

**Fabrication and origin of flame retarding glass fiber/bismaleimide resin
composites with high thermal stability, high mechanical property, low dielectric
constant and loss for high frequency copper clad laminates**

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Table S1 Fiber content for composites

Composite	Fibre content (wt%)
GF/BD	66.8
aPHSi-g-GF/BD	67.6
GF/5aPSiBD	67.1
GF/10aPSiBD	67.6
GF/15aPSiBD	68.1
aPHSi-g-GF/5aPSiBD	68.2
aPHSi-g-GF/10aPSiBD	68.3
aPHSi-g-GF/15aPSiBD	68.0

Table S2 Characteristic data from TG analyses in a N₂ atmosphere

Composite	Heating rate (°C/min)	T_{di} (°C)	T_{max} (°C)	Y_c at 800 °C (wt%)
GF/BD	10	431.1	441.7	81.1
	20	446.7	460.0	83.1
	30	453.4	468.8	83.7
	40	462.2	478.1	84.3
aPHSi-g-GF/BD	10	435.9	448.0	83.1
	20	450.0	465.6	84.3
	30	458.8	472.9	83.9
	40	465.4	481.9	84.6
GF/5aPSiBD	10	443.8	448.4	83.3
	20	458.1	457.3	84.3
	30	462.8	474.2	84.5
	40	468.9	496.3	85.8
aPHSi-g-GF/5aPSiBD	10	444.2	447.3	86.9
	20	451.0	463.5	87.2
	30	464.9	471.5	87.3
	40	473.5	480.8	88.5

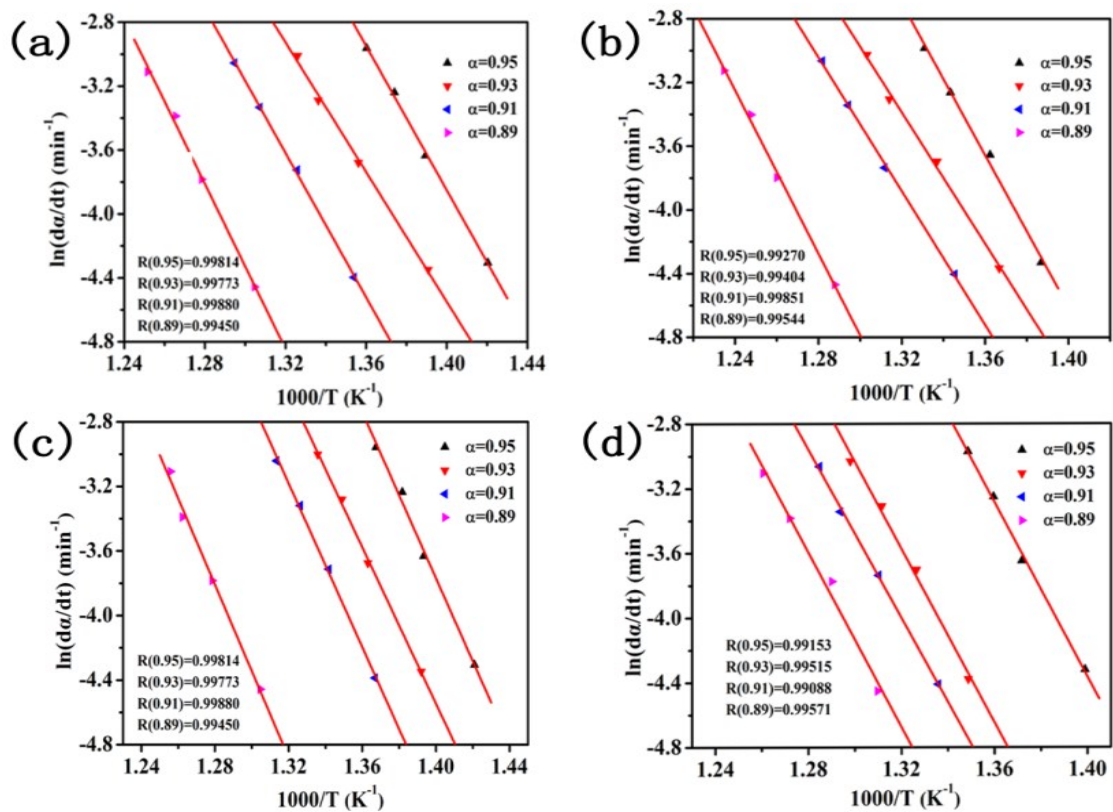


Fig. S1 The Friedman graphs for composites (a: GF/BD, b: aPHSi-g-GF/BD, c: GF/5aPSiBD and aPHSi-g-GF/5aPSiBD): $\ln(da/dt)$ versus $1000/T$