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Supplement of

Exploring microscale heterogeneity as a driver of biogeochemical transformations and gas transport in peat

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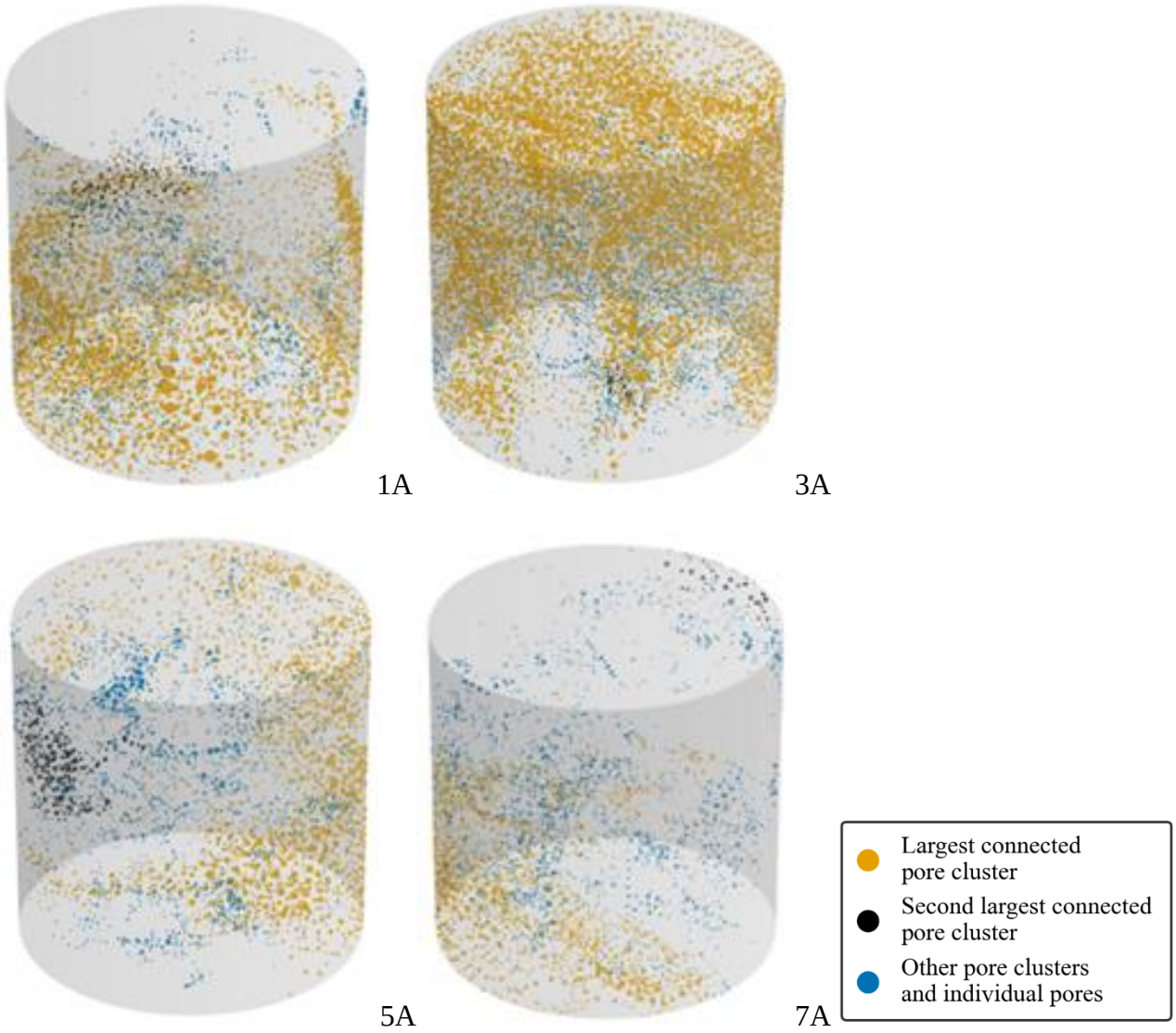

Fig S1. The pore system of the final image domain / network domain of the sample. Largest (= highest number of pores) connected pore cluster (= the pore network) in brown; second largest connected pore cluster in black; other pore clusters + individual pores in blue. [he illustration of the second largest cluster gives some indication of the connectivity of the blue pores. The marker sizes show the relative sizes of the pores (in comparison to each other); otherwise, the pore sizes are not to scale and the image is for illustrative purposes only.

