Supporting Information

Optimized dielectric performance in bismaleimide-triazine resin via dual-modification strategy for high-frequency electronic packaging

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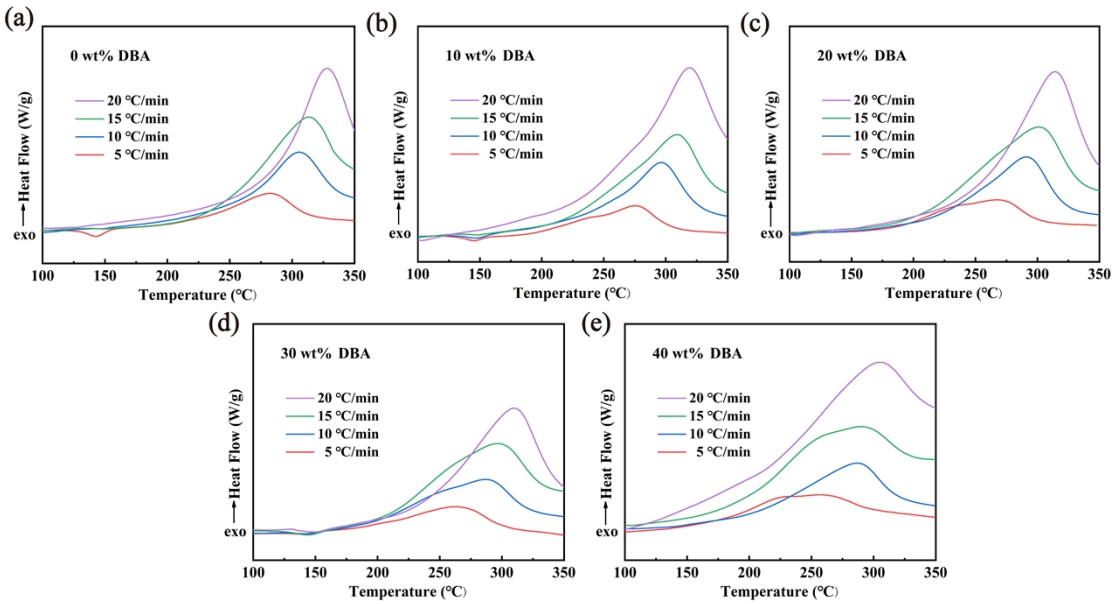

Fig. S1 DSC curves of modified BT resin with varying DBA contents at various heating rates: (a) 0 wt%, (b) 10 wt%, (c) 20 wt%, (d) 30 wt%, (e) 40 wt%.

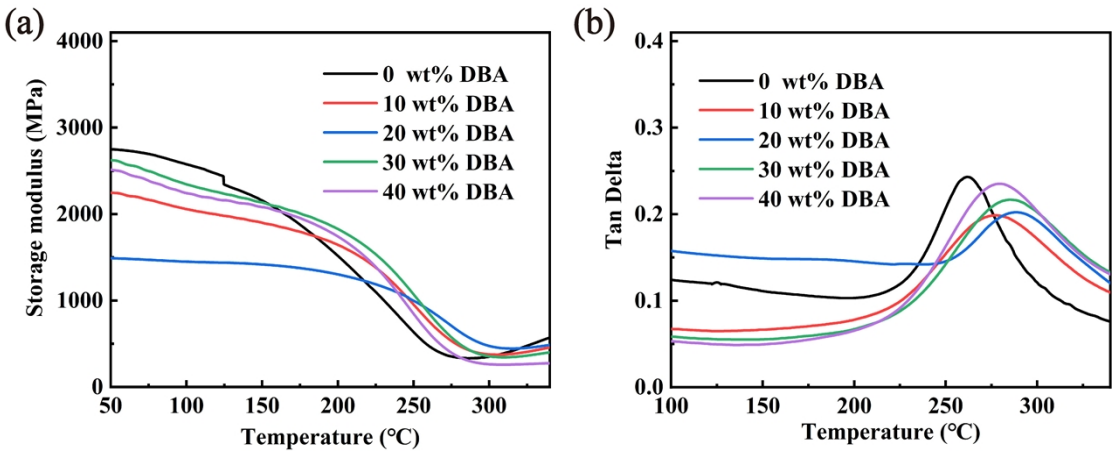

Fig. S2 DMA curve of pristine BT and modified BT resin with varying DBA contents.

