Supporting information

Characterization and toxic potency of airborne particles formed upon WEEE waste recycling – a case study

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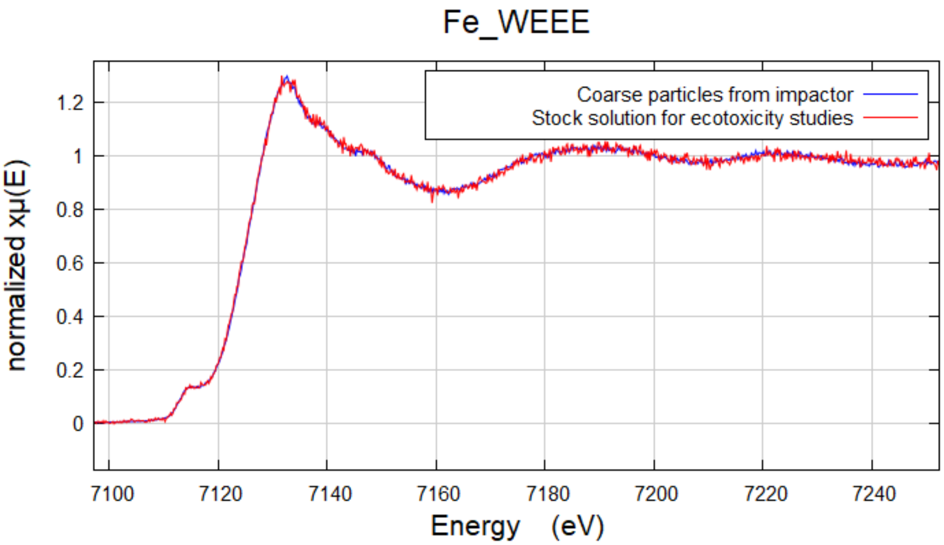

Figure S1. XANES spectra at the Fe K-edge (7112 eV) for untreated aerosol particles (from impactor stage corresponding to 1.5-2.7 µm particles), and for stock solution prepared for the ecotoxicity studies. The similarity in XANES spectra indicate that the preparation steps did neither alter the oxidation state nor the chemical form of Fe.

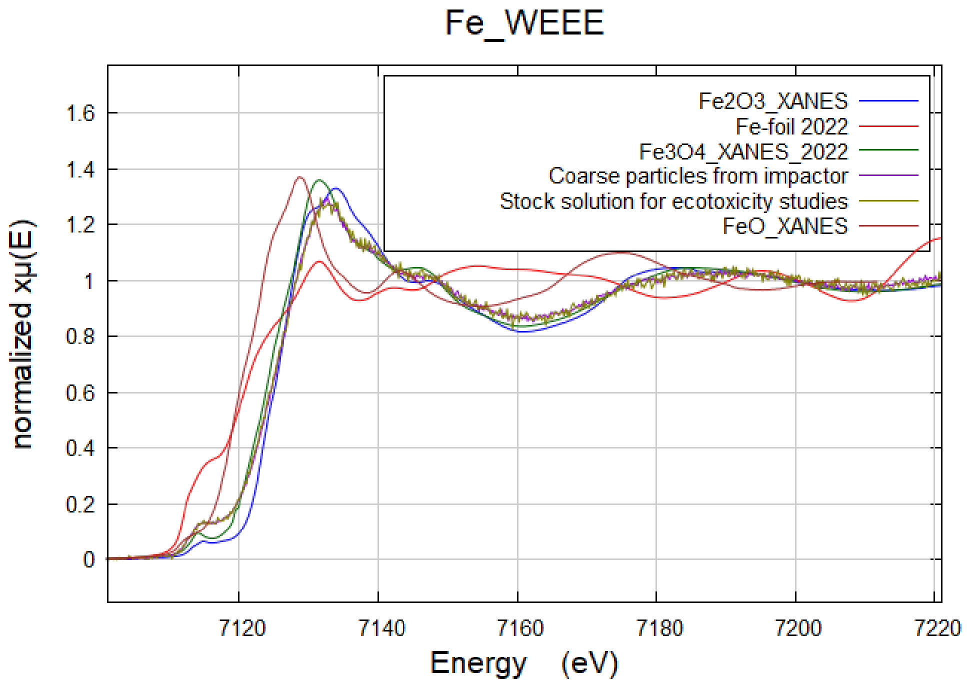

Figure S2. Same as in A1 including a few selected reference spectra for comparison to show the variation in XANES spectra with chemical form.

