

# POPULAR SCIENCE



## [THE EQUATION]



## A BACHELOR'S DREAM COME TRUE

Bedeviled by laundry? Chemists have a solution: self-cleaning duds

» THE WHITE LOTUS grows in muddy swamps across Asia, yet its leaves stay squeaky clean. Now a Clemson University research team is attempting to mimic the plant's dirt-resistant powers to keep your clothes spot-free.

The secret to the lotus plant's superior hygiene is the billions of microscopic moguls dotting its waxy surface, says Clemson textile chemist Phil Brown. These bumps reduce the contact area on the leaf and thus prevent anything from clinging to its surface. "Water and dirt just fly off," Brown says.

To mimic this effect in the lab, Brown and his team mixed a liquid polymer with silver particles 100 nanometers in diameter—about the size of a small virus. When applied to a cotton swatch, the

mixture bonded to the test fabric, forming an invisible coating with lotus-like repellent properties. Best of all, your clothes will still feel like clothes, not like a vinyl-covered sofa, notes Brown.

North Carolina-based Nano-Tex already sells a slob-proof treatment that's showing up on brand-name labels, such as Dockers, L.L.Bean, Gap and Old Navy. But Clemson's coating could do more than just repel dirt. Silver, notes Brown, has antibacterial properties, so their treatment could also ward off body odor. "Wouldn't it be great to just shower your jacket with a little water and know it's clean?" he muses. But don't toss the detergent just yet. Brown says the invention won't go commercial for another four years. —MICHAEL STROH

