Priority question for written answer P-005660/2021
to the Commission
Rule 138
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Subject: Silica aerogel and new building materials for improved energy efficiency

The most widely used building material is portland cement, with annual production estimated at over 2 billion metric tons. One estimate puts the total carbon footprint of cement production at around 8 % of global CO_2 emissions. It is imperative to innovate and explore alternative building materials.

One promising potential alternative is silica aerogel, which is typically made up of 0.2 % silica and 99.8 % air, making it extremely light. Strengthened silica aerogels known as X-aerogels can be used as construction materials, instead of cement. Silica aerogels have also been found to be a very effective material for insulation, creating the possibility to greatly improve the energy efficiency of buildings.

One project funded by the Commission's Horizon 2020 programme found that by using aerogels, Europe could potentially reduce CO_2 emissions from heating and cooling by 42 %.[1]

While the price of these materials has been prohibitively high in the past, it is estimated that innovative production methods could result in a 70-90 % decrease in prices in the future.

1. Does Commission plan to leverage silica aerogel to facilitate a leap towards improving the energy efficiency of buildings in the EU?

2. What kind of action does it propose to further decrease the price of new innovative building materials, such as silica aerogel?

[1] https://cordis.europa.eu/project/id/718823