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Self-assembly of fluorescent galunamide derivative and sensing of acid vapor and mechanical force stimuli

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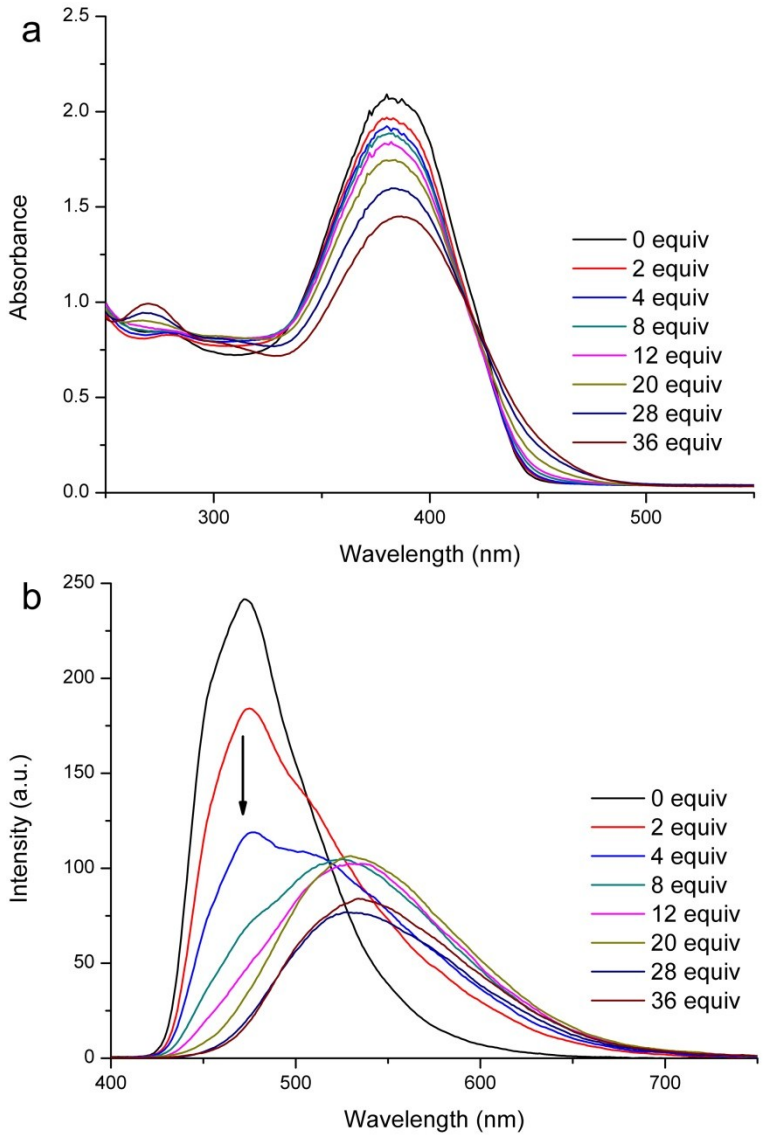

Fig. S1 Absorption and fluorescence spectra of 3C16BPCP in $CHCl_3$ (10^{-5} M) after adding TFA. λ_{ex} = 380 nm.

