



Assessed “best electrode performance” and “the most repeatable silicon powder source batch-to-batch” by the US DOE’s Vehicle Technology Office.

Nanoparticle Silicon Enables Li-ion and Solid Electrolyte Batteries To Last Much Longer Between Recharges

# Paraclete Has It Now!

## The Paraclete Energy Advantage

- Paraclete Is a USA Company.
- Domestic & International Patents (USA, China, Canada, Japan, Korea, etc.)
- Existing Production Capacity (Grams to Tons!)
- Experienced Industry Executives
- Customers Consist of Multiple Tier 1 Players Across the Battery Value Chain

## Why Paraclete Energy Is Best

- Production, Qualification, Evaluation **SM-Silicon/3590™** Powders Available From Grams to Tons Today.  
**Prove for Yourself That Paraclete Has It Now!**
- Optimized for the Customer’s System.
- Best Performance From a Capacity / First Cycle Efficiency / Cycle Stability / Cost / Availability of Any Silicon on the Market.
- We Can Provide You a First-to-Market, Disruptive Performance Advantage Today!
- The Only Silicon That Checks **Any** of Those Boxes – And the Silicon That Checks **All** of Those Boxes – Is Paraclete’s **SM-Silicon/3590™**.



## The Paraclete Energy Business Model

- Paraclete Uses Environmentally-friendly Commodity Chemicals: 100% Are either Used or Recovered and Reused
- Paraclete’s Manufacturing Is a Low Temperature and Low Cost Process
- Distributed Manufacturing Model — Put the Plant Where It Is Most Economical
- Management Has **Over 150 Years in Industry**
- Over 50 Patents Applied For, Pending or Granted
- We Create for Our Customers a **Significant, Sustainable, Competitive Advantage.**

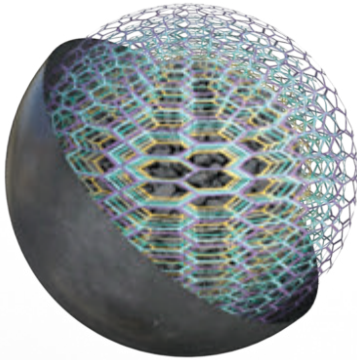
**Be First to Market!**

**Contact Paraclete Energy To Prove for Yourself. Paraclete Has It Now.**

Phone: +1 (734) 288-4120  
E-mail: [info@ParacleteEnergy.com](mailto:info@ParacleteEnergy.com)  
Address: 700 West Industrial Dr, Chelsea, MI 48118

# TECHNICAL

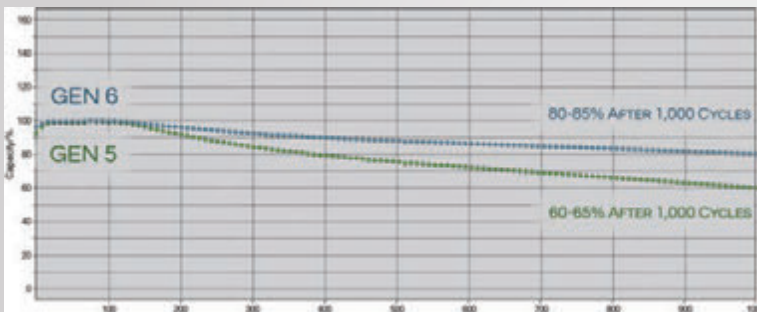
The typical solution when dealing with silicon in a Li-Ion or Solid Electrolyte Battery is to use a costly, high-temperature process to form a hard carbon matrix surrounded by more than 80% inactive material. Instead, Paraclete uses an inexpensive polymer matrix to mitigate the issues of using silicon while using almost all active material, making much higher energy capacity available. The self-healing, highly conductive, cross-linked, elastomeric, porous SM-Silicon/3590™ makes this possible.



### Paraclete's SM-Silicon/3590™:

- 7 times energy density of graphite
- 4.4 times energy density of closest silicon competitor
- Typical FCE of 90%
- <4% swelling
- Fast charge and cycle stability for EVs
- Cheaper than graphite!

**SM-Silicon/3590™** is upwards of **80% silicon**, while competitive silicon anode materials are typically just **12% silicon**. Paraclete technology mitigates the problems caused by silicon's expansion, while using much less inactive material. More silicon equals more energy – and more miles between charges. It's finally that simple.



| SM-Silicon/3590™ Capacity<br>%, e.g. Loadings | Capacity<br>mAh/g | Wh/kg     | Wh/L      |
|---|-------------------|-----------|-----------|
| 4-8%  | 450-650           | 133-340   | 340-765   |
| 8-15%   | 650-900           | 225-500   | 520-1300  |
| 15-25%  | 900-1100          | 450-800   | 1100-1800 |
| 25-55%  | 1100-2000         | 600-1100  | 1500-2500 |
| 55-100%                                       | 2000-2500         | 1100-1935 | >2500     |
| Existing<br>Li-Ion Batteries                  | 250-350           | 90-150    | 325-400   |

## Paraclete Has It Now!

Contact Paraclete Energy To Evaluate  
**SM-Silicon/3590™** To Prove It for Yourself.