AS-PAH exhibited a less PAH content and a PAH mix compared to the coated P90 nanoparticles.

A) Representative thermograms of P90 and P90 coated with BaP or 9NA. One representative thermogram of AS-PAH is shown as the red line in (B). The blue line in B represents the derivative thermogravimetric (DTG) results of the delta-mass-to-delta-temperature ratio, illustrating the two-stage thermal desorption. Figures C and D show thermograms and mass-spectra curves of AS-PAH detected for the range m/z=100–250 (C) and m/z=1–100 (D). C) In the first stage, PAHs were predominantly detected. D) The fragments m/z=26 and 44 in the first stage were PAH fragments or acetylene and carbon dioxide. In the second stage, a release of hydrogen (m/z=2), methane (m/z=16), water (m/z=18), acetylene (m/z=26) and carbon dioxide (m/z=44) occurred. Possible PAH candidates are represented in (E). Figure F shows a representative GC/MS chromatogram of PAHs from an AS-PAH sample. m/z=mass-to-charge ratio.