

October 13, 2002

RESPONSIBLE PARTY/DR. DAVID SOANE; Armor Against Stains

By CAMPBELL ROBERTSON

A LITTLE club soda may erase that wine stain, but if the fabric had been based on new polymer technology, the stain would not have been there in the first place.

A polymer is a giant molecule formed from an arrangement of smaller connected molecules. The structure of a polymer can be manipulated to give it new properties. For Dr. David Soane, a chemical engineer, the practical applications of this manipulation, called nanotechnology, are endless.

Since 1990, he has founded six companies that use the technology to improve upon widely varying products like cancer drugs, eyeglasses and building supplies. But his most visible company is Nano-Tex, which he founded in 1998. Nano-Tex uses polymers to give new characteristics to traditional fabrics.

The original idea was to make clothing that would be impervious to spills, using treatments his company calls Nano-Care, for cotton, and Nano-Pel, for wool and synthetics. Unlike other treatments, which merely coat fabrics, the Nano-Tex products attach "whiskers," or small polymer hairs, to each fiber of a fabric. They prevent water and oil molecules from being able to latch onto the fibers, so that a wine, coffee or ketchup spill can be brushed off as if it were liquid lint.

In 1999, Dr. Soane presented samples of fabric to executives at Burlington Industries. Burlington became a primary investor in Nano-Tex and began mass production of the fabrics. Nano-Tex now has contracts with Eddie Bauer, Levi Strauss, Land's End and others. The prices for Nano-Tex products vary, but a pair of the spill-resistant chinos at Eddie Bauer, for example, costs about \$10 more than ordinary chinos.

Nano-Tex has begun developing other advanced fabrics. By altering the architecture of the polymers, it has produced fabrics that are sweat-resistant, as well as a material called Nano-Touch that has the durability of synthetics but the feel of cotton.

Dr. Soane, now 51, received his Ph.D. in chemical engineering in 1978 at the University of California at Berkeley. He taught there for 16 years before quitting to focus on his businesses full time.

He enjoys the chance to use his knowledge in so many different fields. "Very few academicians work in the fabric industry," he said. "I realized there's a lot of places where nanotechnology can be applied."

CAMPBELL ROBERTSON