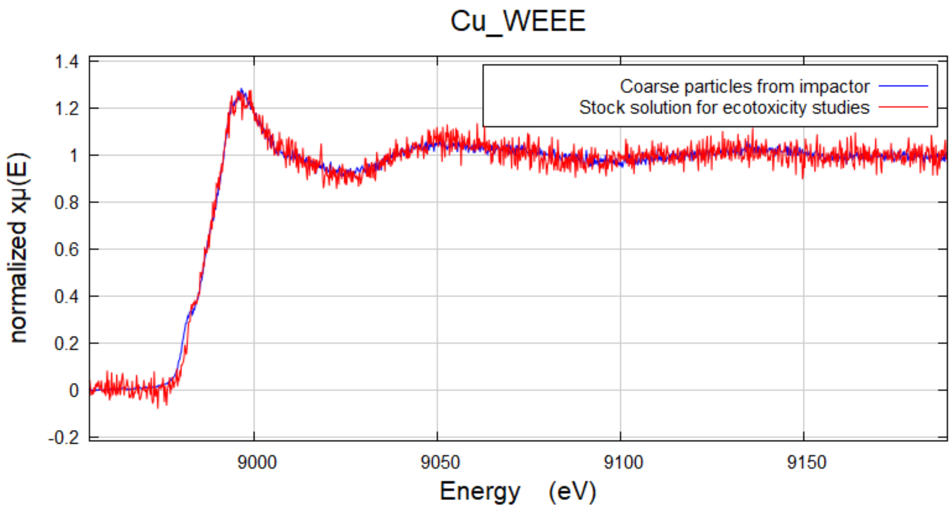

Figure S3. XANES spectra for the Cu K-edge (at 8979 eV) for untreated aerosol particles (from impactor stage corresponding to 1.5-2.7 µm particles), and for stock solution prepared for the ecotoxicity studies. The similarity in XANES spectra indicate that the preparation steps did not alter oxidation state nor the chemical form of Cu.

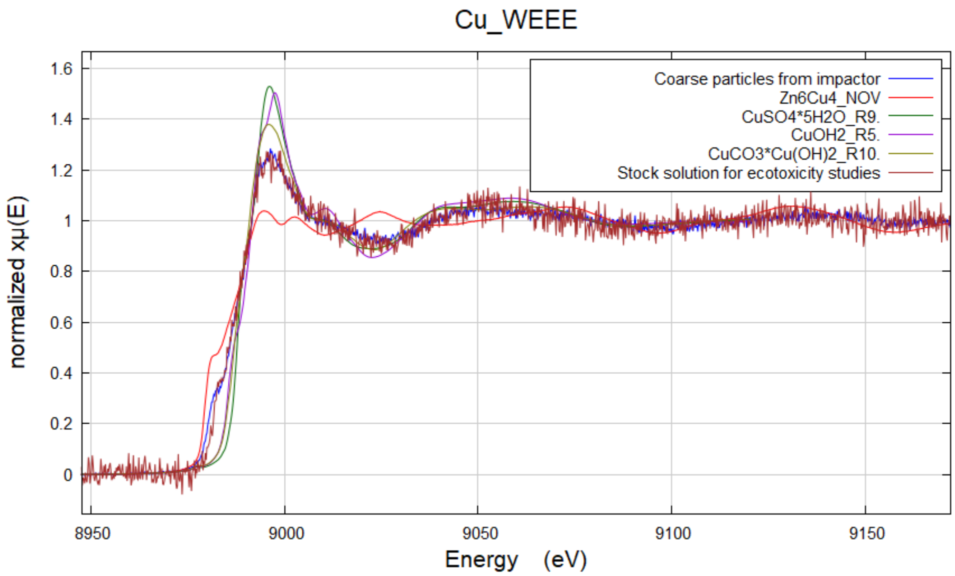

Figure A4. Same as in A3 including a few selected reference spectra for comparison to show the variation in XANES spectra with chemical form.

