Supplementary Materials to the manuscript

The Reaction of the $Si_8O_{20}(SnMe_3)_8$ Building Block with Silyl Chlorides: A New Synthetic Methodology for Preparing Nanostructured Building Block Solids

Jason C. Clark, Craig E. Barnes*

Department of Chemistry, University of Tennessee, Knoxville, TN 37996-1600

Submitted to *Chemistry of Materials*

Table of Contents:

Table S2

BET Surface area analysis of the solids resulting from the reaction of $HSiCl_3$ with $Si_8O_{20}(SnMe_3)_8$ under the conditions given. Absorption gas: nitrogen. Pore size distributions calculated using standard BJH equations.

Figure S1

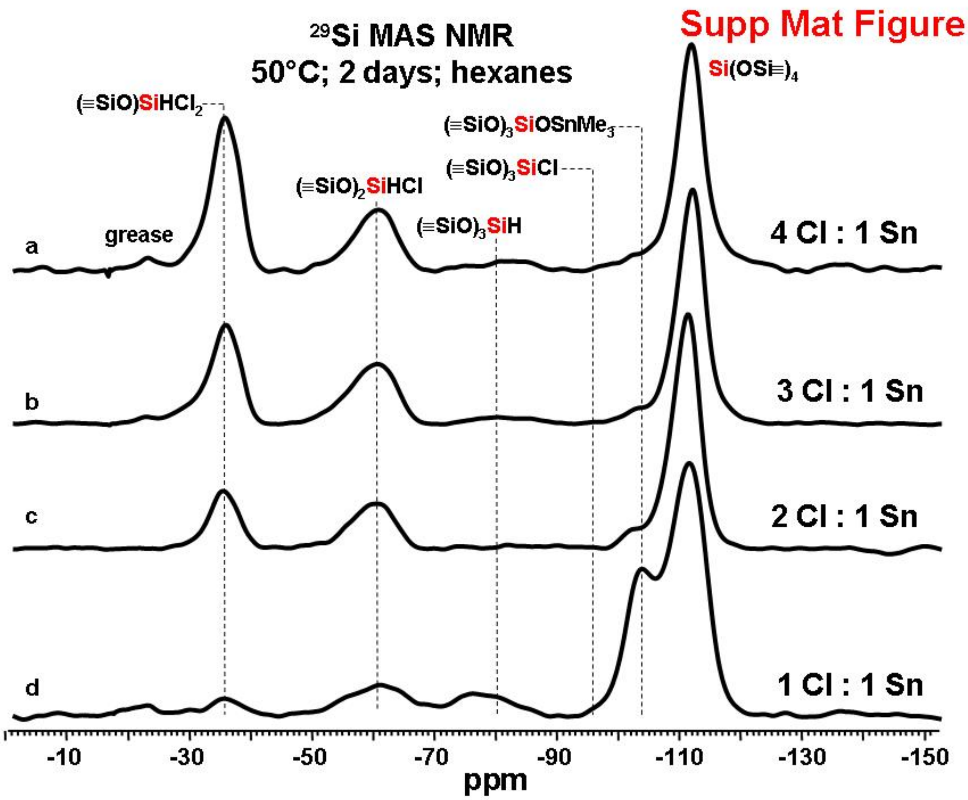

Figure S2

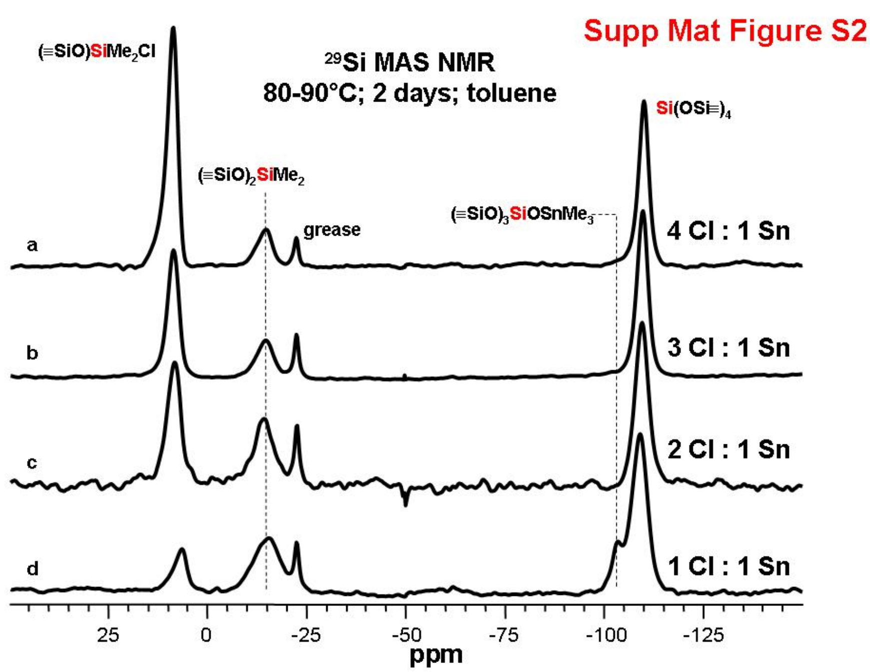

Figure S3

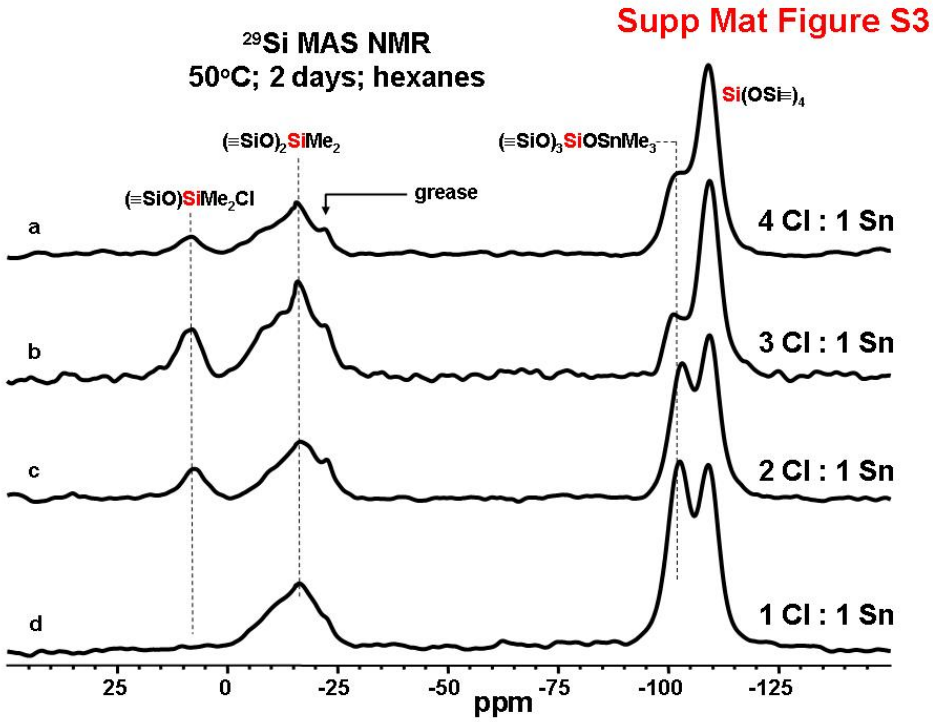

Figure S4

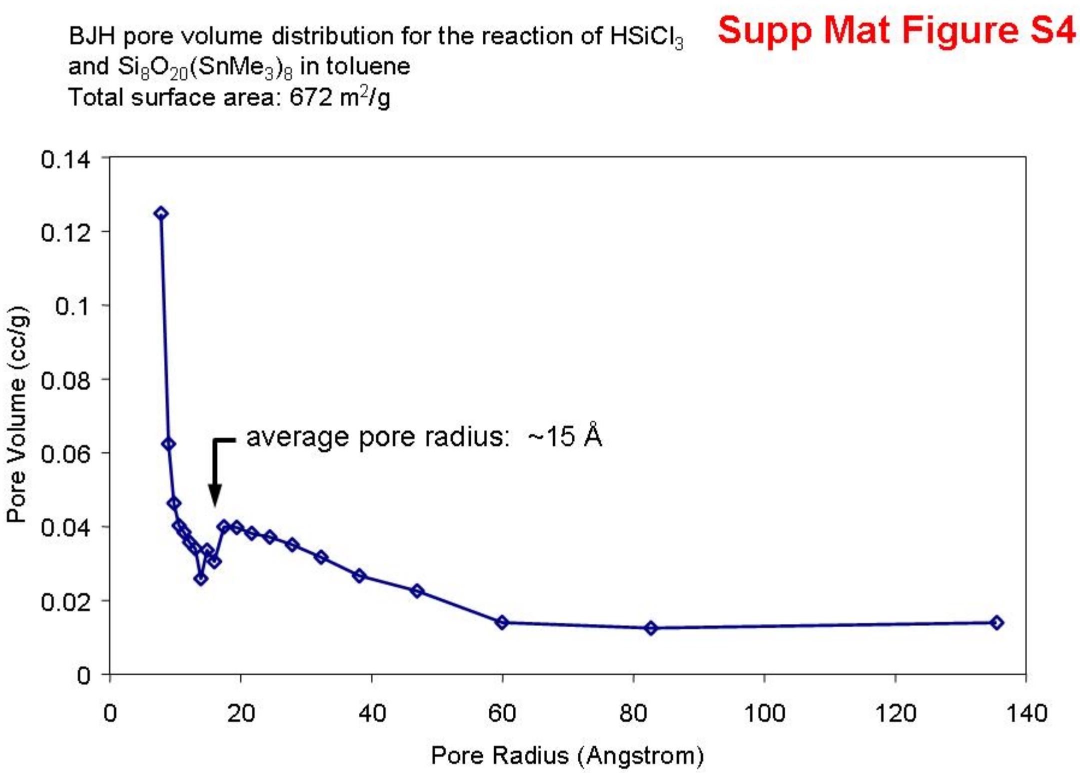

Figure S5

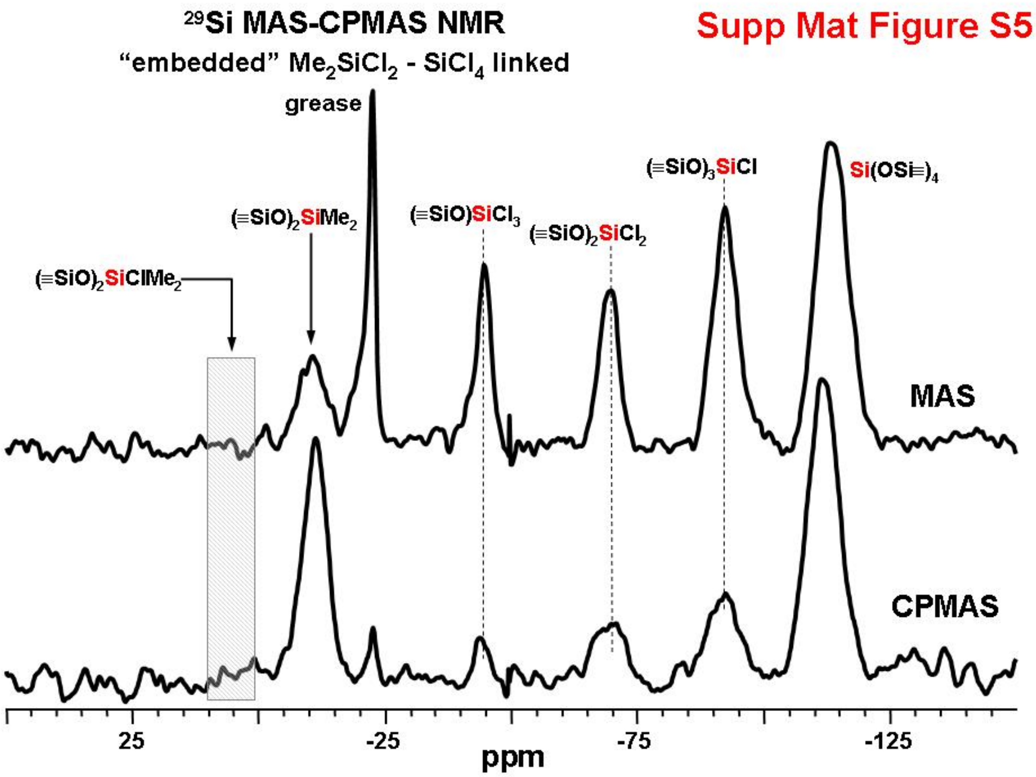

Figure S6

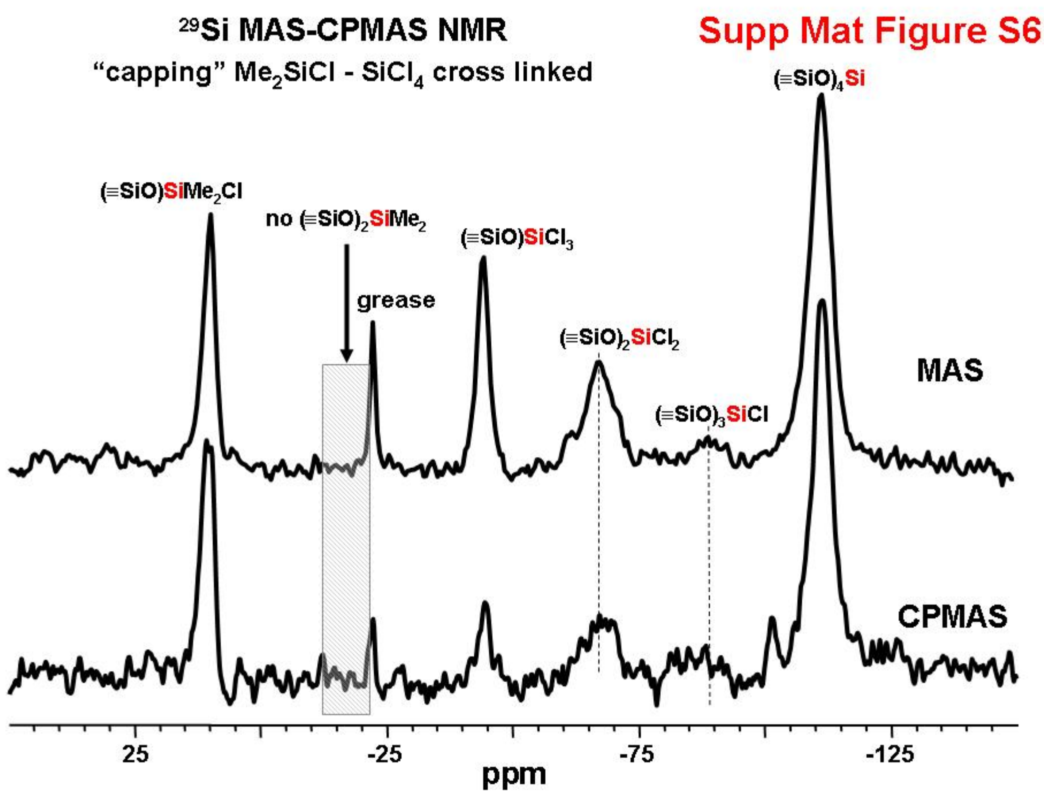

Table S1

Supp Mat Table S1

Table S1 BET Surface area analysis of the solids resulting from the reaction of Me_2SiCl_2 + $Si_8O_{20}(SnMe_3)_8$ under the conditions given. Absorption gas: nitrogen. Pore size distributions calculated using standard BJH equations.

