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Retraction: Non-thermal microwave effects in radical polymerization of bio-based terpenoid (meth)acrylates

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Retraction of 'Non-thermal microwave effects in radical polymerization of bio-based terpenoid (meth)acrylates' by Thibault Castagnet, *et al.*, *Polym. Chem.*, 2020, **11**, 6840–6846, DOI: 10.1039/D0PY01192D.

We, the named authors, hereby wholly retract this *Polymer Chemistry* article, due to concerns with the reliability of the data in the published article.

The authors found that, while the temperature of the microwave reactor was relatively well controlled in the lower part of the reactor, the temperature in the upper part was higher. At first sight, this would not necessarily affect the conclusions of the article because even if the average temperature was higher than what was measured at the bottom of the reactor, the high molecular weights obtained in the microwave reactor would still suggest a non-thermal effect. However, the existence of two zones of different temperatures could lead to a different explanation. In the upper part of the reactor, the conversion was high due to the higher reaction temperature, while in the lower part of the reactor, the polymer was formed at a lower temperature and therefore had a higher molar mass. This effect can be reinforced by the diffusion of the initiator from the low temperature region to the high temperature one, where it was consumed at a faster rate. This could explain the observations without considering non-thermal effects, critically affecting the conclusions of the article.

Given the concerns about the validity of the data due to the differences in the reactor temperature, the findings are no longer reliable, and we therefore retract this article. We apologise for any inconvenience to the readers.

Signed: Thibault Castagnet, Amaia Agirre, Nicholas Ballard, Laurent Billon and José M. Asua, 4th August 2021.

Retraction endorsed by Maria Southall, Executive Editor, *Polymer Chemistry*.

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