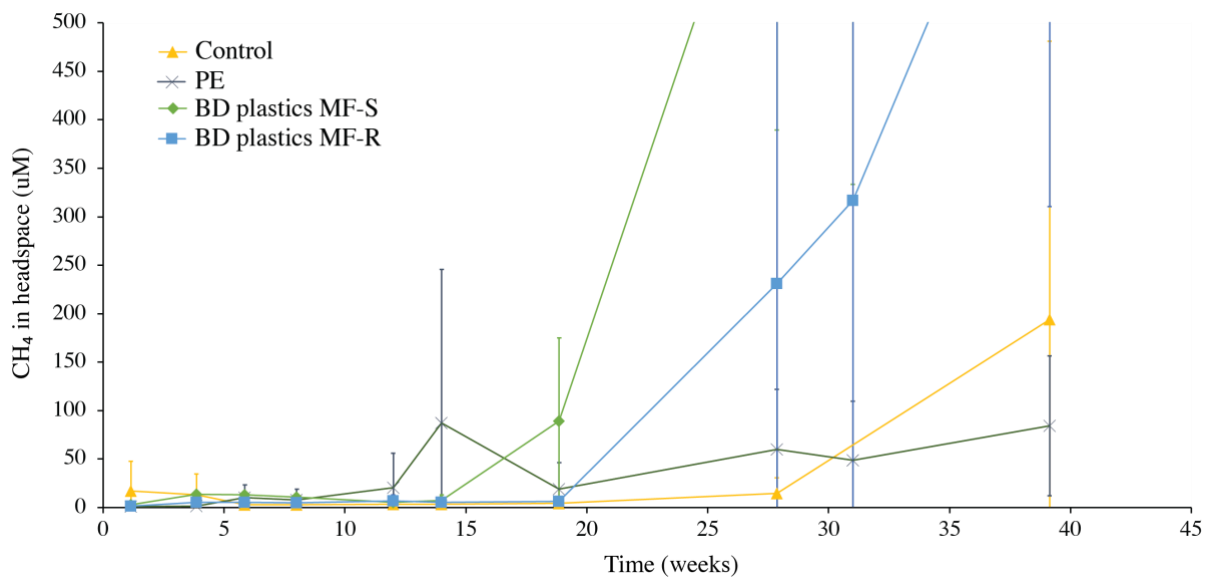
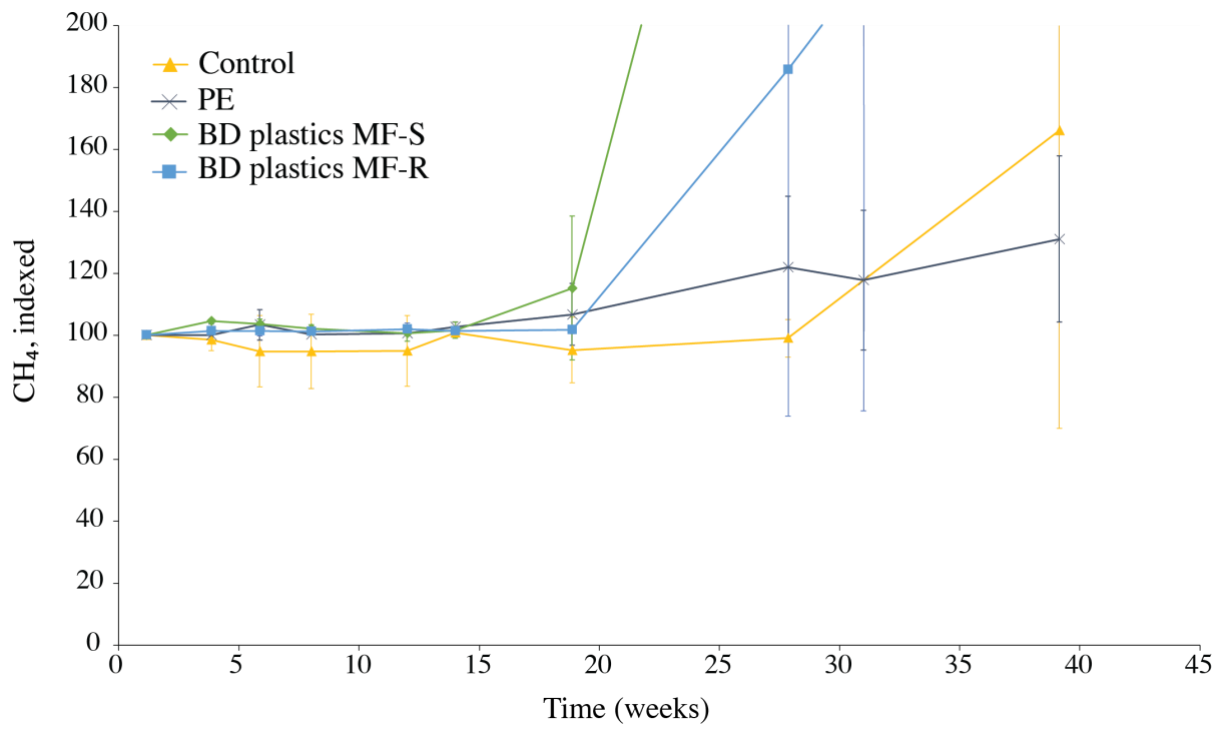
Example of cut shape in plastics, to increase degradation surface for microbes. The figure represents a top view of a folded piece of plastic, existing of 8 layers on top of each other, with several cuts made from two directions, represented by the white lines. The cuts were made to prevent the layers from stacking tightly together. The plastics for the visualization experiment were not folded, and therefore also not cut.