Conditions	Cl:Sn	Surface Area (m^2/g)	Total Pore Volume (cc/g)	Average Pore Radius (Å)
Toluene, 80-90°C, 2 days	4:1	low	low	low
Toluene, 80-90°C, 2 days	3:1	low	low	low
Toluene, 80-90°C, 2 days	2:1	172	0.150	17
Toluene, 80-90°C, 2 days	1:1	669	0.496	15
Hexanes, 50°C, overnight	4:1	13	0.015	24
Hexanes, 50°C, overnight	3:1	29	0.171	13
Hexanes, 50°C, overnight	2:1	12	0.010	19
Hexanes, 50°C, overnight	1:1	14	0.021	30

Table S2

Supp Mat Table S2

Table S2 BET Surface Area Analysis of the solids resulting from the reaction of $HSiCl_3$ + $Si_8O_{20}(SnMe_3)_8$ under the conditions given. Absorption gas: nitrogen. Pore size distributions calculated using standard BJH equations.

Conditions	Cl:Sn	Surface Area (m^2/g)	Total Pore Volume (cc/g)	Average Pore Radius (Å)
Toluene, 80-90°C, 2 days	4:1	low	low	low
Toluene, 80-90°C, 2 days	3:1	558	0.400	14
Toluene, 80-90°C, 2 days	2:1	660	0.513	16
Toluene, 80-90°C, 2 days	1:1	672	0.539	16
Hexanes, 50°C, overnight	4:1	336	0.243	14
Hexanes, 50°C, overnight	3:1	324	0.254	16
Hexanes, 50°C, overnight	2:1	401	0.295	15
Hexanes, 50°C, overnight	1:1	58	0.046	16