

CORRECTION

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# Correction: Emerging investigator series: physicochemical properties of wildfire ash and implications for particle stability in surface waters

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Correction for 'Emerging investigator series: physicochemical properties of wildfire ash and implications for particle stability in surface waters' by Mrittika Hasan Rodela *et al.*, *Environ. Sci.: Processes Impacts*, 2022, 24, 2129–2139, <https://doi.org/10.1039/D2EM00216G>.

An error occurred in the units when calculating yields resulting from the amount of volume used for the extraction/leaching of the solids. However, the focus of the paper was on the comparison of the physical and chemical properties between ash colours and unburned soils and the trends remain the same, despite the error in units. The error did not impact the scientific findings or conclusions reported.

With regards to the comparison to the Chen *et al.* paper (ref. 27), the numerical findings for carbon and nitrogen yields ( $\text{mg g}^{-1}$ ) are no longer within the same range as those reported in Chen *et al.* However, the trends for black and white fresh ashes (collected before rainfall) reported in Chen *et al.* are consistent with this work, as noted later in the paragraph. The difference in numerical values for yields between this study and Chen *et al.* may be due to different fire characteristics, fuel characteristics, time-since-fire, or leaching/extraction methods, among other field and experimental variables.

Therefore, the corrected paragraph on page 2135 should read:

## Chemical composition

The chemical composition of ash drives potential impacts on water quality when ash is mobilized to surface waters. Further, the presence of NOM will increase particle stability in aqueous system by steric interactions and limit particle aggregation and flocculation.<sup>24</sup> In addition to background NOM present in surface waters, post-fire runoff can increase NOM levels.<sup>48</sup> White ash had the lowest mean water extractable organic carbon ( $6.0 \pm 2.5 \text{ mg L}^{-1}$ ) and nitrogen ( $0.3 \pm 0.2 \text{ mg L}^{-1}$ ). Meanwhile, dark gray ash leached 675% higher organic carbon ( $46.5 \pm 2.9 \text{ mg L}^{-1}$ ) and 836% higher nitrogen ( $3.0 \pm 0.5 \text{ mg L}^{-1}$ ) than white ash (Fig. 6a and b). The unburned soil organic carbon ( $6.1 \pm 3.6 \text{ mg L}^{-1}$ ) and nitrogen ( $0.3 \pm 0.2 \text{ mg L}^{-1}$ ) concentrations were similar to the white ash. Black ash leached lower organic carbon ( $8.0 \pm 3.1 \text{ mg L}^{-1}$ ) and nitrogen ( $0.7 \pm 0.3 \text{ mg L}^{-1}$ ) than dark gray ash, which is consistent with the Chen *et al.* (2020) study that also reported lower organic carbon leached from black wildfire ash.<sup>27</sup> Overall, the higher water extractable organic carbon of gray and dark gray ash compared to unburned soil suggests greater stability of ash particles. Therefore, ash particles may not naturally flocculate and settle out in surface waters, rather may be transported downstream.

The corrected Fig. 6a and b are shown here.

In addition, the sentence in the Analytical methods section: "The mixture was filtered with Whatman GF/F 0.7  $\mu\text{m}$  filters and analyzed for dissolved organic carbon and total dissolved nitrogen and reported as gram of organic carbon or nitrogen leached per gram of solid." should instead read "The mixture was filtered with Whatman GF/F 0.7  $\mu\text{m}$  filters and analyzed for dissolved organic carbon and total dissolved nitrogen."

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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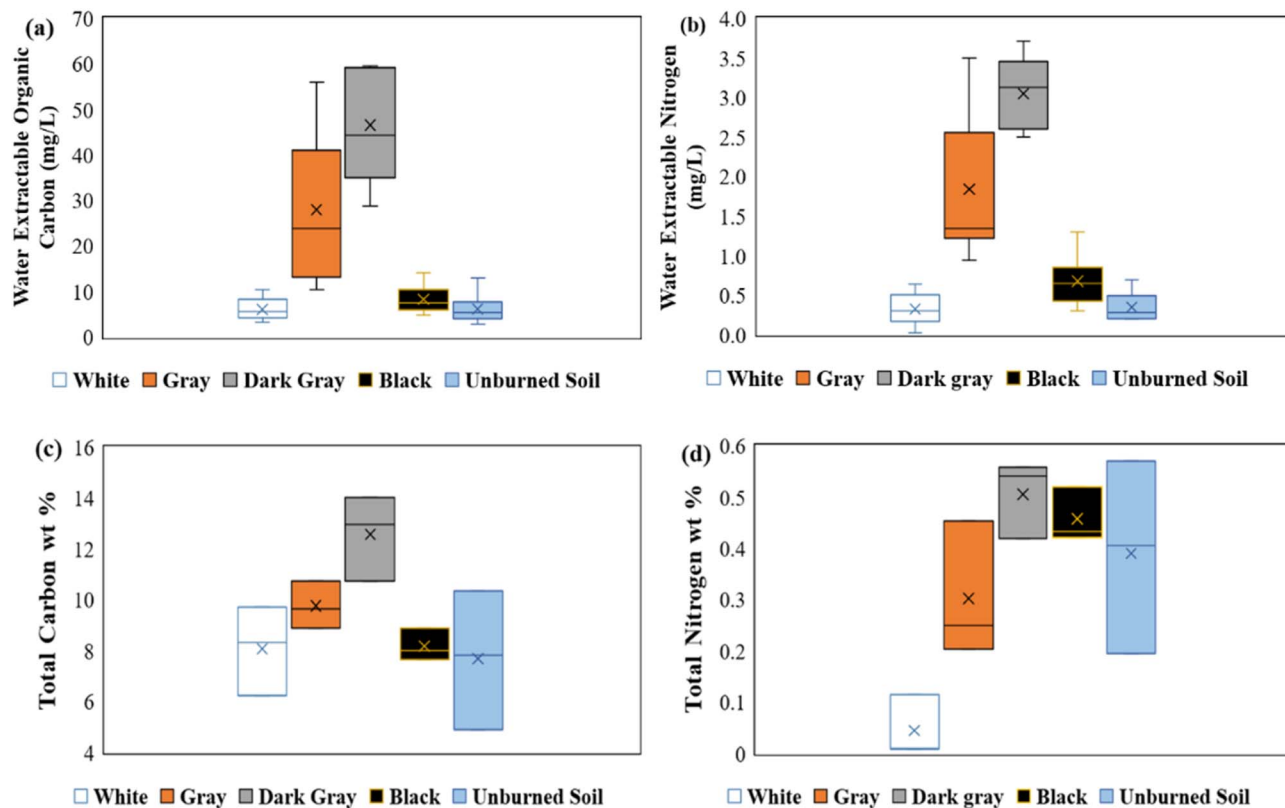


Fig. 6 Boxplots for ash and unburned soil samples of (a) water extractable organic carbon, (b) water extractable nitrogen, (c) total carbon wt%, and (d) total nitrogen wt%. The 'x' represents mean values, the middle horizontal line represents median, lower box line 25th percentile, upper box line 75th percentile, and whiskers represent maximums without outliers. White, gray, dark gray, and black represent ash samples.

