

Supplementary material

Table S1. *F*- and *p*-values of linear mixed-effects model analysis focusing on the effects of nitrogen (N) and sulfur (S) addition on remaining mass, remaining lignin, and remaining cellulose.

	d.f.	<i>F</i> -value	<i>p</i> -value
Remaining mass (%)			
N effect (NE)	1	40.8	0.000
S effect (SE)	1	454	0.000
Time	11	17185	0.000
NE × SE	1	2.26	0.158
NE × Time	11	36.8	0.000
SE × Time	11	137	0.000
NE × SE × Time	11	102	0.000
Remaining lignin (%)			
N effect (NE)	1	21.5	0.001
S effect (SE)	1	325	0.000
Time	11	58895	0.000
NE × SE	1	38.2	0.000
NE × Time	11	553	0.000
SE × Time	11	862	0.000
NE × SE × Time	11	1137	0.000
Remaining cellulose (%)			
N effect (NE)	1	29.4	0.000
S effect (SE)	1	42.2	0.000
Time	11	8052	0.000
NE × SE	1	10.4	0.007
NE × Time	11	131	0.000
SE × Time	11	168	0.000
NE × SE × Time	11	53.2	0.000

Table S2. *F*- and *p*-values of linear mixed-effects model analysis focusing on the effects of nitrogen (N) and sulfur (S) addition on remaining carbon (C), remaining N, and remaining phosphorus (P), litter C/N ratio, litter C/P ratio, and litter N/P ratio.

	d.f.	F-value	p-value		d.f.	F-value	p-value
Remaining C (%)				Litter C/N ratio			
N effect (NE)	1	159	0.000	N effect (NE)	1	160	0.000
S effect (SE)	1	430	0.000	S effect (SE)	1	674	0.000
Time	11	9597	0.000	Time	11	125	0.000
NE × SE	1	5.58	0.036	NE × SE	1	155	0.000
NE × Time	11	63.1	0.000	NE × Time	11	8.42	0.000
SE × Time	11	66.6	0.000	SE × Time	11	23.6	0.000
NE × SE × Time	11	27.8	0.000	NE × SE × Time	11	12.8	0.000
Remaining N (%)				Litter C/P ratio			
N effect (NE)	1	137	0.000	N effect (NE)	1	17.7	0.001
S effect (SE)	1	571	0.000	S effect (SE)	1	11.2	0.006
Time	11	1557	0.000	Time	11	628	0.000
NE × SE	1	22.6	0.000	NE × SE	1	1336	0.000
NE × Time	11	4.89	0.000	NE × Time	11	86.7	0.000
SE × Time	11	48.6	0.000	SE × Time	11	73.8	0.000
NE × SE × Time	11	12.5	0.000	NE × SE × Time	11	97.7	0.000
Remaining P (%)				Litter N/P ratio			
N effect (NE)	1	91.7	0.000	N effect (NE)	1	69.9	0.000
S effect (SE)	1	13.5	0.003	S effect (SE)	1	268	0.000
Time	11	2266	0.000	Time	11	171	0.000
NE × SE	1	2426	0.000	NE × SE	1	16.0	0.002
NE × Time	11	44.7	0.000	NE × Time	11	9.48	0.000
SE × Time	11	75.8	0.000	SE × Time	11	42.7	0.000
NE × SE × Time	11	136	0.000	NE × SE × Time	11	11.4	0.000

Table S3. The soil pH under different treatments. Values are the averages of three plot replicates $\pm$ standard deviations. Different lowercase letters denote significant differences between different treatments at each sampling time based on ANOVA ($p < 0.05$; Fisher's LSD test adjusted using the Bonferroni correction). CK, no added N or S; +N, added N but no added S; +S, added S but no added N; and +NS, added N and S.

Treatments	October 2013	April 2014	October 2014	April 2015
CK	4.49 $\pm$ 0.009 a	4.56 $\pm$ 0.057 a	4.43 $\pm$ 0.014 a	4.52 $\pm$ 0.014 a
+N	4.41 $\pm$ 0.005 b	4.46 $\pm$ 0.071 ab	4.31 $\pm$ 0.005 b	4.35 $\pm$ 0.028 b
+S	4.42 $\pm$ 0.009 b	4.43 $\pm$ 0.033 ab	4.25 $\pm$ 0.016 c	4.30 $\pm$ 0.011 b
+NS	4.38 $\pm$ 0.005 c	4.40 $\pm$ 0.016 b	4.15 $\pm$ 0.005 d	4.23 $\pm$ 0.025 c
<i>p</i> -values				
N effect	<0.001	0.054	<0.001	<0.001
S effect	<0.001	<0.050	<0.001	<0.001
N $\times$ S effect	<0.050	0.280	0.272	<0.050