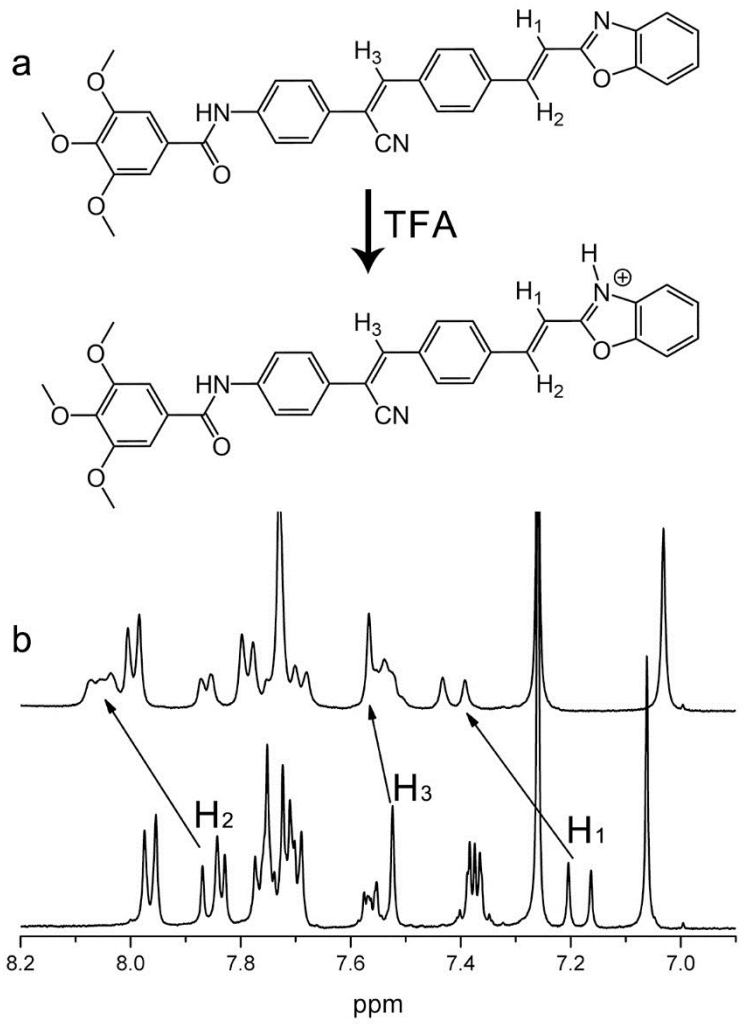

Fig. S2 (a) Response mechanism of 3C16BPCP to TFA, and (b) ^{1}H NMR spectra before (bottom) and after (top) adding TFA (10 equiv.).

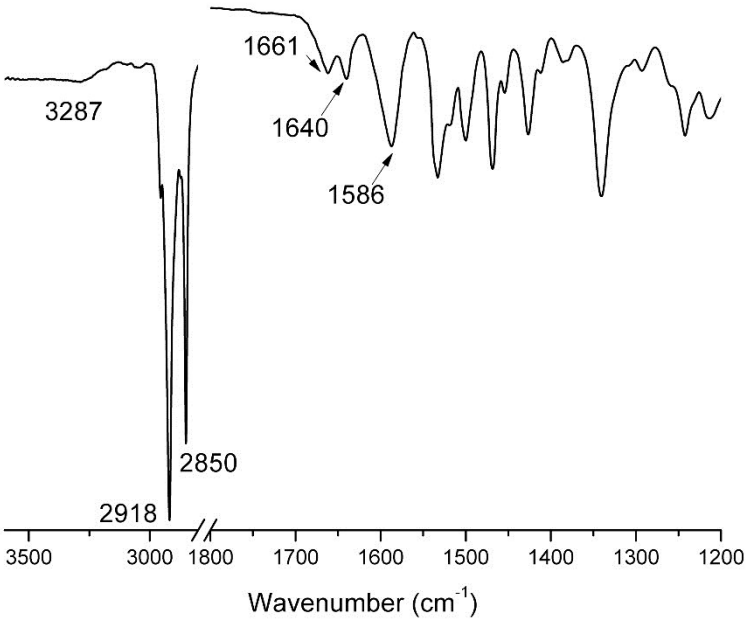

Fig. S3 FT-IR spectrum of DMSO xerogel.

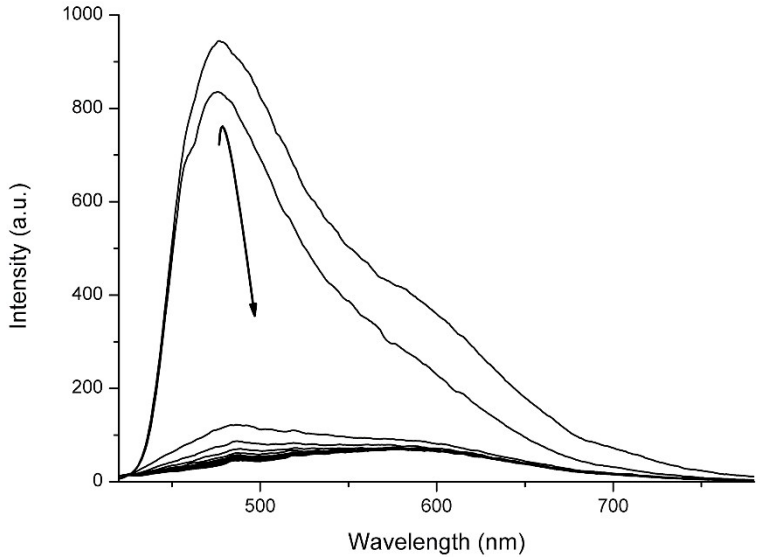

Fig. S4 Fluorescence spectral change of 3C16BPCP in acetic acid during gelation. λ_{ex} = 380 nm.