**Fig. S2.** Individual CO<sub>2</sub> concentrations in each of the sediment cores, in ppm in the core headspace. Note the different y-axes. One core of the PE treatment was discarded due to leakage.



**Fig. S3.** Individual CH<sub>4</sub> concentrations in each of the sediment cores, in  $\mu\text{M}$  in the core headspace. Note the different y-axes. One core of the PE treatment was discarded due to leakage.



**Fig. S4.** Excerpt of Fig. 3, notice the adapted y-axis.

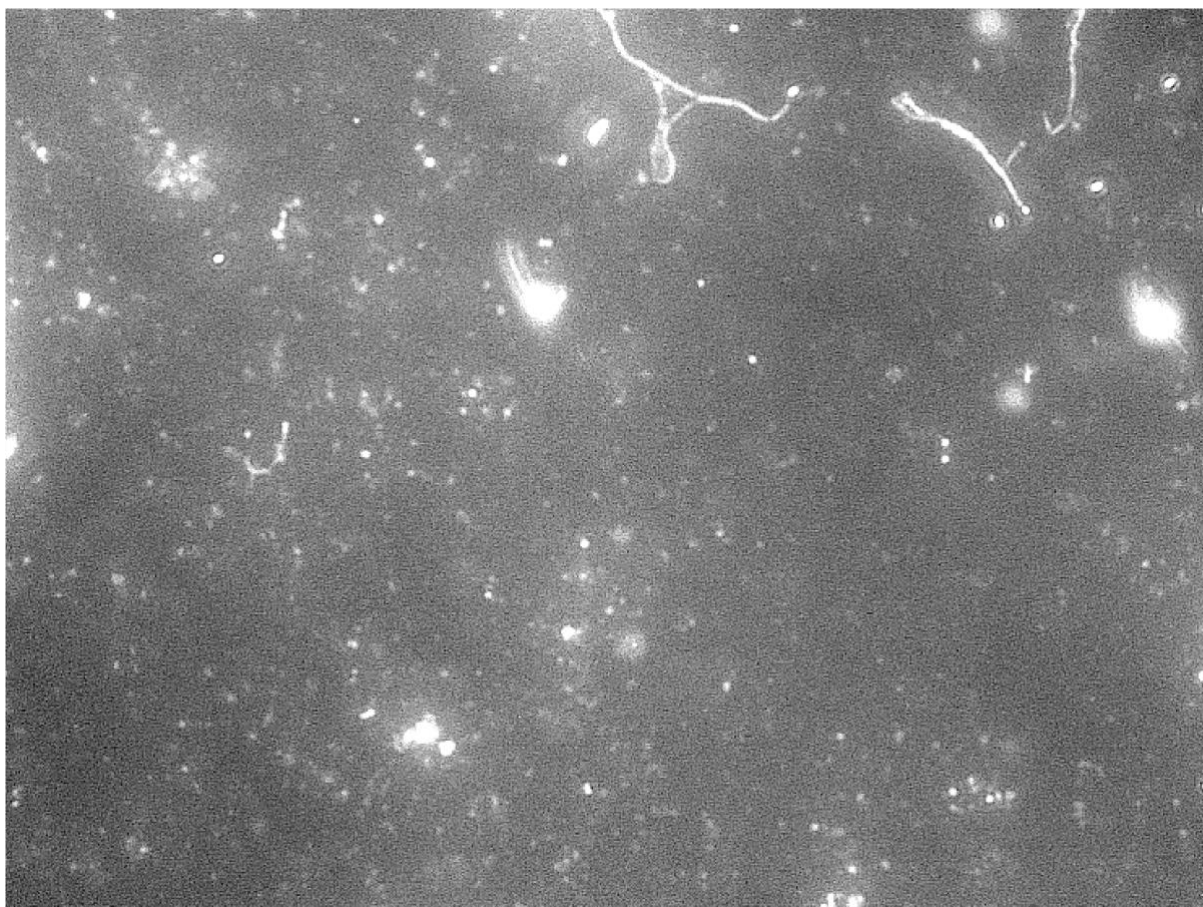


Fig. S5. Microscope visualization of plastics with DAPI stain, 40x magnification. Image shows plastics of the biodegradable type 'MF-R', after 40 weeks of incubation. Other plastics showed highly similar results.