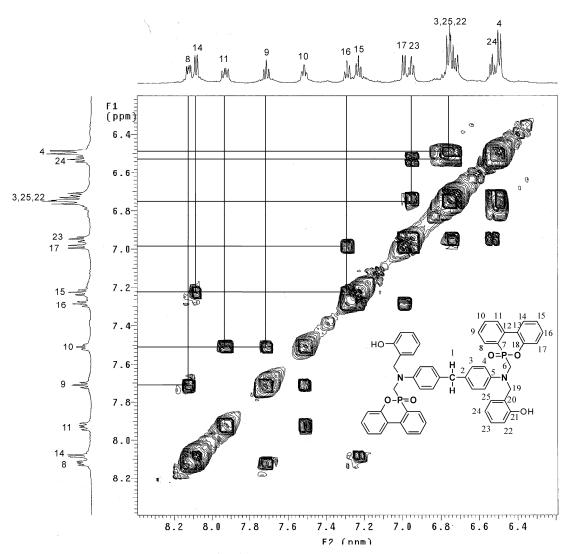
## **Supplementary information**

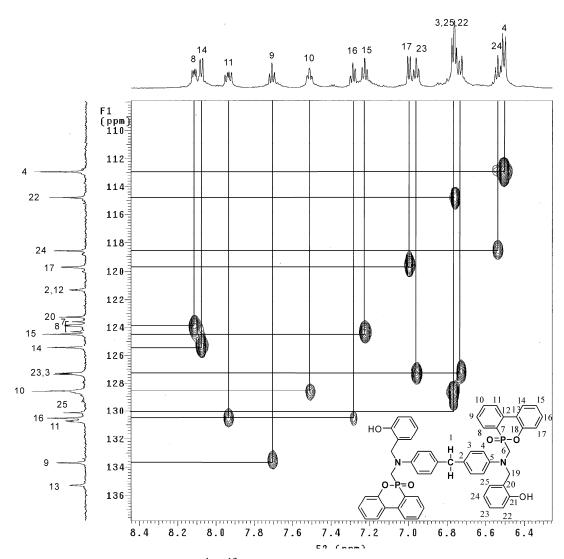
Benzoxazine-based phosphinated bisphenols and their application in preparing flame-retardant, low dielectric cyanate esters thermosets

Hou Chien Chang, Hung Tse Lin, Ching Hsuan Lin\*

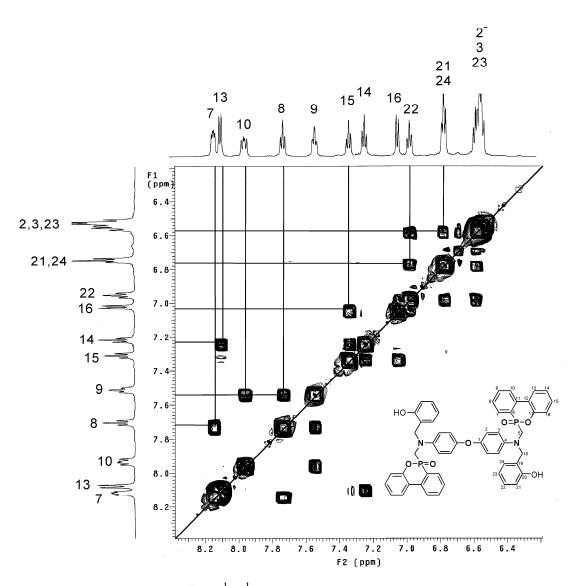
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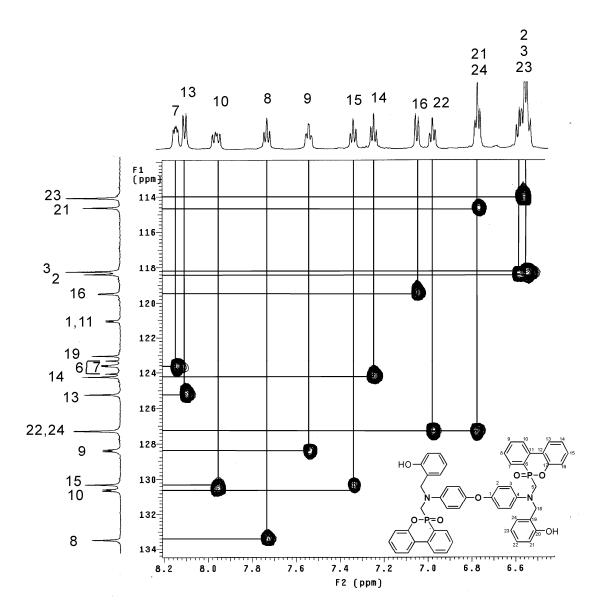
**Figure S1.** <sup>1</sup>H-<sup>1</sup>H COSY NMR spectrum of (1).



