All that glitters — CLEANS

Gold is the latest weapon against toxic waste.

GOLD DETERGENT may sound like some hip soap for celebrities, but it could turn out to be the best way to clean up toxic waste.

Michael Wong, a chemical engineer at Rice University, has discovered that gold can help to destroy cancer-linked chemicals used by factories and dry cleaners, and in certain household products, such as spot removers and cosmetics.

Today, more than 27,000 sites nationwide are contaminated with toxins called trichloroethylene (TCE) and perchloroethylene (PCE). Current cleanup techniques would cost billions of dollars to deploy, and they wouldn’t even destroy those chemicals — they’d only move them to another site.

Wong used his “chemist’s intuition” and conceived of combining gold with the metal palladium to see if the combination might be effective. He dusted palladium over tiny samples of gold, then sprinkled the resulting “fairy dust” onto contaminated water. The golden detergent broke down the chemicals into the more environmentally friendly ethane.

Wong hopes his discovery can be used soon to help clean up toxic waste sites at a fraction of the cost of current techniques. And, one day, the precious-metal concoction might be used to purify drinking water in Third World countries. — Karen C. Fox