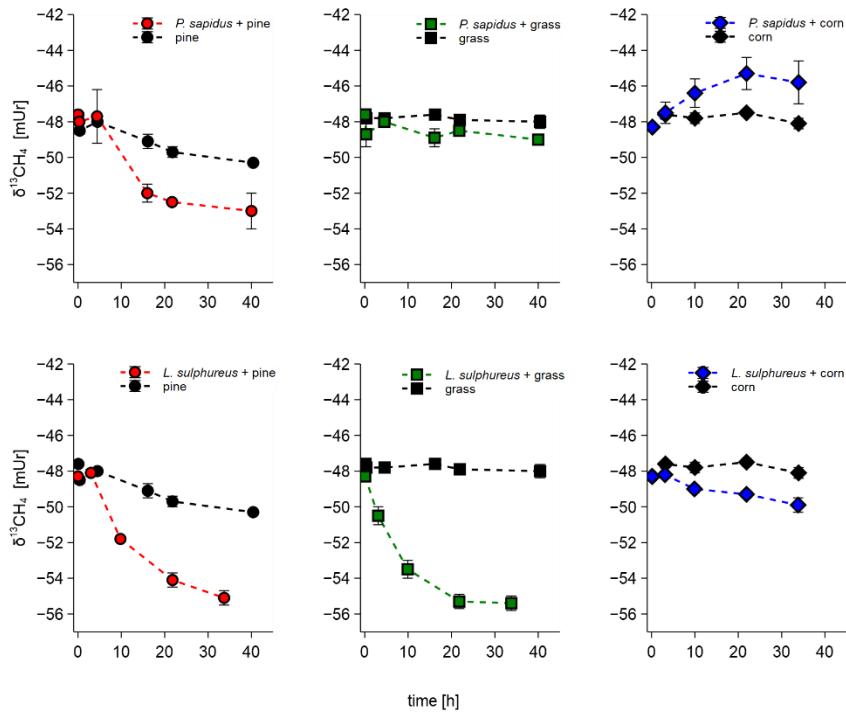


## Supplement



**Figure S1:** Stable carbon isotope values of CH<sub>4</sub> of *P. sapidus* (a-c) and *L. sulphureus* (d-f) grown on pine, grass, and corn. Values are presented as mean values with SD (n=3), except for  $\delta^{13}\text{CO}_2$  of *L. sulphureus* grown on corn (n=2).

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**Table S1:** Statistical data including p-values of two-way ANOVA analysis performed to test the significance of “species”, “substrate” effects on CH<sub>4</sub> and CO<sub>2</sub> emission rates, the CH<sub>4</sub>: CO<sub>2</sub> emission ratios,  $\delta^{13}\text{C-CH}_4$  and  $\delta^{13}\text{C-CO}_2$  source signatures by *P. sapidus* and *L. sulphureus*.

		p-value	f-value
<b>CH<sub>4</sub> emission rates</b>	Species effect	0.03	6.5
	Substrate effect	< 0.001	14
<b>CO<sub>2</sub> emission rates</b>	Species effect	< 0.001	53
	Substrate effect	< 0.001	75
<b>CH<sub>4</sub>: CO<sub>2</sub> emission ratio</b>	Species effect	0.47	0.55

	Substrate effect	0.07	3.4
$\delta^{13}\text{C-CH}_4$	Species effect	< 0.001	100
	Substrate effect	< 0.001	147
$\delta^{13}\text{C-CO}_2$	Species effect	0.008	10
	Substrate effect	< 0.001	742