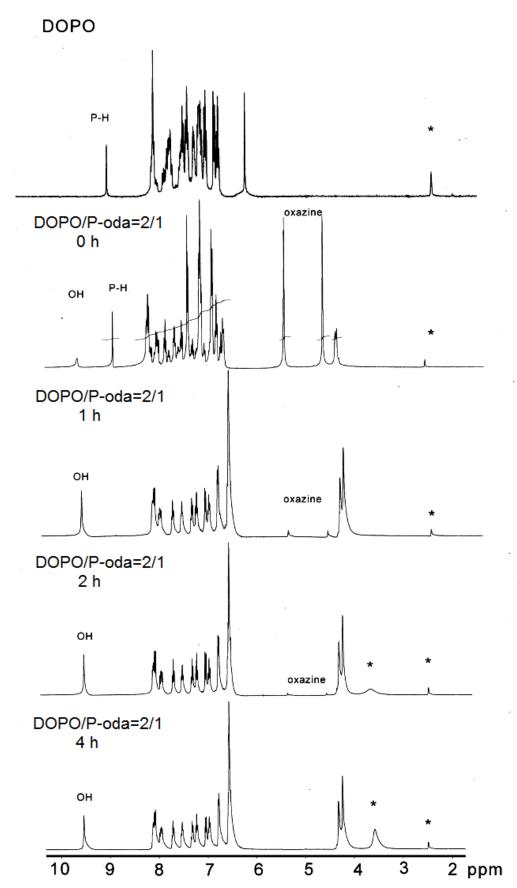
**Figure S2.** <sup>1</sup>H-<sup>13</sup>C HETCOR NMR spectrum of (1).



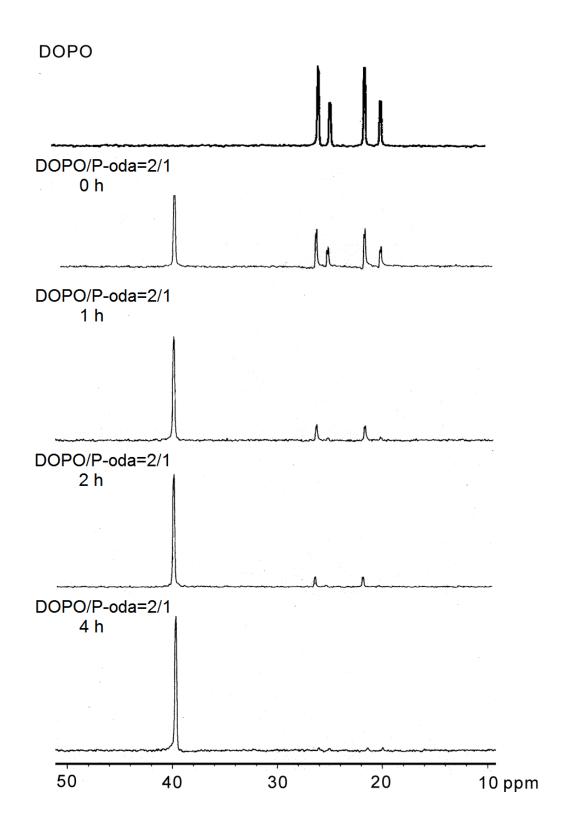
**Figure S3.** <sup>1</sup>H-<sup>1</sup>H COSY NMR spectrum of (2).



**Figure S4.** <sup>1</sup>H-<sup>13</sup>C HETCOR NMR spectrum of (2).



**Figure S5.** <sup>1</sup>H-NMR trace of DOPO/**P-oda** mixture (2/1 molar ratio) in DMSO- $d_6$  at room temperature.



**Figure S6.**  $^{31}$ P-NMR trace DOPO/**P-oda** mixture in DMSO- $d_6$  at room temperature.