

Interactive comment on “Unravelling the enigmatic origin of calcitic nanofibres in soils and caves: purely physicochemical or biogenic processes?” by S. Bindschedler et al.

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We thank this referee for his/her relevant comment regarding the quantification of the contribution of organic nanofibres in global Ca and C biogeochemical cycles. We think that this mineralization process is likely of importance as calcitic nanofibres are present in large amounts in some environments and chitin and cellulose are ubiquitous polymers on the Earth. However, we are currently unable to quantify this contribution in terms of Ca and C sequestration and its impact on the global Ca and C biogeochemical cycles. To do so, several points have to be better understood, such as i) dynamics of mineralization, ii) which organic templates are involved in the calcification process,

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and iii) the micro-environmental conditions (temperature, pH, pCO₂, ...) enhancing and able to preserve these nano-features. Therefore, we have rephrased (P2, L41–42) this aspect in order to be more careful with conclusions dealing with the global significance of this process.

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