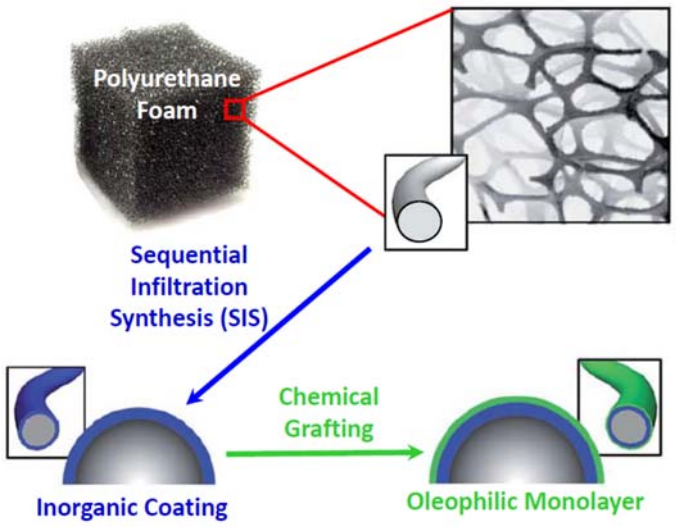

Figure 1: Oleo Sponge fabrication begins with commercial polyurethane foam. Sequential infiltration synthesis (SIS) is performed to grow an inorganic "seed" layer in the near surface region of the polymer ligaments of the polyurethane foam. This inorganic layer presents a high density of functional groups for the subsequent chemical grafting of an oleophilic monolayer. The result is a hydrophobic, oleophilic material that is highly effective at selectively adsorbing oil from water. The material can be squeezed to recover the oil, and used again.

Figure 2: Oleo Sponge was tested in the 2 million gallon salt-water wave tank at the Ohmsett facility in Leonardo, NJ. An 8'x8' frame was covered with Oleo Sponge pads, and dragged through a subsurface plume of crude oil droplets. Oleo Sponge was highly successful in extracting the crude oil from the salt water, and is the only reusable sorbent material with this capability.