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Corrigendum: Along-the-channel modeling and analysis of PEFCs at low stoichiometry:  
Development of a 1+2D model

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## Corrigendum: Along-the-channel modeling and analysis of PEFCs at low stoichiometry: Development of a 1p2D model

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The numerical model used in the original article [1] was updated during the review process; however, some cell parameter expressions have remained from the first version of article and mistakenly were not updated during revisions. The expressions used in the actual model and analysis are accurate and therefore none of the results or outcomes are impacted. The oxygen diffusivity in ionomer ( $D_{O_2,m}$ ) expressed in Table 3 of original article is incorrectly reported. The actual expression implemented in the model is as follows:

$$D_{O_2,m} = 1.74525 \times 10^{-10} \lambda^{0.708} \exp\left[\frac{T - 273.15[K]}{106.65[K]}\right] - 2.057 \times 10^{-10} \lambda^{0.708} + 6.5 \times 10^{-10} \left[\text{m}^2 \cdot \text{s}^{-1}\right]$$

The membrane protonic conductivity in vapor equilibrated phase ( $\kappa_{m,V}$ ) expressed in Table S2 (supplementary material, original article) Eq. (11) is incorrectly reported. The actual expression implemented in the model is as follows:

$$\kappa_{m,V} = 27 \left[ \text{S} \cdot \text{m}^{-1} \right] (\varepsilon_w - 0.057)^{1.5} \exp\left[\frac{14468 \left[ \text{J} \cdot \text{mol}^{-1} \right]}{R}\right] \left( \frac{1}{310[K]} - \frac{1}{T} \right)$$

Finally, the membrane water vapor uptake ( $\lambda_v$ ) fitted to experimental data shown in Fig. S3 (supplementary material, original article) is based on an outdated set of experimental data which was replaced by a more reliable data in revised article. The new fit is shown in the following figure.

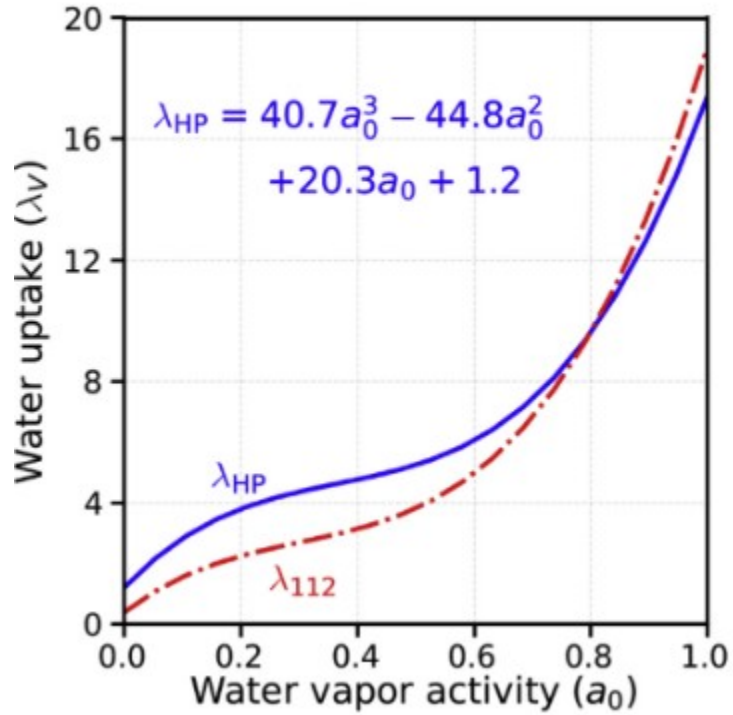


Fig. 1. Vapor equilibrated fitted water-uptake curve for the Nafion®HP membrane and comparison with Nafion®112 membrane

#### References

- [1] L.M. Pant, M.R. Gerhardt, N. Macauley, R. Mukundan, R.L. Borup, A.Z. Weber, Along-the-channel modeling and analysis of PEFCs at low stoichiometry: Development of a 1p2D model, *Electrochim. Acta* 326 (2019), <https://doi.org/10.1016/j.electacta.2019.134963>, 1 34963. L.M. Pant et al. / *Electrochimica Acta* 346 (2020) 1362542