

**Physicochemical properties of air discharge-generated manganese oxide
nanoparticles: Comparison to welding fumes**

Larissa V. Stebounova,¹ Natalia I. Gonzalez-Pech,² Thomas M. Peters,^{1,*} Vicki H.
Grassian^{2,3,*}

*Corresponding authors

¹ Department of Occupational and Environmental Health, The University of Iowa, Iowa City, IA

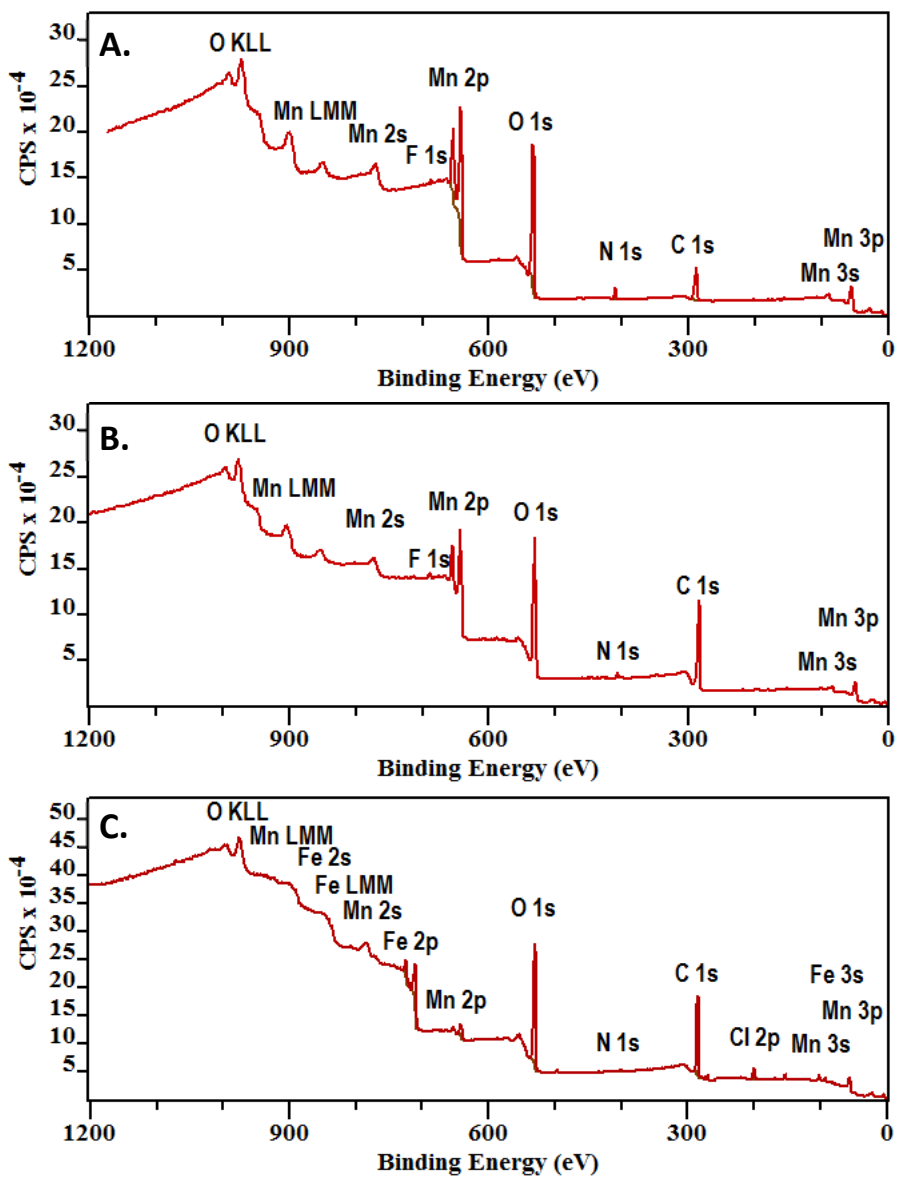
² Department of Chemistry and Biochemistry, University of California San Diego, La Jolla, CA

³ Scripps Institution of Oceanography and Department of Nanoengineering, University of California,
La Jolla, CA

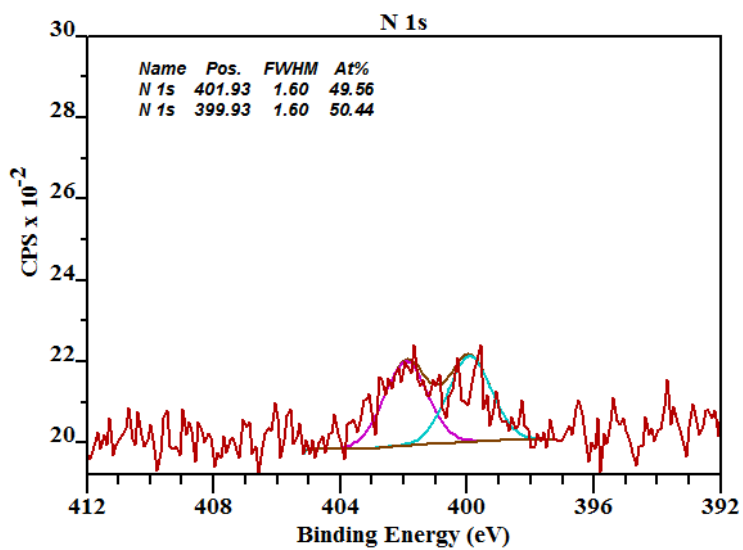
Supplementary Information: Supplemental Figure 1 – 3.

Supplementary Information

Suppl. Figure 1. Survey XPS spectra of fresh fume Mn (A), agglomerated Mn nanoparticles (B) and welding fume sample (C).



Suppl. Figure 2. High resolution XPS spectrum of N(1s) region of the welding fume sample.



Suppl. Figure 3. Characterization and dissolution studies of Mn_3O_4 nanocrystals. SEM images (A), XRD diffractograms (B) and dissolution studies (C) of single phase Mn_3O_4 (left) and mixed phase Mn oxide (right) nanomaterials used as standards. Simulated biological fluids used in dissolution studies: Gamble's (blue) and ALF (brown), and in PBS (pH 7.4) (green) and pH 4.5 (red) buffers.