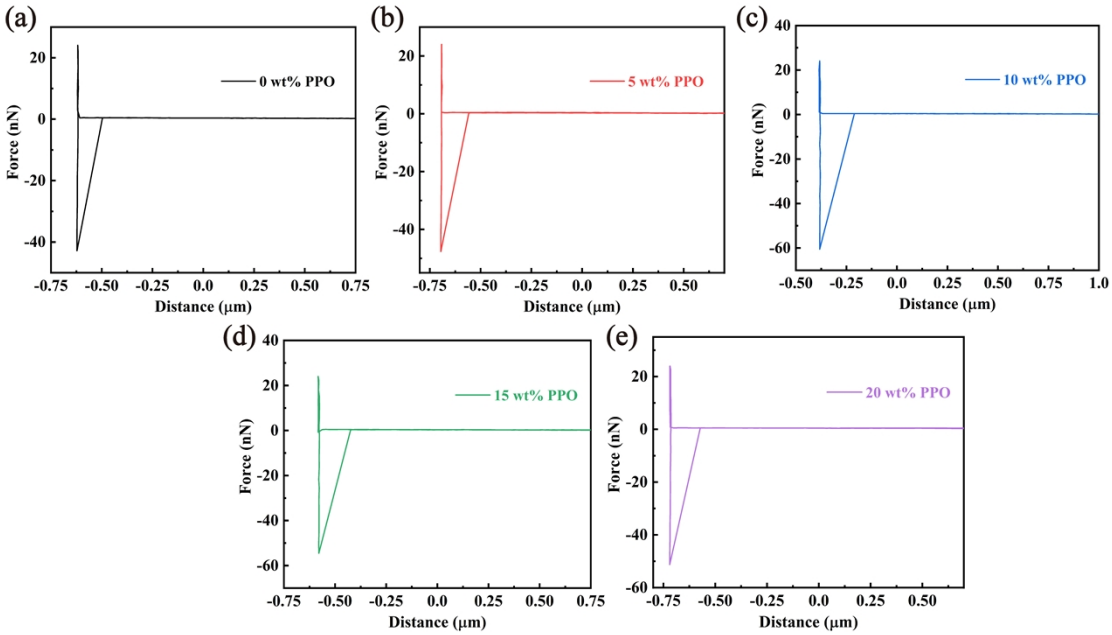

Fig. S3 Force-distance curves of modified D-BT resin with varying PPO contents: (a) 0 wt%, (b) 5 wt%, (c) 10 wt%, (d) 15 wt%, (e) 20 wt%.

Table S1 Comparison of the dielectric properties of the 10 wt% PPO-modified D-BT resin prepared in this work with those of recently reported advanced BMI or CE-based resin systems.

Samples	Frequency	Dielectric constant	Dielectric loss	Ref
PPO/DBA-BT	10 GHz	2.71	0.0041	This work
QF/4-PSN/CE-EP	10 GHz	3.16	0.0072	58
HSiEP/BADCy	10 GHz	2.59	0.0062	40
4 wt% F-PEI	15.2 GHz	2.96	0.009	46
BDP resins	1 GHz	2.9	0.0058	57
CE/2EGEP-POSS	10 GHz	2.49	0.008	45
M2-modified BMIs	10 GHz	2.89	0.0061	56
BDM-F	10.5 GHz	3.06	0.0078	52
PPE-BMI3	103 GHz	2.58	0.006	55
1,2-PB/SBS/EPDM	3-15 GHz	2.36	0.0054	17
DPDP1.4/CE	1 GHz	2.71	0.005	47
PEI-modified CE resin	5.4-18 GHz	3.3	0.01	51
TBMI	10 GHz	2.78	0.005	53
6FBMP/6FDABPA	10 GHz	2.88	0.009	50
Modified BMI	10 GHz	3.1	0.0089	49
BCE	10 GHz	2.8	0.007	48
PI/BADCy	10.2 GHz	3.15	0.004	54
AEAF-co-BADCy	10 GHz	2.49	0.0048	44
7.5 wt% BMI-HPPs/CE	16 GHz	2.46	0.006	59