

# Supporting Information

## Guaiazulene Revisited: A New Material for Green-Processed Optoelectronics

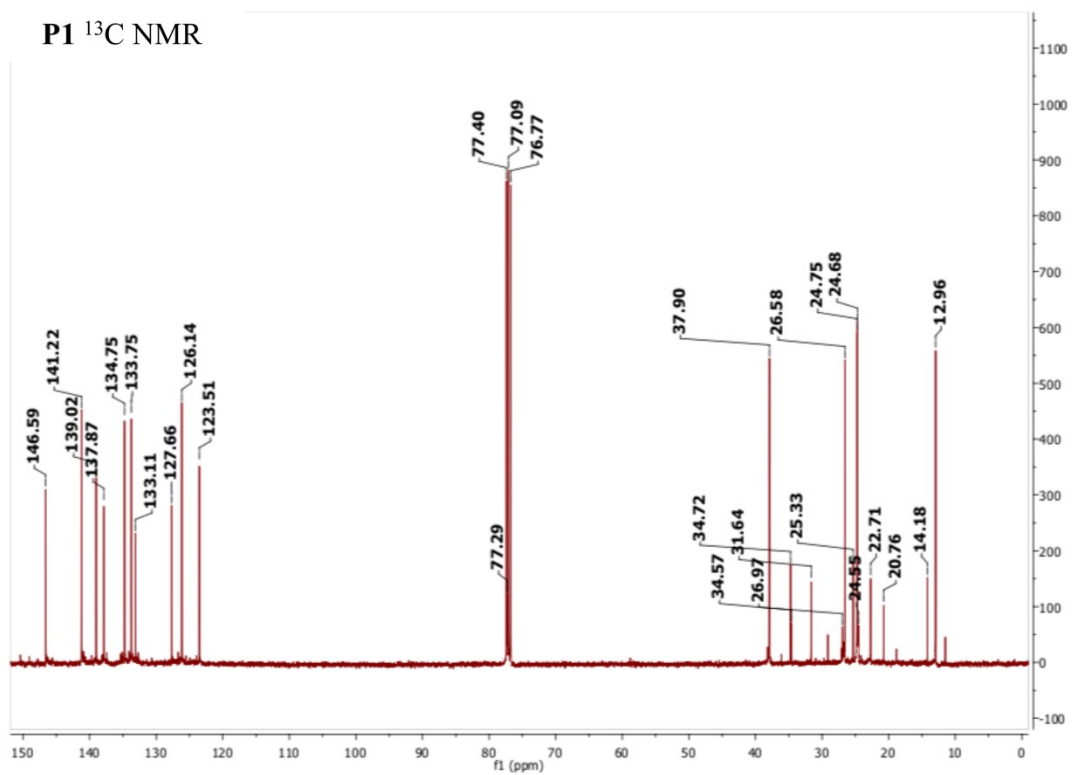
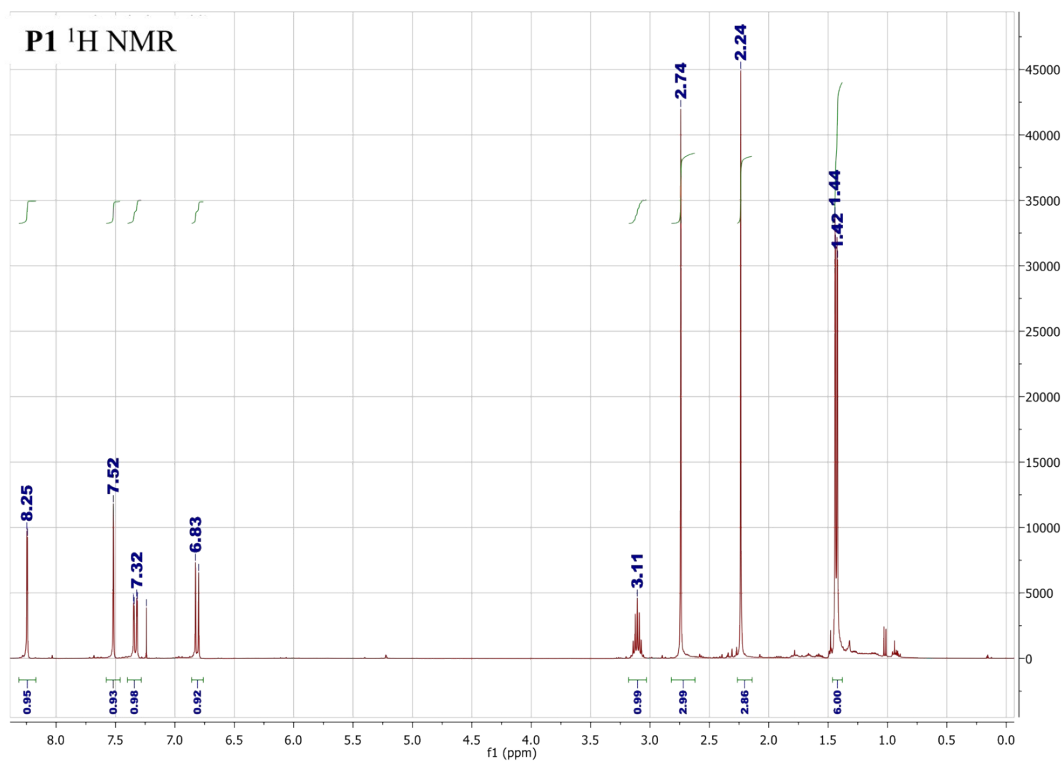
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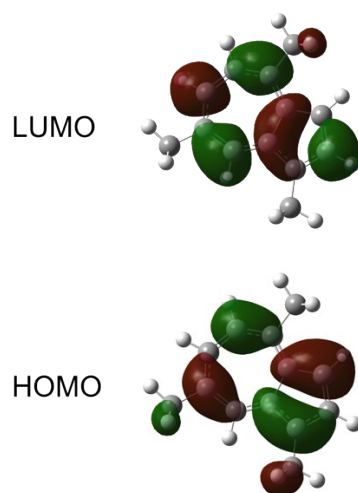
