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Erratum

Erratum to:
The formation mechanism of aqueous hydrogen peroxide in a plasma-liquid system with liquid as the anode[⋆]

Eur. Phys. J. D 74: 80 (2020), DOI: 10.1140/epjd/e2020-100371-2

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We find that we made a mistake in the estimation of the H_2O_2 concentration by the colorimetric method in our previous paper (J. Lin et al., Eur. Phys. J. D (2020) 74: 80) [1]. The H_2O_2 concentration is estiamted by the colorimetric method based on the reaction of H_2O_2 and $Ti(SO_4)_2$ in strong acid (Ti^{4+}+ H_2O_2+ $2H_2O \rightarrow H_2TiO_4$+ $4H^+$). The absorbance of the yellow-coloured H_2TiO_4 at 410 nm is proportional to the reacted H_2O_2 concentration [2–5], expressed as

$$C_{H_2O_2} = kI, \qquad (1)$$

where k is the proportionality obtained by a calibration measurement, I is the absorbance at 410 nm of the H_2TiO_4 formed by the reaction of H_2O_2 and $Ti(SO_4)_2$.

In Figure 4 of our paper (J. Lin et al., Eur. Phys. J. D (2020) 74: 80), we used a wrong k of 1.23, it should be 3.7. Therefore, the correct figure should be as Figure 1 here. Because the trends of the H_2O_2 production change are our main concerns other than the absolute value in our paper, this corrigendum does not affect the validity of our disscussion and conclusions. We apologize for this mistake and any confusion it may have caused.

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[⋆] The online version of the original article can be found at https://doi.org/10.1140/epjd/e2020-100371-2.
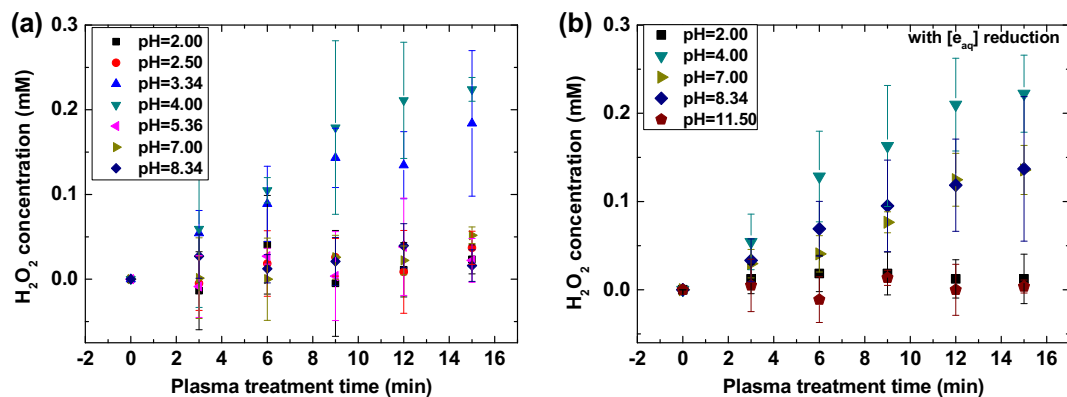
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Fig. 1. The corrected figure for Figure 4 in paper. The formation mechanism of aqueous hydrogen peroxide in a plasma-liquid system with liquid as the anode (Eur. Phys. J. D (2020) 74: 80 https://doi.org/10.1140/epjd/e2020-100371-2).