Optimal thermolysis conditions for soil carbon storage upon plant residue burning
: modelling the trade-off between thermal decomposition and subsequent biodegradation

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(3 pages, 3 figures)
Fig. S1. Cumulative C loss by biodegradation during 295-day aerobic incubation of thermally altered residues. The abbreviations in the legends, “S”, “H”, “a”, and “l” represent “straw”, “husk”, “ambient O_2 condition”, and “low O_2 condition”, respectively. The numerical values following the abbreviations show the thermolysis temperatures. The error bars represent standard deviations of the three replicates for each residue.

Fig. S2. Scattered plot of H/C molar ratios against O/C (van Krevelen diagram) of thermally altered residues. See Fig. S1 for the abbreviations (Sa, Sl, Ha, Hi). The symbols with circles represent the residues used for subsequent incubation experiment. Major compound groups based on Hammes et al. (2007) are shown in the diagram as gray zones.
Fig. S3. Relationship of biodegradability against fractions of O-alkyl-C (blue diamond) and aromatic-C (red square). The biodegradability is shown as the cumulative CO$_2$ respired in 295-day incubation experiment (Fig. S1). The error bars represent standard deviation (n=3).

Reference