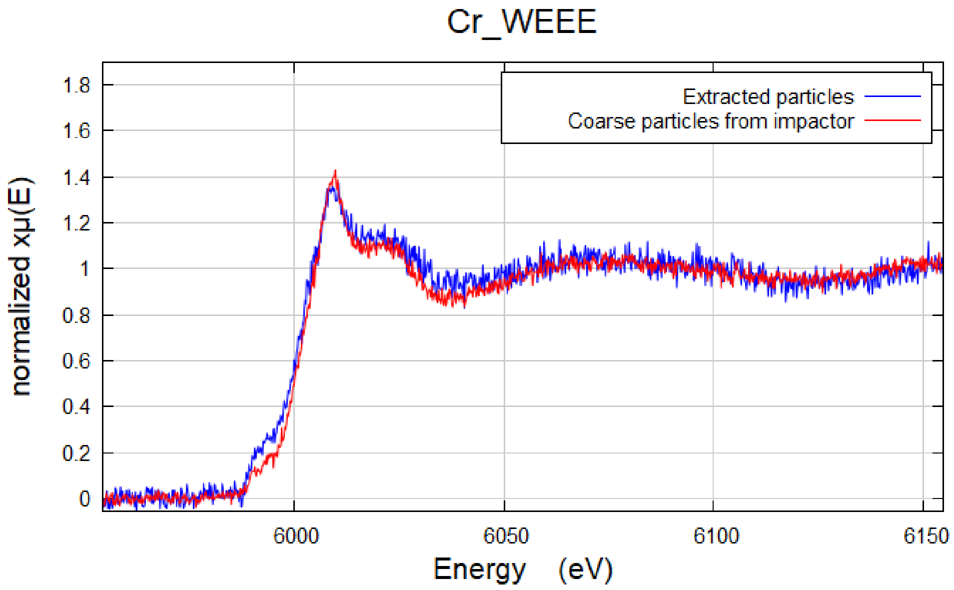

Figure A5. XANES spectra for the Cr K-edge (at 5989 eV) for untreated aerosol particles (from impactor stage corresponding to 1.5-2.7 µm particles), and for extracted particles. No spectra for stock solutions could be retrieved due to low concentrations. Some minor differences in XANES spectra were observed, but in principle no change in oxidation state of Cr was detected.

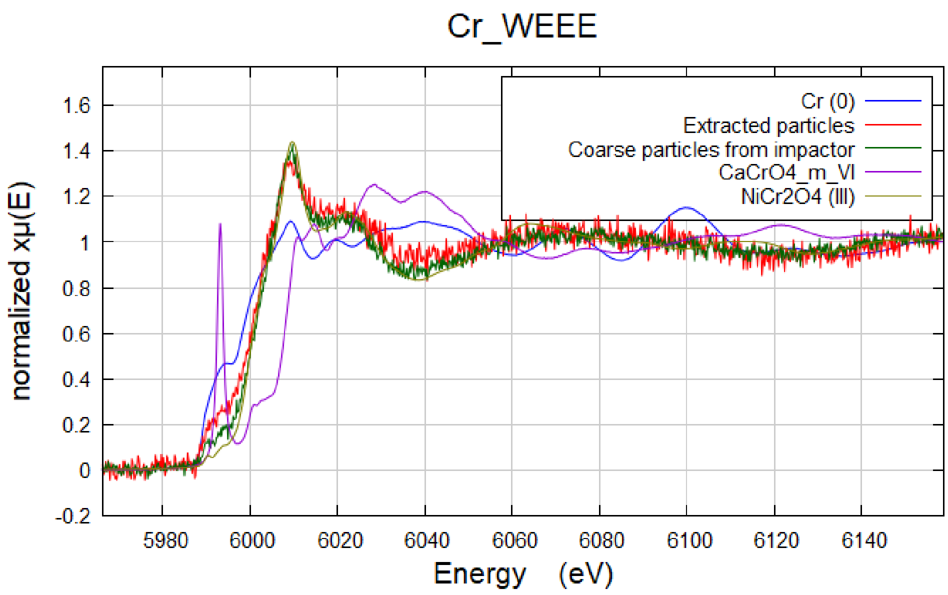

Figure A6. Same as in A5 including a few selected reference spectra to illustrate the typical variation in XANES spectra with chemical form.

