

No chlorinated by-products.



Provides for derivatizing the sila-adamantane cluster in site selective fashion with either the same or unique functional groups.



Atomically precise structure of sila-adamantane is an advantage over existing silicon nanocrystals that are heterogeneous in core size and surface chemistry.

SUGGESTED USES

Applications that could be enabled by this invention include:



Use as a ligand for improved chemical catalysis



Nanoscale silicon electronics



Battery anode materials



Pharmacology and medicine



UV/blue-emitting materials



Atomically precise versions of silicon donor qubits

STATE OF DEVELOPMENT

Experimental, lab-level demonstration of the process. 20 derivatives of sila-adamantane have been successfully synthesized and are ready for testing.

RELATED MATERIALS

► [Site-Selective Functionalization of Sila-Adamantane and Its Ensuing Optical Effects](#)

University of California, Riverside
Office of Technology Commercialization

200 University Office Building,
Riverside,CA 92521

otc@ucr.edu
<https://research.ucr.edu/>