Supporting Information

for

Time of flight secondary ion mass spectrometry imaging of contaminant species in chemical vapour deposited graphene on copper

Barry Brennan, Vlad-Petru Veigang-Radulescu, Philipp Braeuninger-Weimer, Stephan Hofmann and Andrew J. Pollard

Additional figures

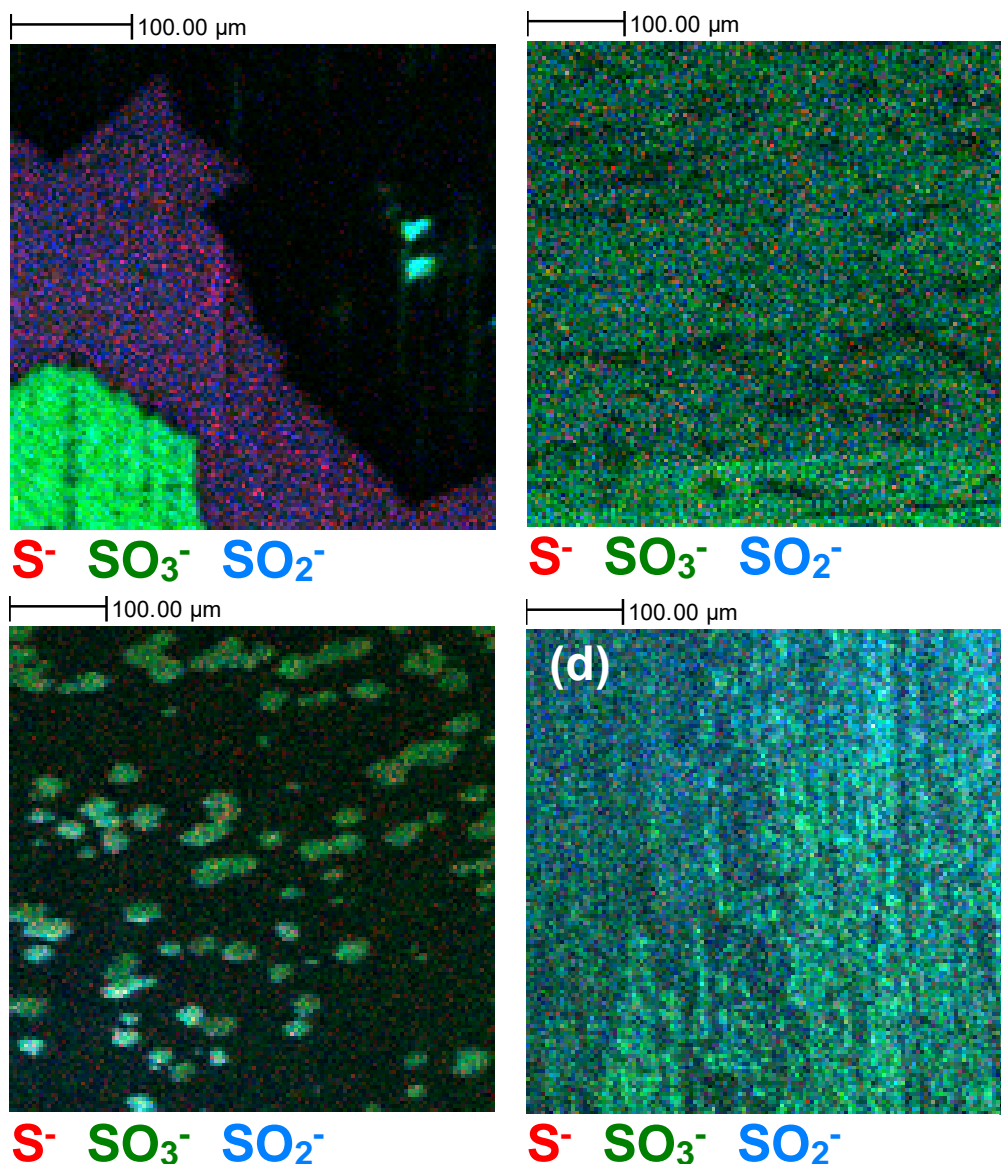**Figure S1:** ToF-SIMS images (500 μm × 500 μm) of the S⁻ (red), SO₃⁻ (green) and SO₂⁻ (blue) ion signals after graphene growth on copper with different growth mechanisms, from (a) backside