Supplementary Materials: Figure S1: All ceramic cylinder membranes tested in the study, Figure S2: Photos of experimental set-up (left) and individual MFCs (right), Figure S3: Temporal change of peak power of test ceramics, Table S1: Chemical compositions and physical properties of tested ceramic materials, Table S2: Percentage relative volume of pores for test ceramics.

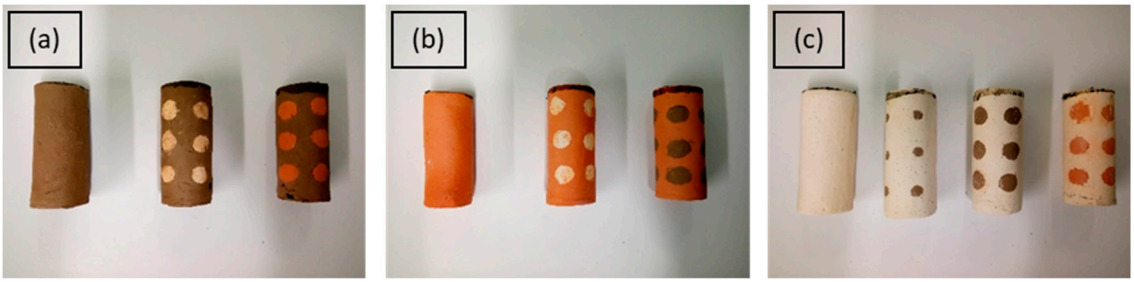

Figure S1. All ceramic cylinder membranes tested in the study: brown clay-based ceramics (**a**), red clay-based ceramics (**b**), and white clay-based ceramics (**c**). The second ceramic in (**c**), white based with smaller brown spots, was not used in the study.

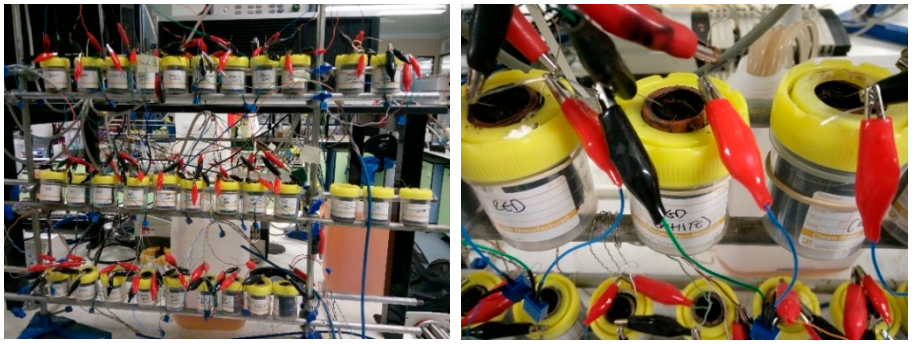

Figure S2. Photos of experimental set-up (**left**) and individual MFCs (**right**).

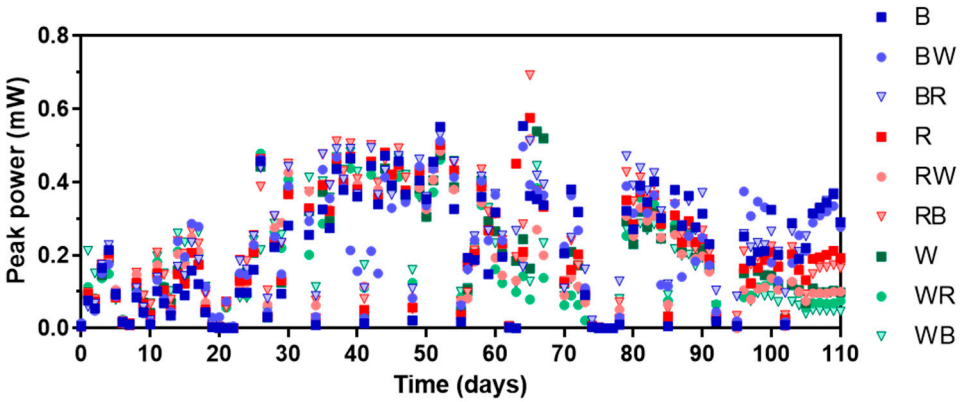

Figure S3. Temporal change of peak power of test ceramics. Each data point represents average value from triplicates of each ceramic type.

Table S1. Chemical compositions and physical properties of tested ceramic materials[1)].

		Brown	Red	White
Product number		No. 366	No. 364	No. 264
Chemical compositions (%)	SiO_2	64.5	68.9	72.0
	Al_2O_3	20.0	20.5	22.0
	TiO_2	1.3	1.3	1.8
	Fe_2O_3	6.5	6.0	1.0
	CaO	0.3	0.3	0.3
	MgO	0.4	0.4	0.2
	K_2O	2.2	2.5	2.3
	Na_2O	0.1	0.1	0.3
	MnO	4.8	-	-
Firing at 1070 (°C)	Firing colour	Brown-black	Light red	White
	Firing shrinkage (%)	5	5	3
	Water absorption (%)	4	6	8
Note		25 % chammotte 0-0.5 mm		

[1)]data from the manufacturer, Georg & Schneider

Table S2. Percentage relative volume of pores for test ceramics[1)].

	% Relative volume Pore radius ranges				
	1-10 nm	10-100 nm	100-1,000 nm	1-10 μm	10-100 μm
Brown	0.00	74.47	23.6	0.18	1.74
Red	1.19	92.04	5.44	0.66	0.66
White	3.37	94.49	1.57	0.22	0.34

[1)]determined by mercury intrusion method