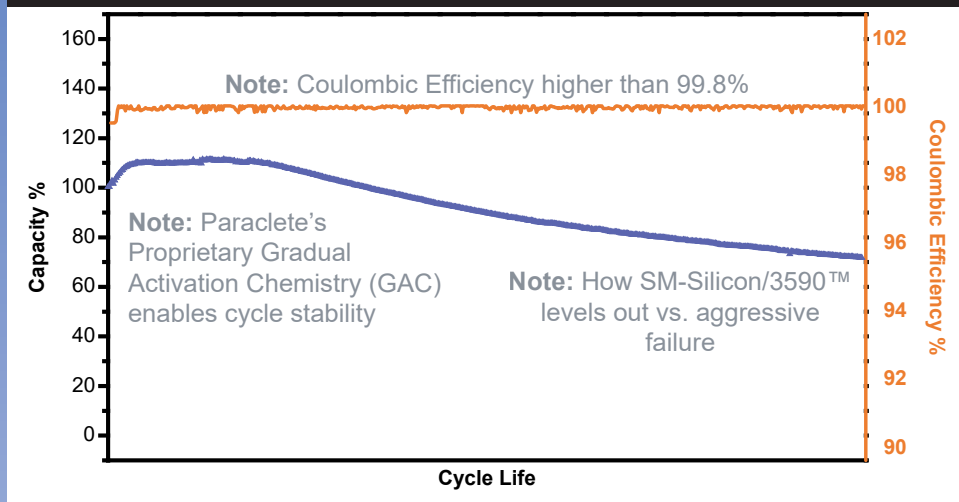


# SM-SILICON/3590™

Get a Sample and  
Validate for Yourself!

## SM-Silicon/3590™ The Capacity of Silicon, The Price and Stability of Graphite

### Paraclete's SM-Silicon/3590™ Cycles



SM-Silicon/3590™ %, e.g. Loadings	Capacity mAh/g
4-5%	472-525
6-8%	565-630
8-10%	630-690
15-20%	850-1015
25%-55%	1100-2000

### SM-Silicon/3590™ Engineering Design

Paraclete Energy's **SM-Silicon/3590™** is the highest capacity, commercially viable, cycle-stable validated anode material available on the market today, while being priced like graphite \$/kWh.

Products currently on the market at 400-450 mAh/g require also using their supplier's graphite and their fixed ratio of silicon to graphite. With Paraclete's **SM-Silicon/3590™**, customers can use their preferred graphite, and can add more or less **SM-Silicon/3590™**, changing the reversible

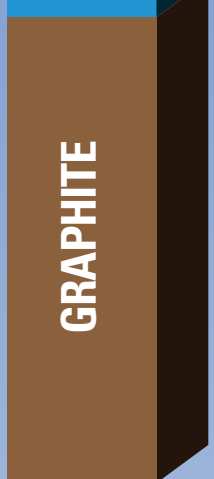
capacity to meet the application's requirements. With **SM-Silicon/3590™**, customers can also use a less expensive graphite and add **SM-Silicon/3590™** until the desired capacity is achieved. This significantly reduces the total cost of the cell.

This is particularly advantageous because **SM-Silicon/3590™** is up to five times less expensive than the silicon graphite blend used in the 400-450 mAh/g product already on the market.

### Use the Graphite You Want at any Ratio

#### COMPETITOR'S GRAPHITE BLEND

- ▶ Receive ~95% Graphite
- ▶ Must use their Graphite
- ▶ Must use their ratio of Si to Graphite up to 450 mAh/g
- ▶ 1st cycle efficiency of SiOx is 65-70%
- ▶ Implied cost of silicon is ~\$1,200/kg



