Supplementary information

A Tetrafunctional yet Low-Viscosity Glycidylamine Modifier for DGEBA Epoxy Resins

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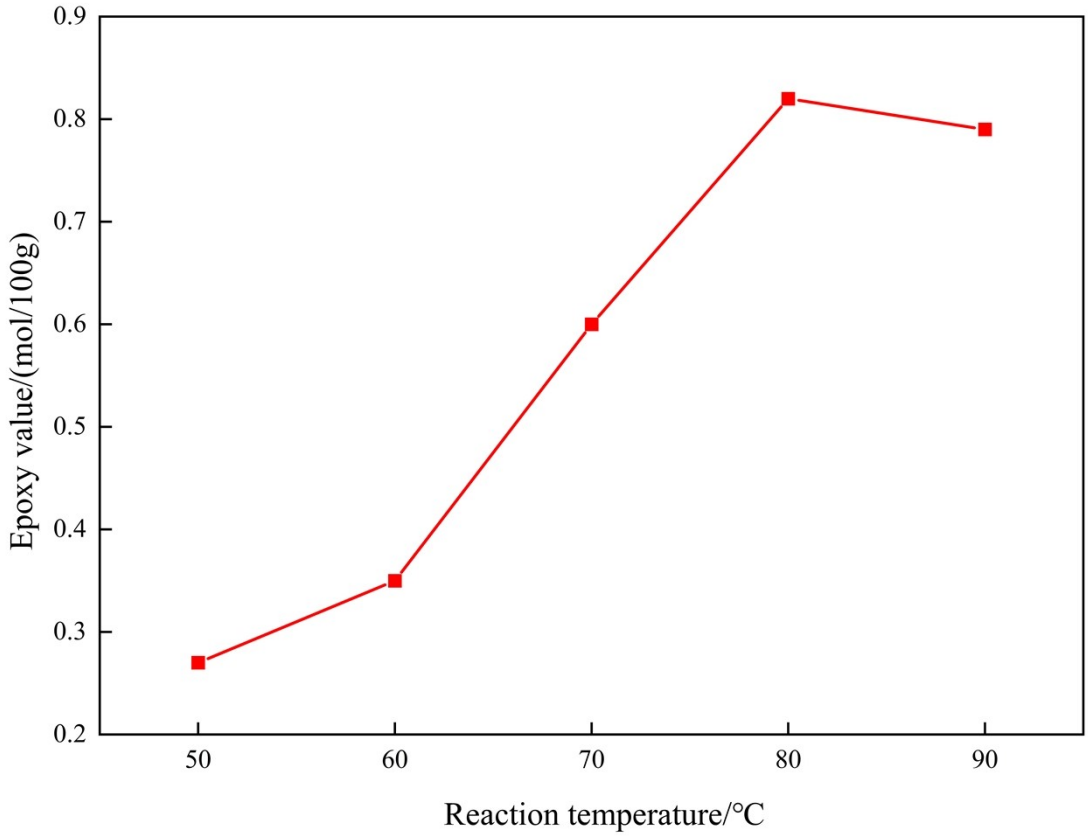

Fig. S1. Effect of reaction temperature on the epoxy value of synthesized DETGA.