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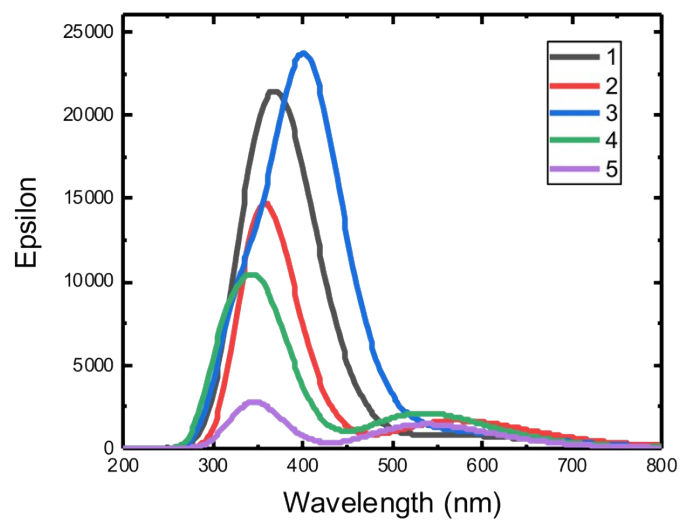
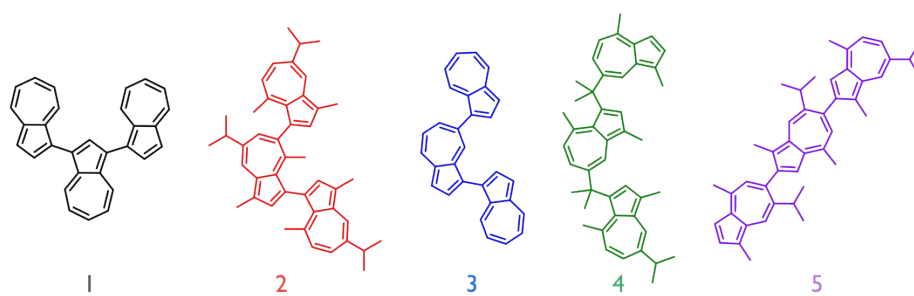


**Figure S1.**  $^1\text{H}$  NMR (top) and  $^{13}\text{C}$  NMR (bottom) spectra of **P1** in deuterated chloroform ( $\text{CDCl}_3$ ).