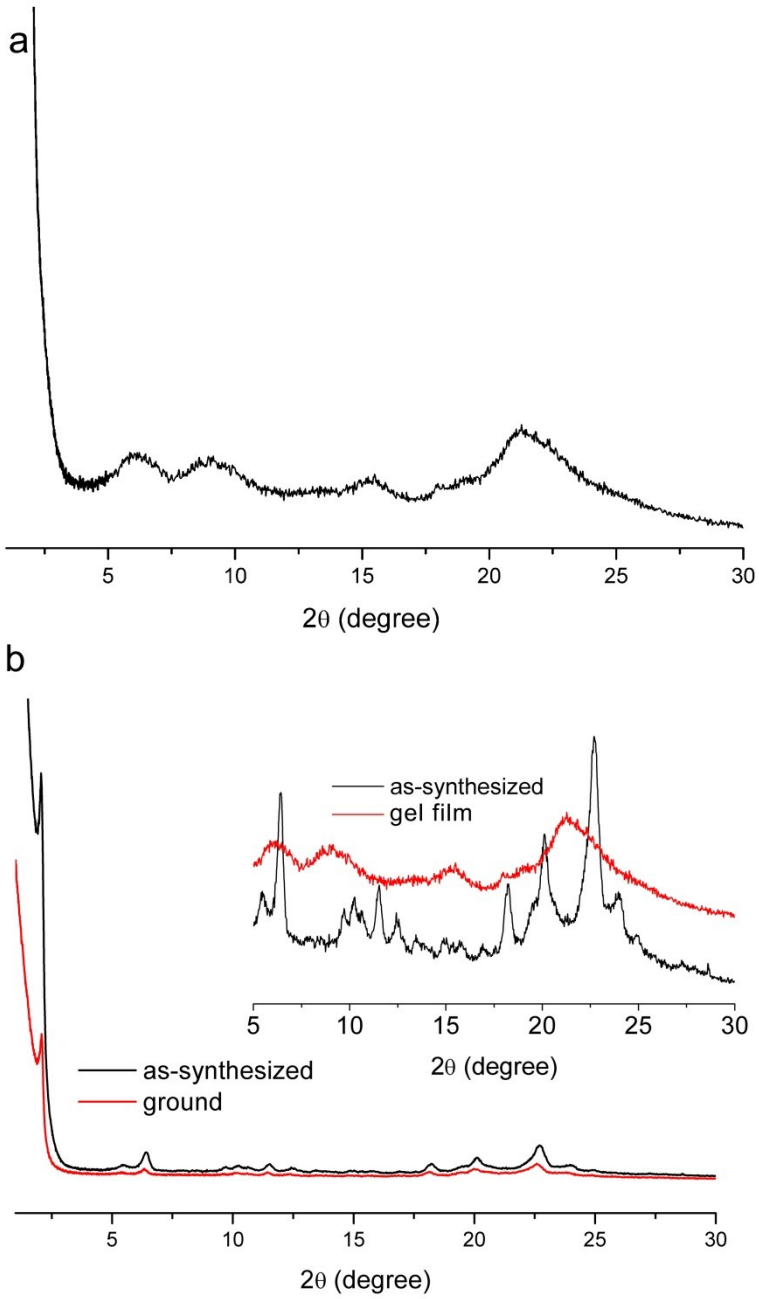

Fig. S5 XRD patterns of (a) gel film, (b) as-synthesized and ground solid. Insets are XRD patterns of gel film and as-synthesized solid in wide angle region.

