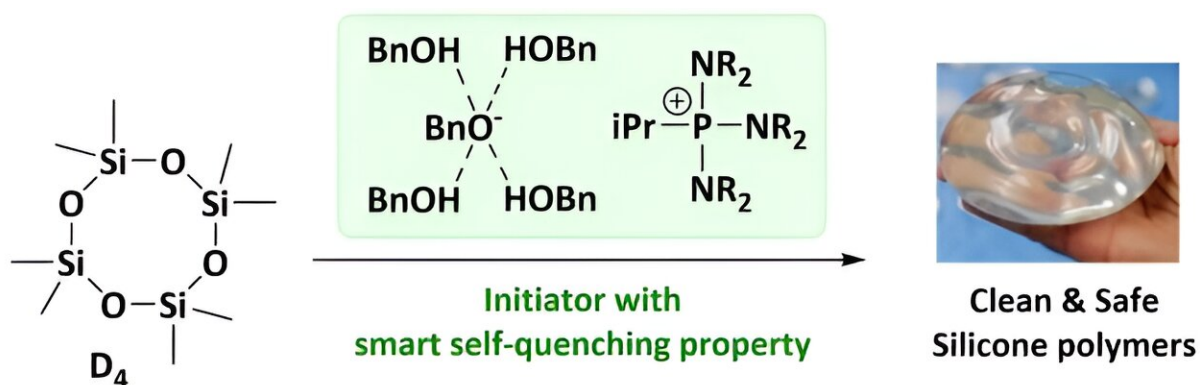


# Developing silicones that are friendlier toward health and the environment

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Silicone synthesis equation developed by the research team (ECOIH/LHFA).  
Credit: © Tsuyoshi Kato/CNRS

Polysiloxanes, the scientific name for silicones, possess exceptional properties, and are used in numerous fields ranging from cosmetics to aerospace. They are absolutely everywhere.

However, they have a major flaw, as small, cyclic oligosiloxanes—toxic for the environment and identified as an [endocrine disruptor](#)—form during their synthesis.

To correct this drawback, a team of scientists led by a CNRS researcher recently developed a new process for synthesizing silicones in a cleaner

and more environmentally-friendly manner by preventing the formation of these small cyclic oligosiloxanes.

The results are published in *Science* and could have a considerable impact on the [industrial sector](#).

**More information:** Limiao Shi et al, Ring-opening polymerization of cyclic oligosiloxanes without producing cyclic oligomers, *Science* (2023). [DOI: 10.1126/science.ad11342](https://doi.org/10.1126/science.ad11342)

Provided by CNRS

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