Electronic Supplementary Information: C9AY00722A
Fig. S1 MS data for any nicotine molecular ions, e.g. C_{10}H_{15}N_{2} requires 163.1229 [M+H]^+ (found 163.1249 m/z) and C_{20}H_{29}N_{4}Cl dimer-HCl salt requires 360.2069 (found 360.3263 m/z).
Fig. S2 GC-MS EI spectra of (A) 5F-PB-22, (B) 1-(5F-pentyl)-indole, (C) 1-pentyl-indole.
Fig. S3 EI spectrum of (A) MDMB-CHMICA showing proposed fragmentation pattern with assignments, (B) the keto-δ-lactam with proposed fragmentation pattern and assignments.
**Fig. S4** Proposed mechanism for the formation of the new combustion product.

**Fig. S5** (A) UHPLC TIC chromatogram of combustion sample of MDMB-CHMICA showing MDMB-CHMICA peak at 9.7 min, (B) expansion of the keto-δ-lactam peak at 10.7 min, (C) ESI-MS spectrum showing both molecular ions.