Natural sand is hydrophilic, or water loving. It readily sticks to water, and immediately sinks when placed in the liquid. The surfaces of both sand and water carry positive and negative charges, and thus are attracted to each other.

By applying nanotechnology, scientists have created a way to make sand water repellant, or hydrophobic. They expose natural sand grains to a silicon compound, which forms a non-polar layer on the grains’ surfaces. This layer repels water, which is a polar molecule.

Special sand repels water molecules.

Hydrophobic sand, also known as “magic sand,” is an example of science on the nanoscale. Treating the surface of individual grains, produces a new type of sand that behaves very differently from regular beach sand.

Ordinary sand sticks to water molecules.

Natural sand is hydrophilic, or water loving. It readily sticks to water, and immediately sinks when placed in the liquid. The surfaces of both sand and water carry positive and negative charges, and thus are attracted to each other.