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Supplementary Material

Phosphorus based α-amino acid mimetic for enhanced flame retardant properties in an epoxy resin

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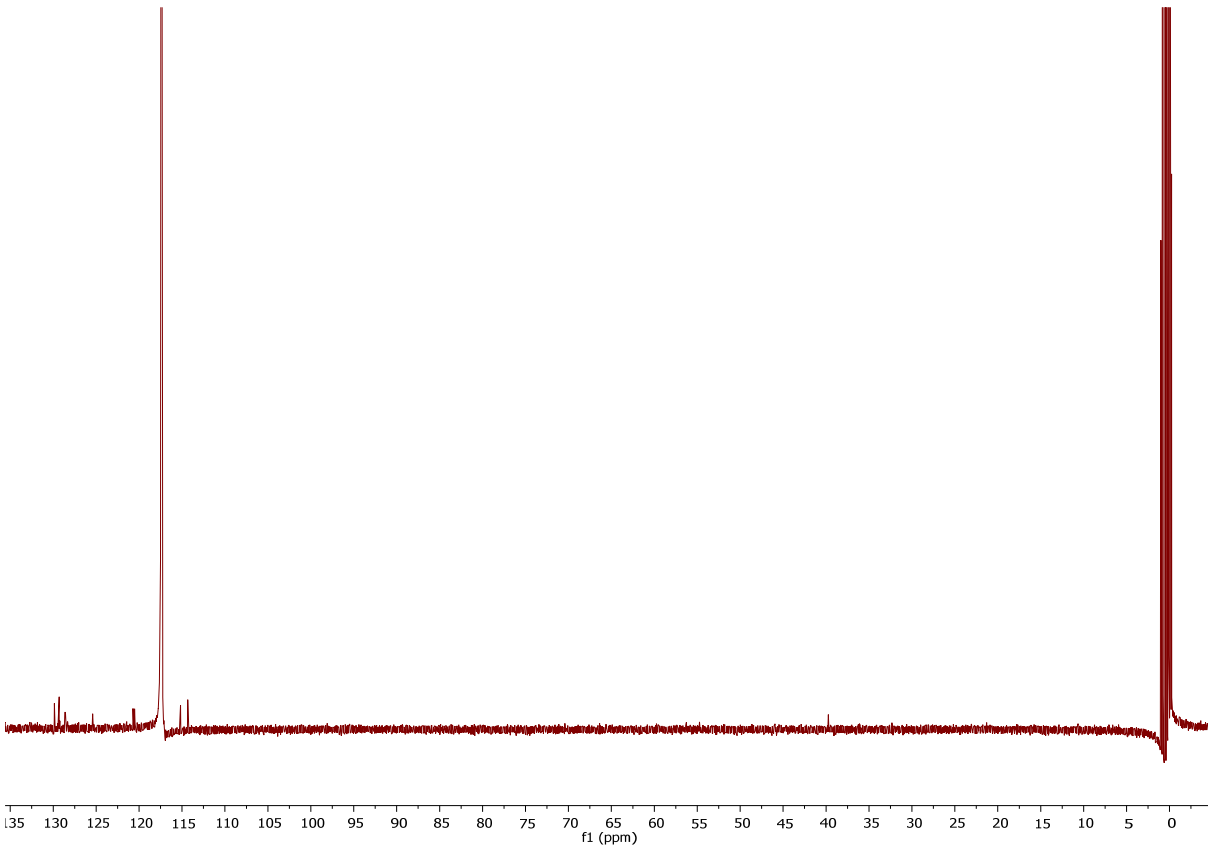
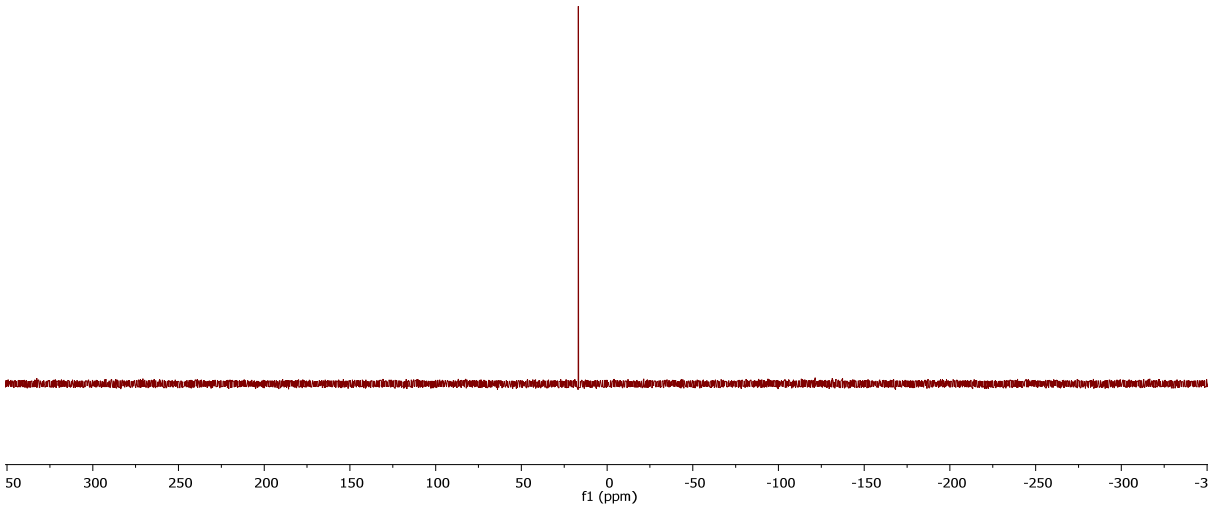
Spectra for DDMP

