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Correction: Oxygen diffusion dynamics in organic semiconductor films

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Correction for 'Oxygen diffusion dynamics in organic semiconductor films' by Safa Shoaee et al., *J. Mater. Chem. C*, 2015, **3**, 10079–10084.

The authors regret that a number of errors were included in their original article.

The *x*-axis of Fig. 3 should read "O₂ exposure time (days)" instead of "O₂ exposure time (hours)". The corrected Fig. 3 is shown below.

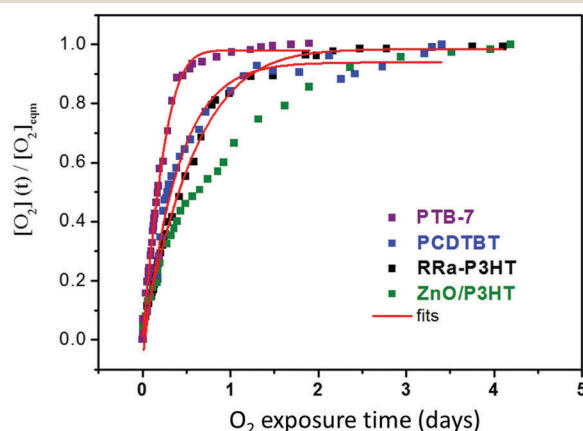


Fig. 3 Local oxygen concentration of partially encapsulated polymer films as a function of time, as measured by transient absorption. The partially encapsulated films were kept in dark and exposed to oxygen atmosphere until saturated. Red lines shows fits to eqn (3).

The original equation 3 was missing an "erfc" term. The corrected equation is shown below:

$$C(t) = C_0 \operatorname{erfc}\left(1 - \frac{x}{2\sqrt{Dt}}\right)$$

The units of "*D*" in Table 1 should be m² s^{−1} rather than cm² s^{−1}. The corrected Table 1 is shown below:



Table 1 Oxygen diffusion half-times ($t_{1/2}$) and diffusion coefficients (D) determined from the data in Fig. 3, using eqn (1) and (3), for the four samples studied herein

Material system	$t_{1/2}$ (hours)	D ($\text{m}^2 \text{s}^{-1}$)
PTB7	4.52	1.2×10^{-8}
PCDTBT	7.60	7.3×10^{-9}
RRa-P3HT	10.01	5.5×10^{-9}
RRa-P3HT/ZnO	16.96	—

The sentence “These values are of similar order of magnitude to those reported previously for organic polymers,^{21,22} with for example previous studies reporting an oxygen diffusion constant for regioregular P3HT of $3 \times 10^{-8} \text{ cm}^2 \text{ s}^{-1}$.^{6,7}” should be changed to “These values are different to those reported previously for organic polymers,^{6,7,21,22} most probably due to film thicknesses of several tens of micro-meter (10–30 nm) being used compared to our thin films (100 nm) where accelerated diffusion is expected.”

The conclusions of this article are not affected by these changes.

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

