

Table S1: Pyrolysis related data

	Pyrolysis T (°C)	mQuartz boat(g)	mdry leaves(g)	mQuartz boat+biochar(g)	mbiochar(g)	Biochar yield%
Camphor tree	300	73.735	10.26	79.353	5.618	54.76%
	300	80.846	10.436	86.344	5.498	52.68%
	300	72.113	11.339	78.43	6.317	55.71%
	400	69.099	11.405	73.635	4.536	39.77%
	400	72.139	10.843	76.323	4.184	38.59%
	400	69.106	10.274	73.206	4.1	39.91%
	500	69.039	11.639	73.023	3.984	34.23%
	500	68.904	10.573	72.341	3.437	32.51%
	500	75.431	10.436	78.713	3.282	31.45%
	300	76.274	10.032	81.481	5.207	51.90%
Plane tree	300	68.892	9.894	74.231	5.339	53.96%
	300	72.105	10.133	77.362	5.257	51.88%
	400	69.533	10.428	72.412	2.879	27.61%
	400	68.912	10.593	71.373	2.461	23.23%
	400	70.792	10.936	73.815	3.023	27.64%
	500	72.523	11.422	75.556	3.033	26.55%
	500	69.621	11.582	72.21	2.589	22.35%
	500	72.537	10.677	75.561	3.024	28.32%
	300	69.134	10.465	74.552	5.418	51.77%
	300	68.953	10.372	74.033	5.08	48.98%
Ginkgo biloba tree	300	70.081	10.885	75.538	5.457	50.13%
	400	70.521	11.183	74.766	4.245	37.96%
	400	73.897	10.721	77.951	4.054	37.81%
	400	72.091	10.425	76.192	4.101	39.34%
	500	75.587	12.453	78.758	3.171	25.46%
	500	76.905	11.972	79.654	2.749	22.96%
	500	71.896	11.853	74.834	2.938	24.79%
	300	74.265	8.257	78.09	3.825	46.32%
	300	75.714	8.981	79.713	3.999	44.53%
	300	68.892	9.523	73.419	4.527	47.54%
<i>Sapindus mukorossi</i>	400	75.384	14.133	80.161	4.777	33.80%
	400	74.841	12.117	78.914	4.073	33.61%
	400	75.116	11.093	79.012	3.896	35.12%
	500	75.346	11.929	78.799	3.453	28.95%
	500	74.433	10.584	77.357	2.924	27.63%
	500	69.951	10.777	72.957	3.006	27.89%
<i>Liquidam bar formosan</i>	300	80.863	9.1903	86.768	5.905	64.25%
	300	75.439	9.378	81.427	5.988	63.85%
	300	70.676	9.985	77.142	6.466	64.76%

<i>a</i>	400	68.878	10.599	73.8973	5.019	47.36%
	400	69.903	10.82	75.087	5.184	47.91%
	400	69.997	10.031	74.489	4.492	44.78%
	500	67.315	9.131	71.143	3.828	41.93%
	500	65.839	10.564	70.118	4.279	40.51%
	500	69.437	10.588	73.699	4.262	40.25%
	300	67.22	10.093	71.972	4.752	47.08%
	300	69.047	10.259	73.67	4.623	45.06%
	300	69.139	10.298	73.919	4.78	46.42%
	400	72.253	10.837	76.015	3.762	34.71%
	400	75.444	10.433	78.878	3.434	32.91%
	400	75.615	10.612	78.57	2.955	27.85%
	500	74.739	11.301	77.397	2.658	23.52%
	500	73.722	10.284	75.932	2.21	21.49%
	500	75.467	10.443	77.593	2.126	20.36%

Table S2: Sensitivity analysis of M_i and P_t values under different models

Scenarios	M_i (tons/a)	Rel change vs. baseline (%)	P_t (300 °C, tons/a)	Rel change vs. baseline (%)
Conservative scenario	7249.37	-6.01%	2134.07	-6.11%
Baseline	7713.29	/	2273.03	/
Optimistic scenario	8369.31	8.51%	2470.73	8.70%