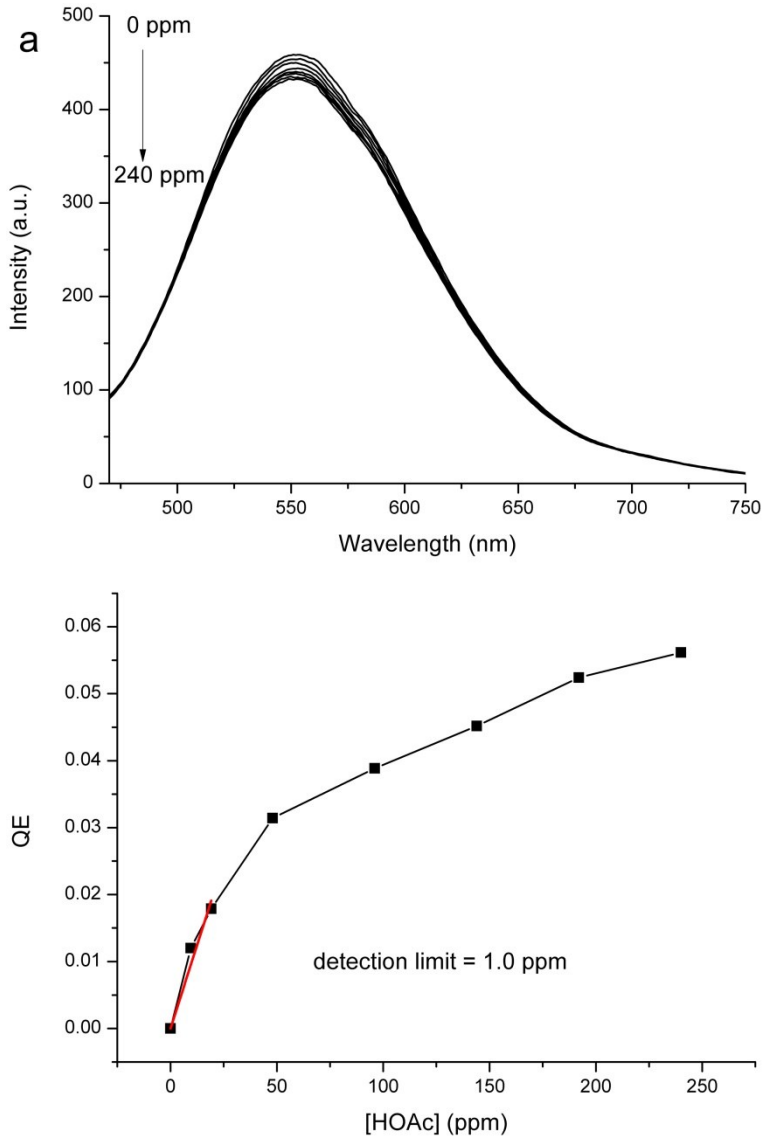

Fig. S6 (a) Fluorescence change of xerogel film upon exposure to acetic acid vapors and (b) the plot of QE vs. the concentration of acetic acid. λ_{ex} = 380 nm.

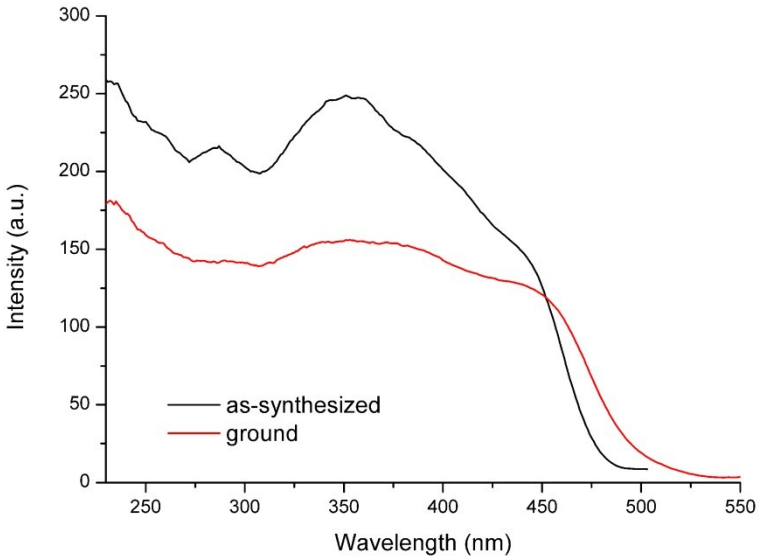

Fig. S7 Excitation spectra of 3C16BPCP solids. λ_{em} = 510 nm for as-synthesized solid, λ_{em} = 550 nm for ground solid.

