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Biomimetic strategies leading to greater innovation

1. Is the biomimetic process/chemistry able to mimic the natural texture as well?

Yes, biomimetic approaches have been used to mimic biological surface structures. Examples include lotus leaf mimics (the so-called Lotus Effect for self-cleaning), Sharklet technology that mimics the surface textures of shark skin that make it inhospitable to bacterial colonies, and Gecko tape that mimics the surface of gecko foot pads.

Steadily increasing capabilities for understanding the principles and functionalities behind biological surfaces as well as our increasing dexterity to manufacture at the nano scale, enable us to steadily improve biomimetic textures.

2. Cosmetics is all about formulation. How can we optimize/maintain the efficacy of those biomimetic technologies in a fully formulated system?

This is where mimicking nature is not only at the level of individual compounds that perform a given function or set of functions, but also at the level of ecosystems where there is cooperation between different species.

In the words of one of Biomimicry 3.8's strategic lab partners, James Stephens at Blue Marble Biomaterials, *"Biomimetic experts need to partner and cross pollinate skills with cosmetics formulators to ensure that the final product is designed for maximum efficiency in a target system."*