#### SM-SILICON/3590™

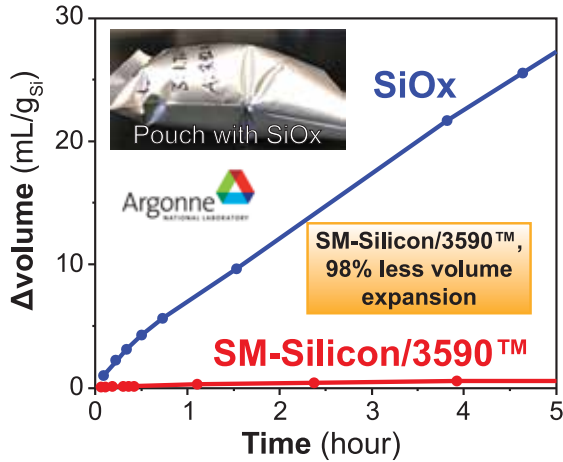
- ▶ Receive 100% air-stable powder, 3590 mAh/g silicon
- ▶ Use the Graphite you want to use
- ▶ Customer selects Si to Graphite ratio up to 3,590 mAh/g
- ▶ 1st cycle efficiency 85-94%
- ▶ Priced like Graphite \$/kWh



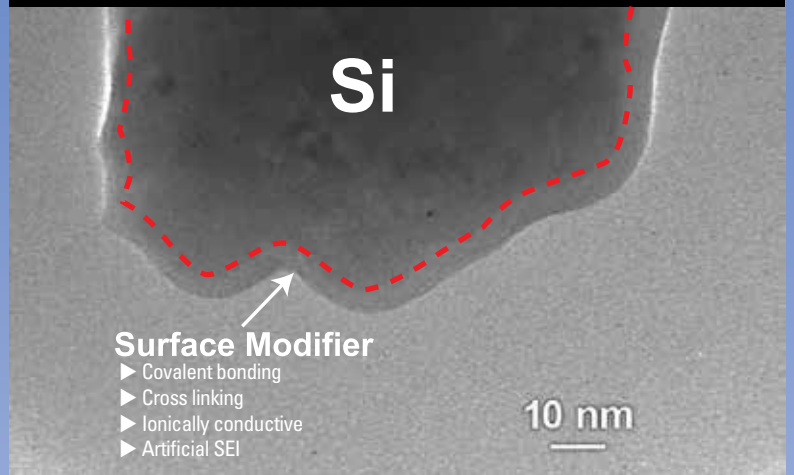
# SM-SILICON/3590™

SM-Silicon/3590™ Features an Outer, Artificial SEI.  
This Surface Modifier Shields the Silicon from the Electrolyte.

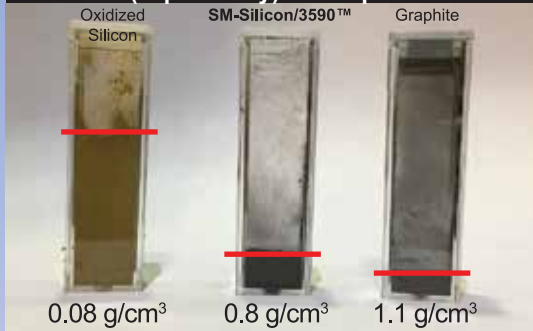
SM-Silicon/3590™ Doesn't Generate Dangerous Hydrogen Gases



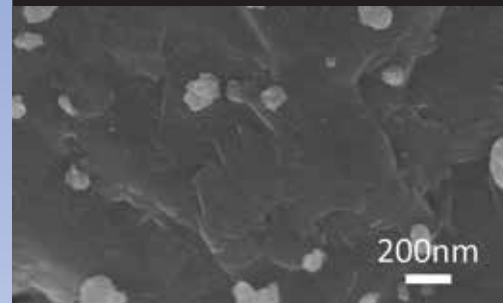
TEM Image Showing the Outer, Artificial SEI, Stabilizing Shell of 150nm SM-Silicon/3590™



SM-Silicon/3590™ Consumes ~Same Space (Tap Density) as Graphite



SM-Silicon/3590™ Disperses Well in Aqueous and Nonaqueous Slurries



**PARACLETE**  
ENERGY

## Energy Capacity Comparison