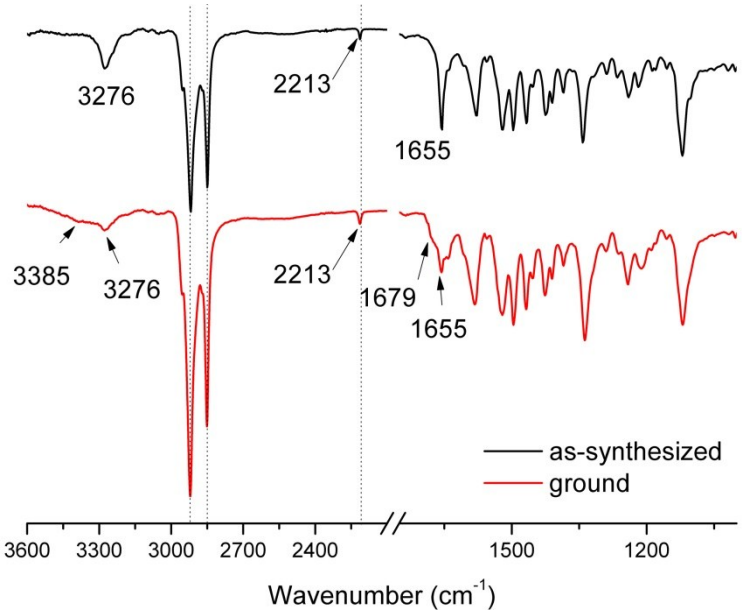

Fig. S8 IR spectra of as-synthesized solid and ground powder.

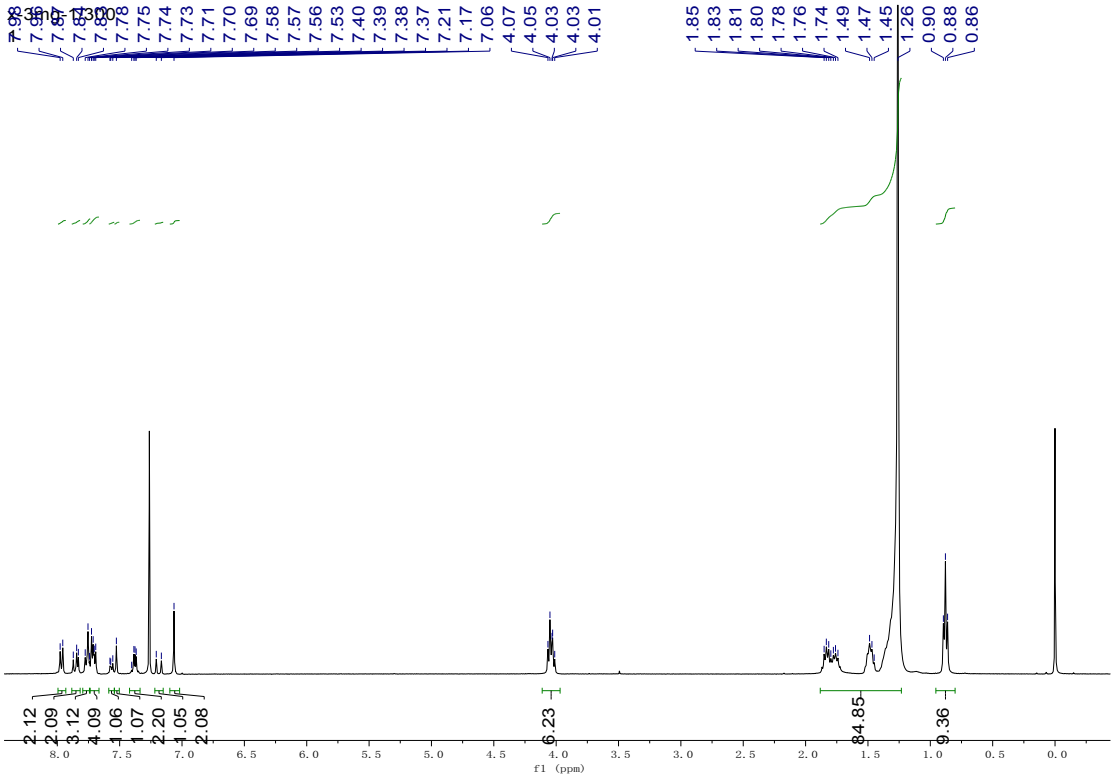

Fig. 9 ^{1}H NMR of 3C16BPCP in $CDCl_3$.