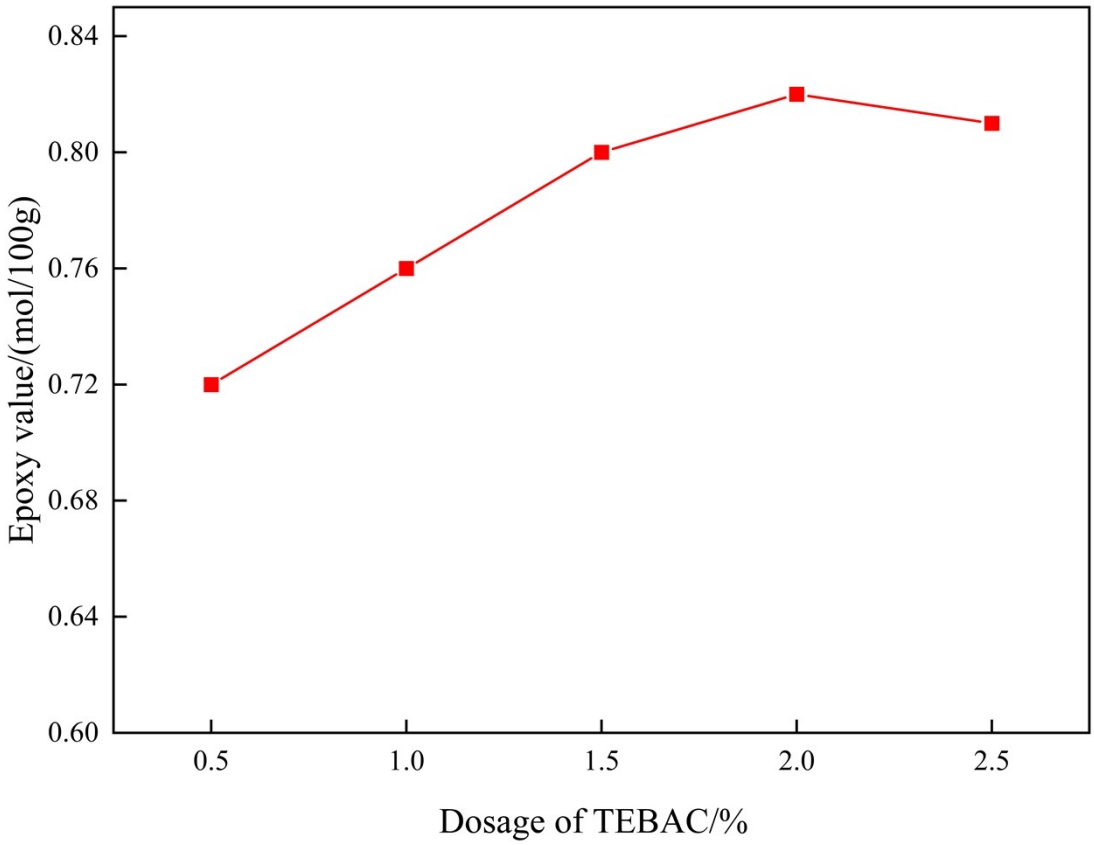

Fig. S2. Effect of TEBAC catalyst dosage on the epoxy value of synthesized DETGA.

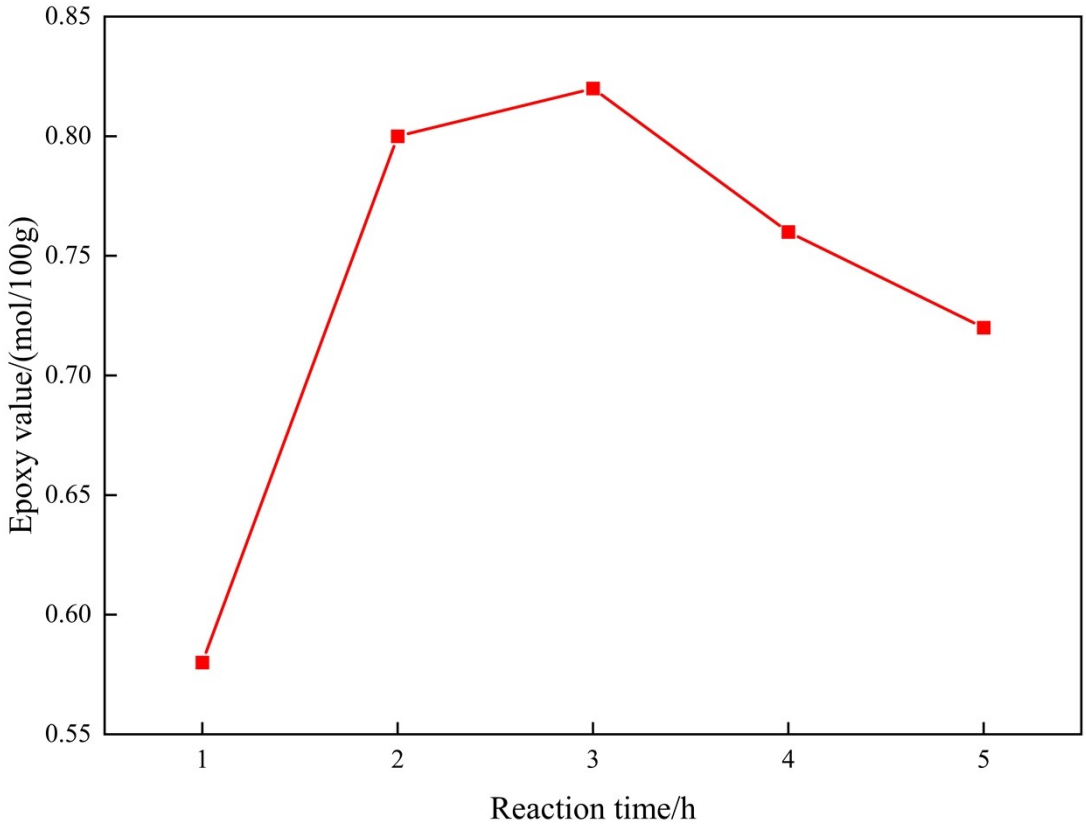

Fig. S3. Effect of reaction time on the epoxy value of synthesized DETGA.

