Supporting information:

Raman spectroscopy was used to confirm the graphitic nature of the material. Two clear peaks can be clearly observed for the MCN-ATN-150 sample which can be assigned to G (graphitic) and D (disordered) bands. The G and D peaks observed in Raman spectrum are due to sp² sites which are confirmed by XPS and EELS. The existence of a G-band (1550 cm⁻¹) in Raman spectra suggests that well defined graphitic domains are indeed developed. Another band at around 1370 cm⁻¹ (D-band) is also observed. This band is the result of defects due to presence of nitrogen in the ring. The G peak is due to the bond stretching of all pairs of sp² atoms in both rings and chains whereas the D peak is attributed to the breathing modes of sp² atoms (C and N) in rings. Intensity ratio (I_G/I_D) is found to be <1.

Fig. S1: Raman spectrum of MCN-ATN-150 sample.