Understanding and Controlling Sample Degradation on Modern XPS Spectrometers

David J. Morgan^{1,2}

¹School of Chemistry, Cardiff University, Park Place, Cardiff, CF10 3AT. UK ² HarwellXPS, Research Complex at Harwell, Didcot, OX11 0FA. UK

1. Comparative Reduction of CrO₃



Reduction of Metal-Organic Frameworks (MOFs) and supported catalytic materials 2.



Time-on-line core-level Cu(2p) and Re(4f) spectra from analysis of a Cu(II) containing MOF and a Re supported heterogeneous catalyst



3. Enhanced degradation of polymers

(a) Core-level C(1s) spectra from pristine (red) and analysis induced damage to PTFE and (b) the plot of degradation index compared to data from Beamson and Briggs (High Resolution XPS of Organic Polymers: The Scienta ESCA300 Database, "Wiley, Chichester, 1992)