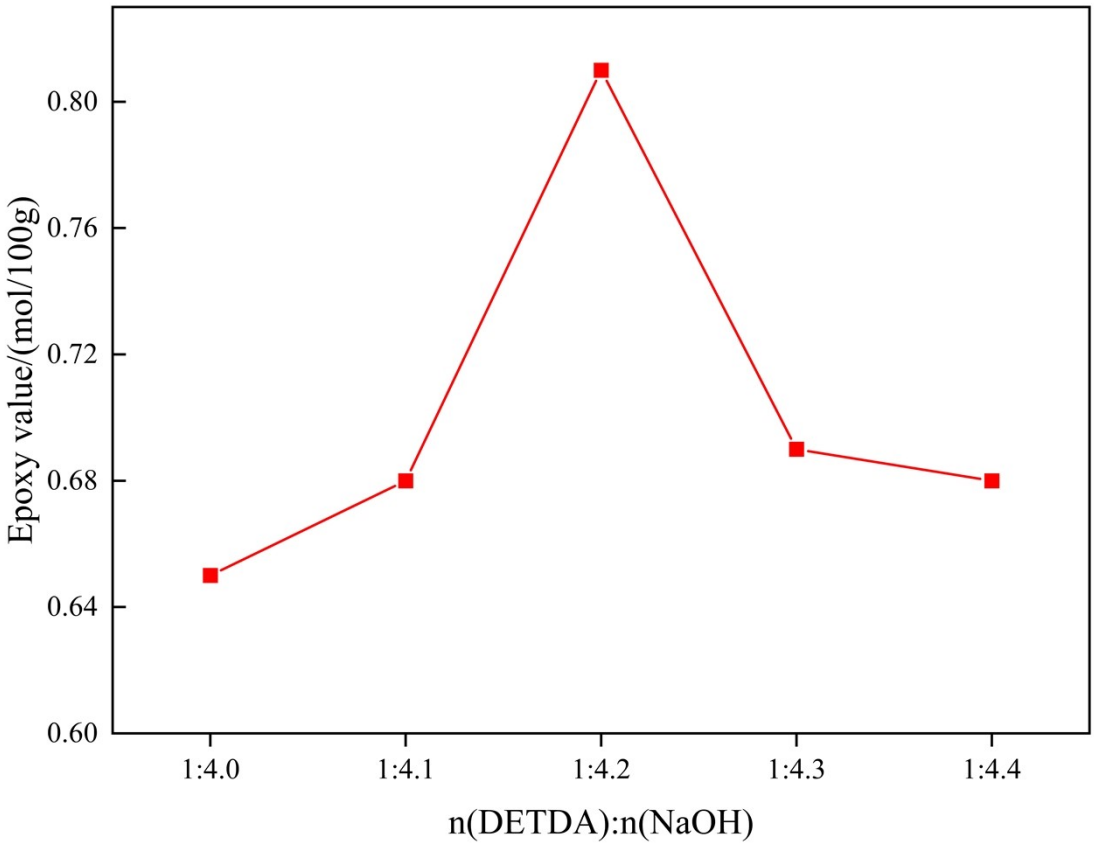

Fig. S4. Effect of DETDA-to-NaOH molar ratio on the epoxy value of synthesized DETGA.

Table S1. Analysis of variance (ANOVA) for the orthogonal experiment on DETGA synthesis [a]

Source of Variation	Degrees of Freedom (DF)	Sum of Squares (SS)	Mean Square (MS)	F-value	p-value	Significance [b]
A: *n*(DETDA):*n*(ECH)	2	0.01520	0.00760	18.29	0.021	*
B: Temperature	2	0.02547	0.01273	30.65	0.010	*
C: TEBAC amount	2	0.00027	0.00013	0.32	0.745	
D: Time	2	0.00147	0.00073	1.76	0.354	
Error	0	0.00083 [c]	0.00042			
Total	8	0.04323				

a The epoxy value (mol/100 g) was used as the response variable.

b * denotes significance at the level of $p < 0.05$.

c The error sum of squares and degrees of freedom were estimated by pooling the sums of squares of the non-significant factors (C and D) for the F-test, following a common practice in the analysis of saturated orthogonal designs.

Table S2. Thermogravimetric data of the cured products

Sample	T5%/℃	T10%/℃	Tmax/℃	T50%/℃	Residual Mass/%
DGEBA	366.4	372.9	380.9	396.3	13.3
10%DETTG/DGEBA	365.7	372.3	377.8	398.1	14.4