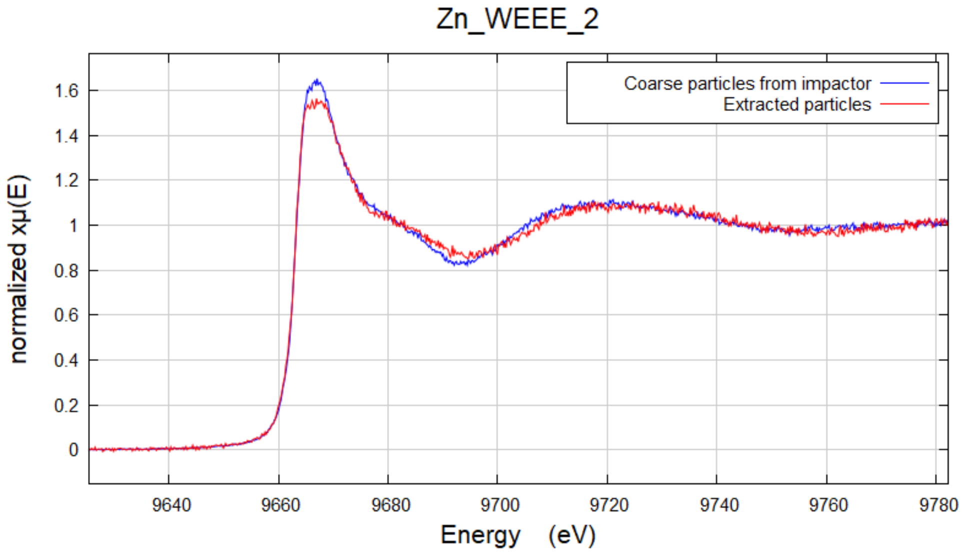

Figure A7. XANES spectra for the Zn K-edge (at 9659 eV) for untreated aerosol particles (from impactor stage corresponding to 1.5-2.7 µm particles), and for stock solution prepared for the ecotoxicity studies. Some minor differences in XANES spectra were observed comparing the Zn spectra for the impactor stage and stock solution.

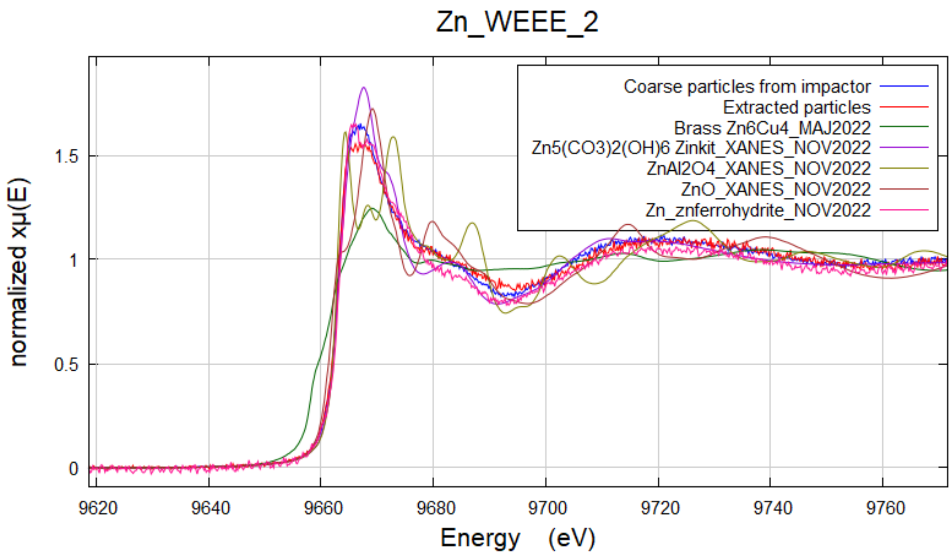

Figure A8. Same as in A7 including a few selected reference spectra to illustrate the typical variation in XANES spectra with chemical form.