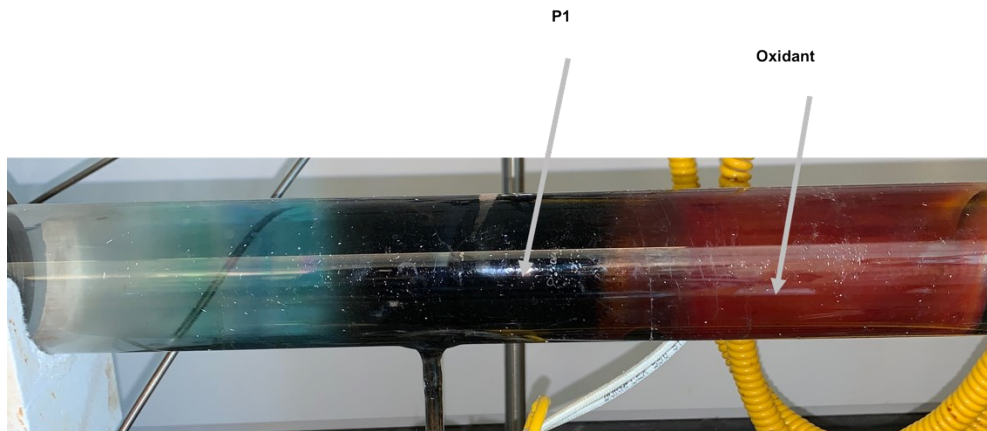
DFT / B3LYP / 6-311+G (2d, p) / Chloroform



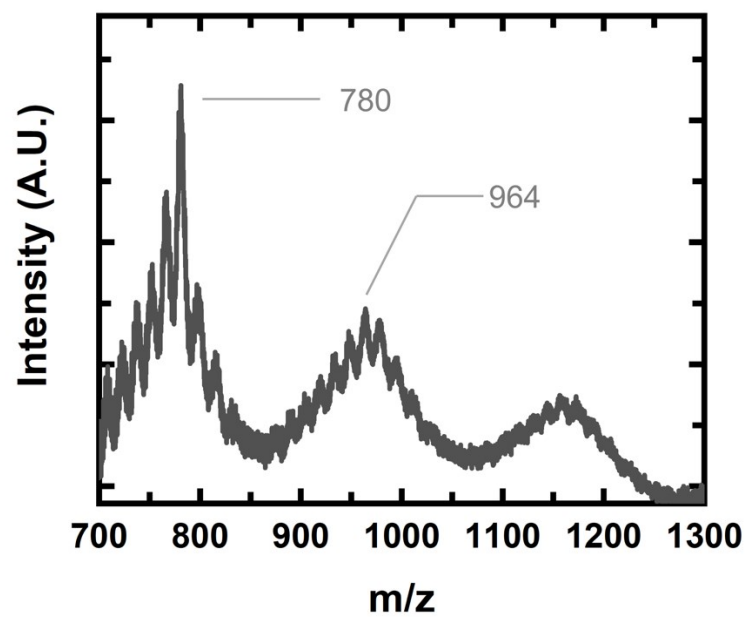
**Figure S2.** DFT calculation of the HOMO-LUMO electronic structure of guaiazulene. The isopropyl group was omitted from the calculations to minimize computational cost.



**Figure S3.** TD-DFT calculations of azulene and guaiazulene-based trimers conducted using the CAM-B3LYP functional and a 6-311+G (2d, p) basis set.



**Figure S4.** Optical image of the reactor following a successful reactive vapor deposition (RVD). The black region consists of condensed polymer (**P1**). The brown region consists of condensed oxidant ( $\text{FeCl}_3$ ).



**Figure S5.** LDI-MS of the soluble fractions of RVD films isolated from inside the reactor.