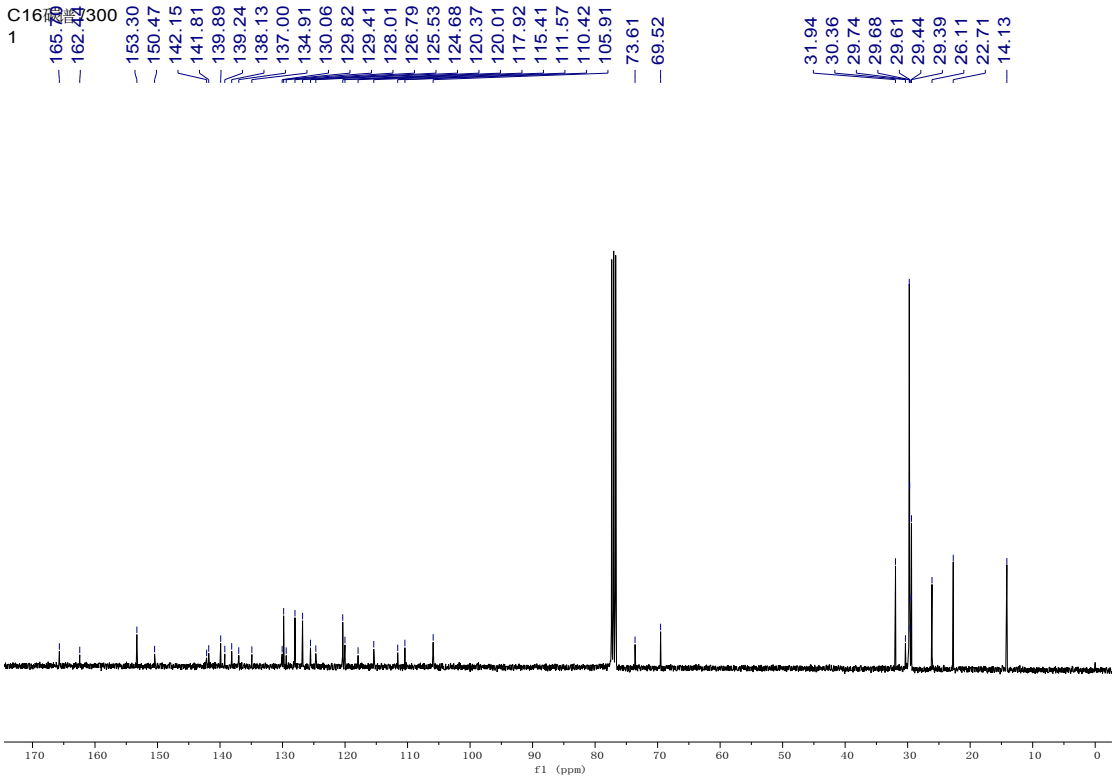

Fig. 10 ^{13}C NMR of 3C16BPCP in $CDCl_3$.

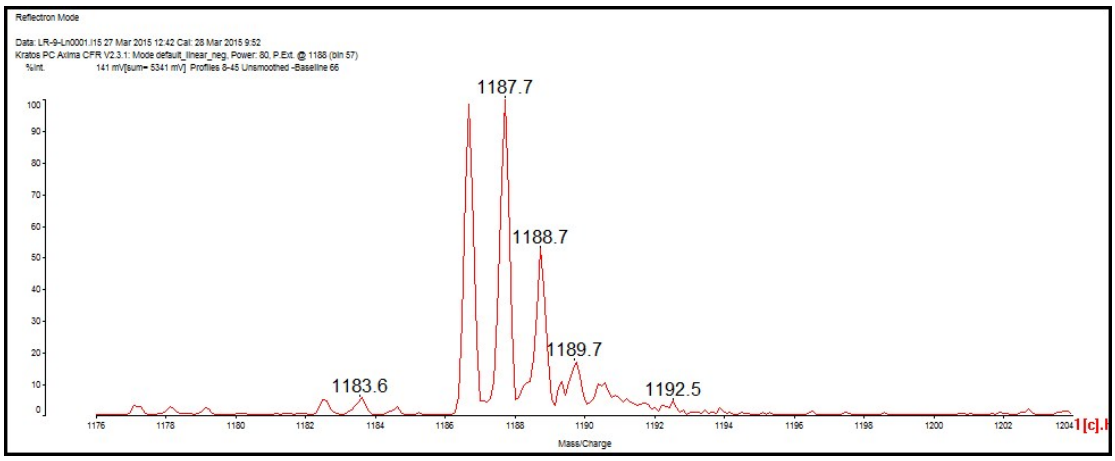

Fig. S11 MS spectrum of 3C16BPCP.