Sea sponge inspired solar cells described in *New Scientist,* 24 March 2007, p32. Some sea sponges are covered with fine spikes of silica, which they make by converting silicic acid from sea water, using an enzyme named silicatein to catalyse the reaction. Spikey structures like these could help make photovoltaic cells (solar panels) more efficient, but making them involves an expensive, high energy process conducted at high temperatures and low pressures. The sponge makes them at low temperatures and near neutral pH - much easier conditions to work with. Researchers at the University of California Santa Barbara have studied the golden puffball sponge, which makes silica spikes, and have developed an analogous process that makes crystalline layers of zinc oxide, using ammonia to catalyse the conversion of zinc nitrate to zinc oxide. The researchers have been able to use the crystals to make some simple solar cells. One of the researchers, Birgit Schwenzer, commented: "There are still problems but the process seems to be working at really low temperatures and producing devices at really low cost."

Editorial Comment: While intelligent, creative chemical engineers continue to apply their minds to solving the problems with the process they invented, the sponge, which has no brain, will continue to make silica spikes without any problems. Therefore, there is no excuse for refusing to believe the sponge, and the enzyme that catalyses the silicic acid reaction, were designed and created by a far more intelligent chemist. (Ref. design, chemistry, invertebrates)

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