oxidation + Ar annealed (BO), (b) Ar:H₂ annealed(Ar:H₂), (c) electro-polished + Ar:H₂ anneal (EP), and (d) Ar annealed (Ar) samples, for the same areas of the samples as in Figure 1 and 2.
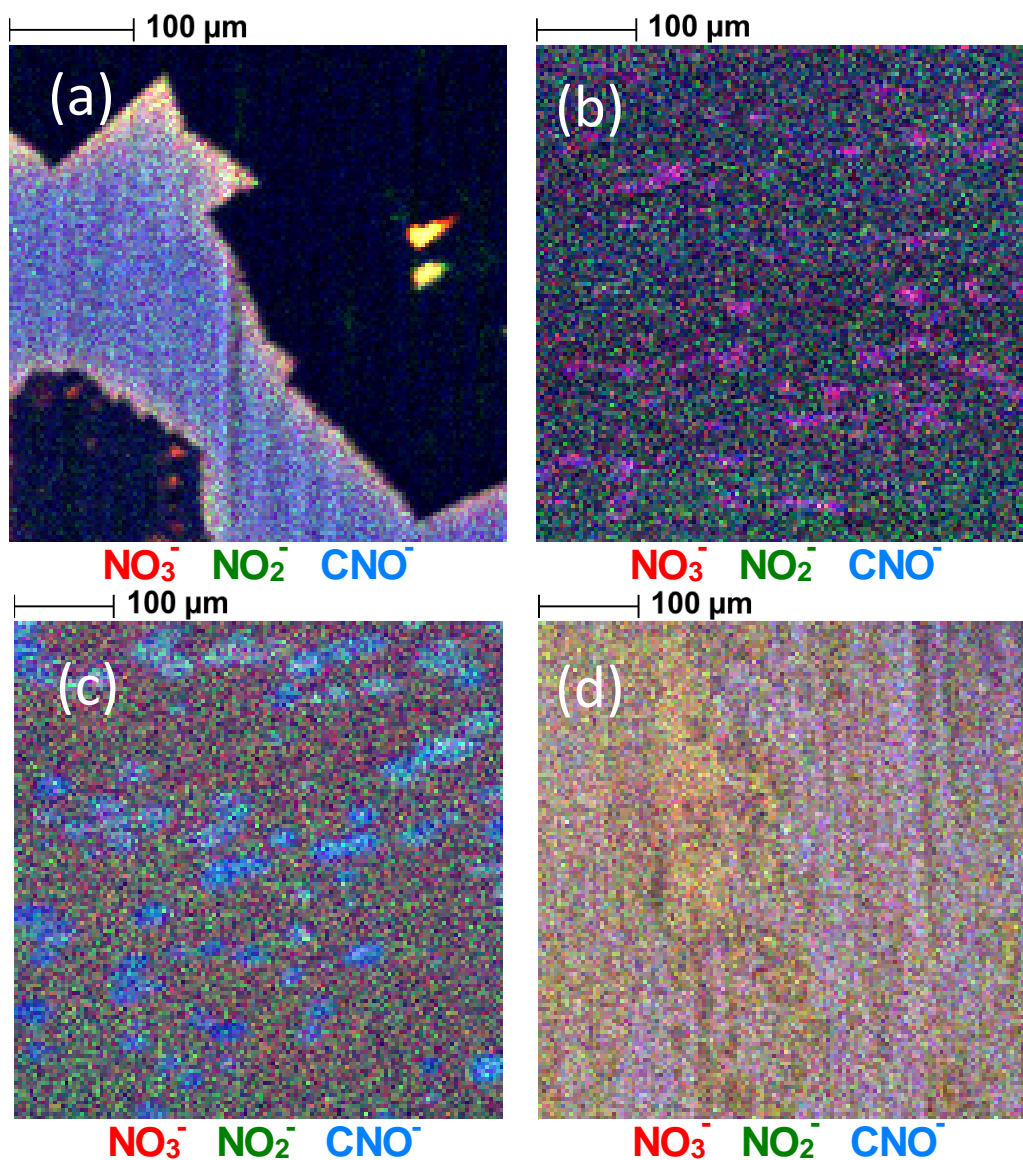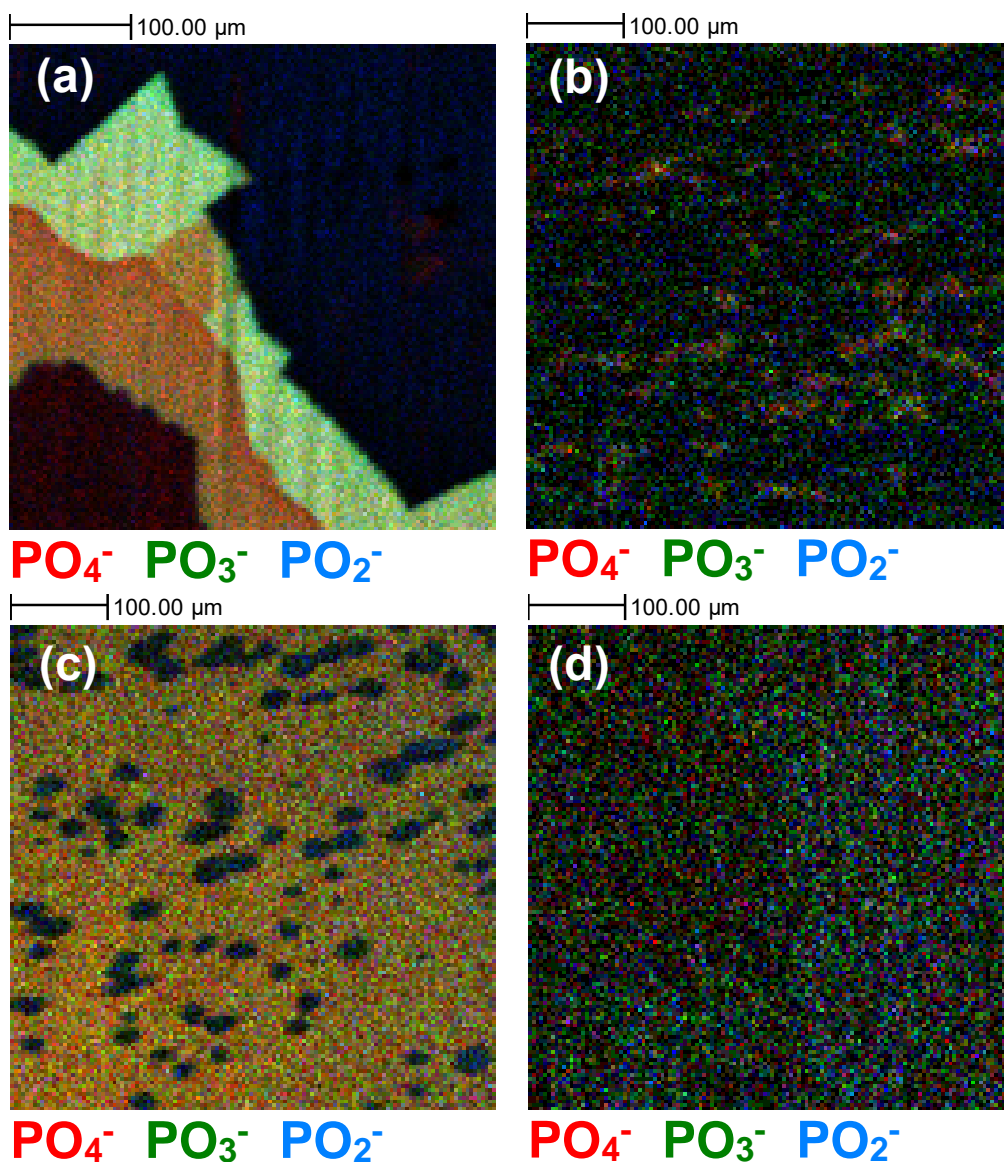
Figure S2: ToF-SIMS images (500 µm × 500 µm) of the NO_3^- (red), NO_2^- (green) and CNO^- (blue) ion signals after graphene growth on copper with different growth mechanisms, from (a) backside oxidation + Ar annealed (BO), (b) Ar:H_2 annealed(Ar:H_2), (c) electro-polished + Ar:H_2 anneal (EP), and (d) Ar annealed (Ar) samples, for the same areas of the samples as in Figure 1 and 2.

Figure S3: ToF-SIMS images (500 μm × 500 μm) of the PO_4^- (red), PO_3^- (green) and PO_2^- (blue) ion signals after graphene growth on copper with different growth mechanisms, from (a) backside oxidation + Ar annealed (BO), (b) Ar:H_2 annealed(Ar:H_2), (c) electro-polished + Ar:H_2 anneal (EP), and (d) Ar annealed (Ar) samples, for the same areas of the samples as in Figure 1 and 2.