

## Green Chemistry is...*less hazardous & safer*

S.C. Johnson & Son, Inc. developed "Greenlist," a system that rates the environmental and health effects of the ingredients in its products, and is using this information to reformulate many of its products. For example, SC Johnson has reformulated its synthesis of Saran Wrap to eliminate the use of nearly 4 million pounds of the hazardous chemical, polyvinylidene.



## Green Chemistry is...*benign by design*

Archer Daniels Midland designed a new biobased ingredient for its latex paints that replaces volatile organic compounds (VOCs). The ingredient, a coalescent, helps the paint particles flow together and cover surfaces while producing less odor and increasing scrub resistance.



## Green Chemistry is...*designing for degradation*

Rohm and Haas' Sea-Nine marine antifouling agent keeps the hulls of ships clean, creating less drag, saving fuel and transportation costs. Sea-Nine is designed to rapidly break down into benign parts so that the marine environment is not harmed.



## Green Chemistry is...*innovative and inspired*

Hercules, Inc. with Professor Li (OSU) and Columbia Forest Products designed a new adhesive for manufacturing plywood and other wood composites. Their environmentally responsible adhesive is soy-based instead of formaldehyde based, and is stronger than and as cost-effective as conventional adhesives.



## Green Chemistry is...*renewable & sustainable*

NatureWorks' process of making biobased, compostable and recyclable polylactic acid (PLA) plastics eliminates the use of organic solvents and reduces reliance on petroleum products and other hazardous materials. Its synthesis recycles byproducts and is very energy efficient.



# Green Chemistry...*Of Course!*

## Green Chemistry is...*economical*

AgraQuest's Serenade fruit & vegetable biofungicide is nontoxic to beneficial and non-target organisms, does not generate any hazardous chemical residues, and is safe for workers and groundwater. Serenade is based on a naturally occurring strain of bacteria and is listed for use in organic farming.



## Green Chemistry is...*pollution prevention at the molecular level*

Pfizer's synthesis of Sertraline has been reduced from a three-step to a single-step process, resulting in a much higher yield while eliminating over 700 metric tons of waste every year - that's a whole lot of molecules!