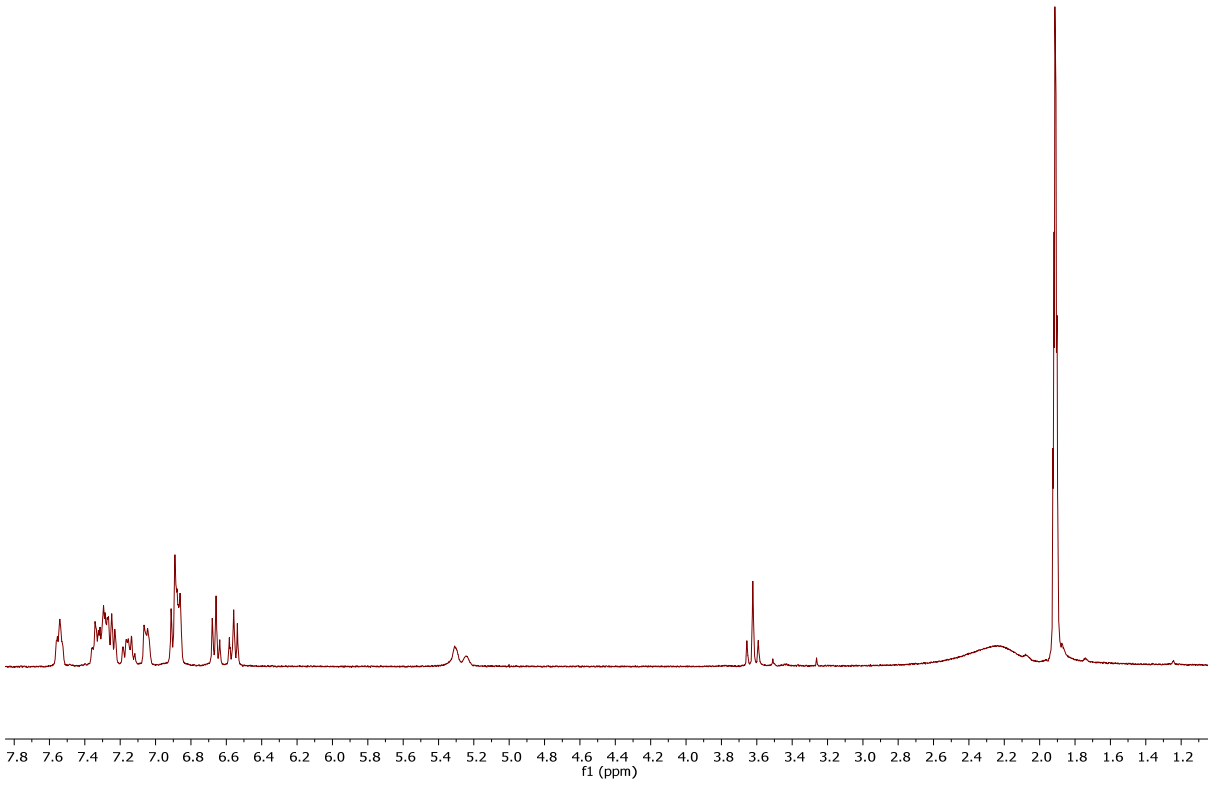
^{13}C

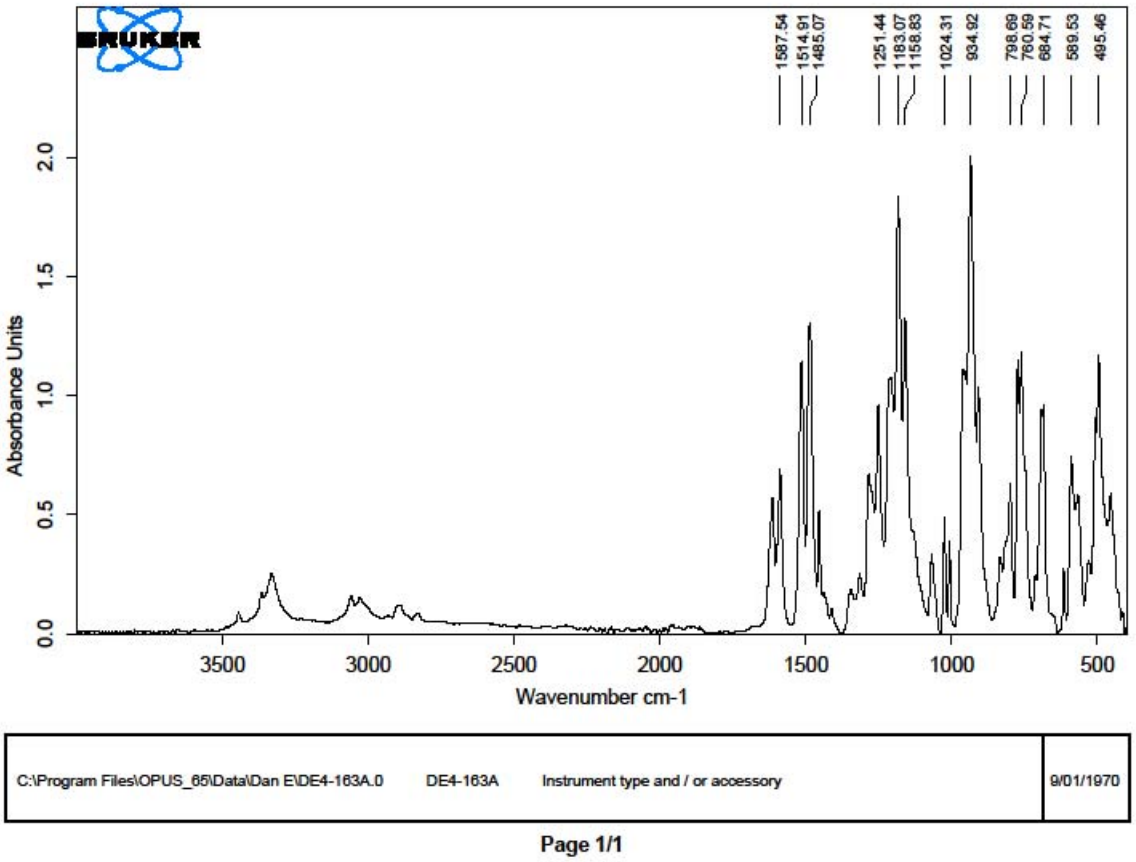


^{31}P



^{1}H


7.8 7.6 7.4 7.2 7.0 6.8 6.6 6.4 6.2 6.0 5.8 5.6 5.4 5.2 5.0 4.8 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2
f1 (ppm)



Pre and Post Burn Samples:

Image 1 - Resin samples prior to the burn test.

The above image shows resin samples, prior to the burn test. In order from left to right are the control, 0.16 P%, 0.33 P% and the 0.49 P% samples. The top row shows the standard cured (100 °C for 12 hours) samples, and the bottom row are those sample subjected to post curing (additional 5 hours at 150 °C), all in the same order.

The image below are the samples in the same order as above, after the burn test.

Image 2 - Resin samples after the burn test.