Supporting Information

Facile Synthesis of Phosphorus and Cobalt Co-Doped Graphitic Carbon Nitride for Fire and Smoke Suppressions of Polylactide Composite

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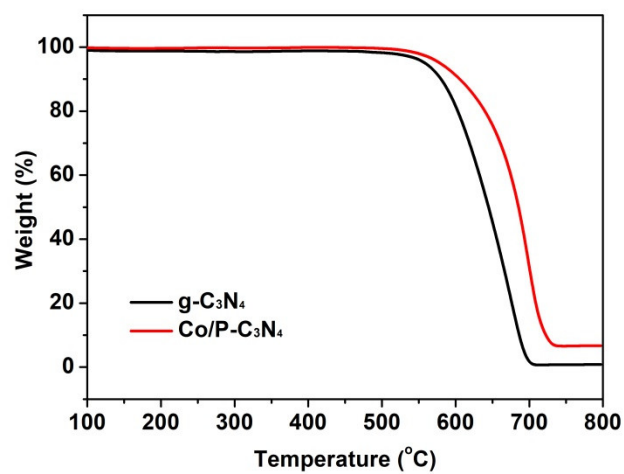* Correspondence: bin.yu@usq.edu.au (B.Y.); weiwu39@scut.edu.cn (W.W.)

Figure S1. TGA curves of g-C_3N_4 and Co-C_3N_4 at a heating rate of 10 ^{o}C/min under nitrogen atmosphere.

Table S1 Deconvoluted results of the XPS N 1s spectra of g-C$_3$N$_4$ and Co/P-C$_3$N$_4$.

Samples	Peaks	Binding energy (eV)	Area	Atomic percentage (%)	FWHM(eV)
	1	398.6	2531.9	49.8	1.285
g-C$_3$N$_4$	2	399.2	1423.9	28.0	1.401
	3	400.6	1127.2	22.2	1.707
	1	398.3	8531.7	61.8	1.134
Co/P-C$_3$N$_4$	2	399.4	4080.3	29.6	1.656
	3	400.7	1192.1	8.6	1.118

Table S2. XPS Fitting results of char residues.

Samples	Elements	Peaks	Binding energy (eV)	Atomic percentage (%)	FWHM(eV)
g-C$_3$N$_4$-2%	C 1s	1	283.9	17.8	1.158
		2	284.8	11.8	1.568
		3	287.4	70.4	1.273
	N 1s	1	397.7	53.2	1.055
		2	398.5	36.4	1.541
		3	400.0	10.4	1.228
Co/P-C$_3$N$_4$-2%,	C 1s	1	283.8	7.1	0.938
		2	284.4	12.9	1.458
		3	287.6	79.0	1.258
	N 1s	1	397.9	65.7	1.149
		2	398.9	23.6	1.405
		3	400.3	10.6	1.214
	P 2p	1	132.1	42.78	1.377
		2	132.8	37.77	1.185
		3	133.8	19.45	1.298