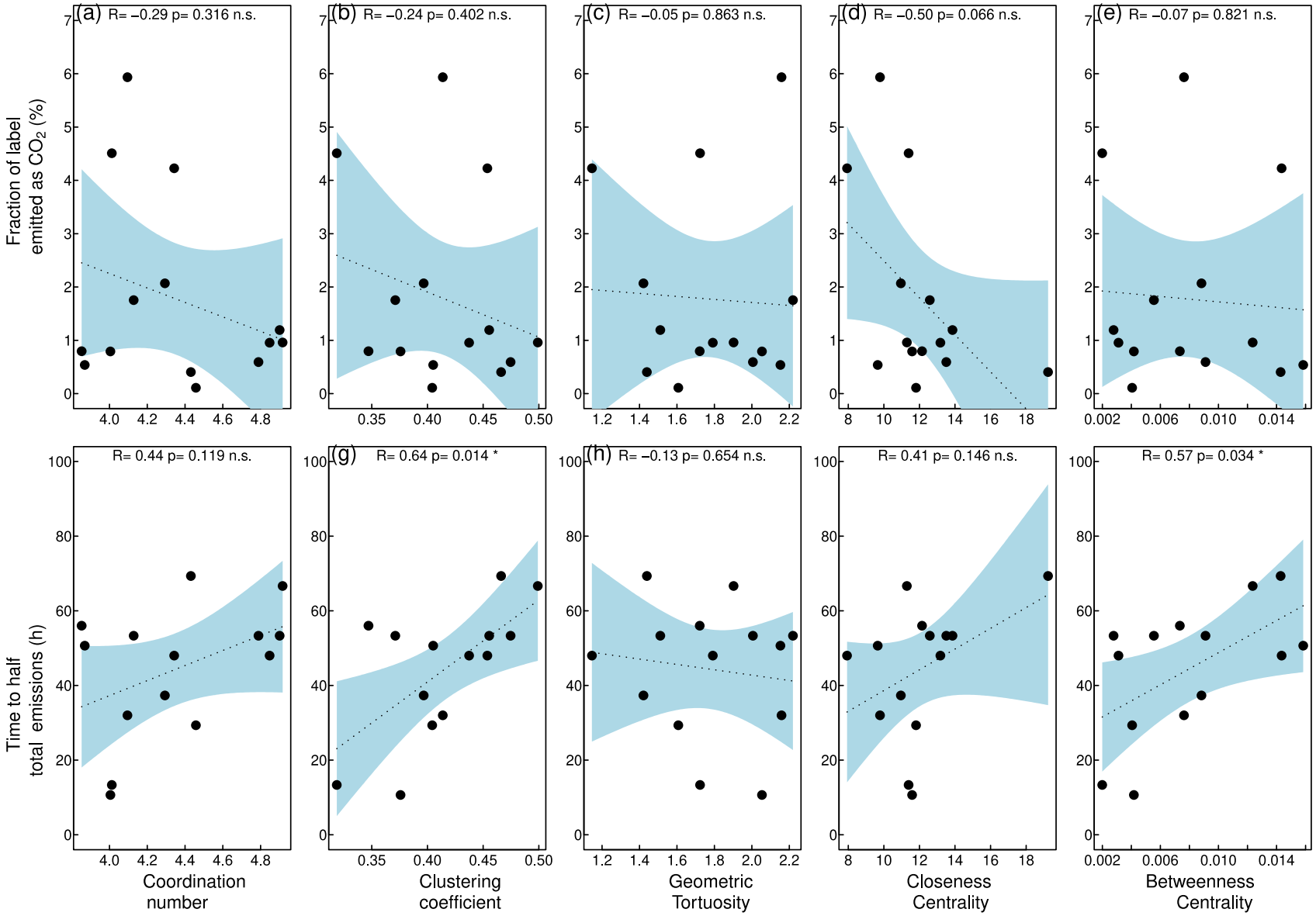

Figure S2. Correlation between network metrics and emission characteristics (fraction of label emitted as CO_2, lag of CO_2 emission, time to half of total emission).

Table S1. Correlation coefficients between air filled porosity, network metrics, and

	air-filled por. 0-5cm	air-filled por. 0-8cm	Coord. numb.	Clust. coef.	Geom tort.	Closen. centr.	Betw. centr.	Label-der. CO_2 2cm	Label-der. CO_2 5cm	Label-der. CO_2 8cm	t1/2 2cm	t1/2 5cm	t1/2 8cm
air-filled porosity 0-2cm	0.90	0.73	0.14	-0.31	0.15	0.01	-0.70	-0.09	0.49	0.43	-0.79	-0.71	-0.33
air-filled porosity 0-5cm		0.88	0.23	-0.27	-0.08	0.05	-0.78	-0.15	0.29	0.27	-0.73	-0.83	-0.36
air-filled porosity 0-8cm			-0.01	-0.49	0.03	-0.01	-0.88	-0.34	-0.06	0.15	-0.47	-0.75	-0.65
Coordination number				0.80	-0.26	0.33	-0.08	-0.18	0.41	-0.28	-0.29	-0.24	0.48
Clustering coefficient					-0.21	0.24	0.48	0.13	0.36	-0.23	-0.02	0.18	0.66
Geometric tortuosity						-0.11	-0.13	-0.04	0.09	-0.06	-0.08	0.16	-0.13
Closeness centrality							-0.07	-0.23	0.19	-0.49	0.07	-0.22	0.38
Betweenness centrality								0.62	0.01	-0.06	0.41	0.71	0.56
Label-derived CO_2 emitted after 2cm injection									0.34	0.28	-0.22	0.21	0.43
Label-derived CO_2 emitted after 5cm injection										0.46	-0.58	-0.35	0.32
Label-derived CO_2 emitted after 8cm injection											-0.42	-0.22	-0.38
t1/2 after 2cm injection												0.71	-0.06
t1/2 after 5cm injection													0.26