# Corrigendum

Corrigendum to "Prospective study of lignin-based and recycled carbon fibers in composites through meta-analysis of life cycle assessments" Journal of Cleaner Production Journal of Cleaner Production 223 (2019) 946-956

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The authors regret that due to an unfortunate mix-up of volume fraction and weight fraction, some of the numbers presented in the article are inaccurate. This does not, however, change any main results or any conclusions drawn. In fact, the conclusions are strengthened.

The errors can be found in Figures 3,4 and 6 and are for the values from the studies by Suzuki & Takahasi 2005a, La Rosa et al. 2016, and Meng et al. (2017). This also means that the corresponding calculations in the supplementary material for these are flawed and should be disregarded.

The numbers and calculations should be changed as follows:

## Suzuki & Takahashi 2005a

The study includes two cases. The first has a volume fraction of 30% fibers and 70% polypropylene, with the weight ratio 0.462:0.538. The second one has a volume fraction of 60% fibers and 40% epoxy, with the weight ratio of 0.692:0.308

## La Rosa et al. (2016)

The study presents a case with a volume fraction of 50%. 0.32 kg of carbon fibers are needed to produce a composite laminate of 0.556 kg. This corresponds to a weight fraction of 58% fibers.

## Meng et al. (2017)

Meng et al. (2017) presents two different cases. One where the volume fraction is 25%, and one where the volume fractions are 50%. The case with the volume fraction of 25% is mixed with PA, the cases with a volume fraction of 50% is mixed with epoxy. The first case should have a theoretical density of 1.3 g/cm<sup>3</sup>, if the fibers have a density of 1.84 g/cm<sup>31</sup> and the polyamide (PA 6.6) has a density of 1.13 g/cm<sup>32</sup>, resulting in a CF weight fraction on 35%. The second case should have a theoretical density of 1.5 g/cm<sup>33</sup> and the resulting weight

<sup>&</sup>lt;sup>1</sup> Average of 1.75-1.93 g/cm<sup>3</sup> as in Gulgunje et al. (2015)

<sup>&</sup>lt;sup>2</sup> Omnexus

<sup>&</sup>lt;sup>3</sup> Assuming an average density of epoxy resin of 1.1-1.2 g/cm<sup>3</sup> as in Bhatia et al. (2019)

fraction of the fiber should be 62%. Note that these values are rough approximations, and the reality might look different depending on actual material properties.

The new values presented above generates new Figures 3, 4, and 6:



Figure 3



Figure 4



Figure 6

The authors would like to apologize for any inconvenience caused.

### References

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