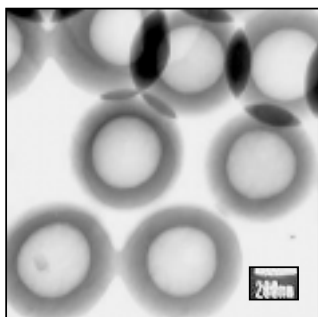


Supplementary Information

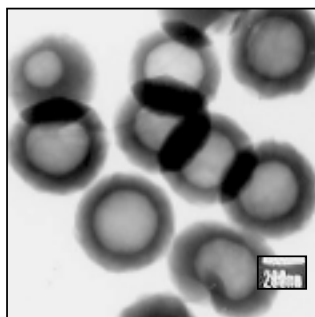
1

Hydrolysis Time :

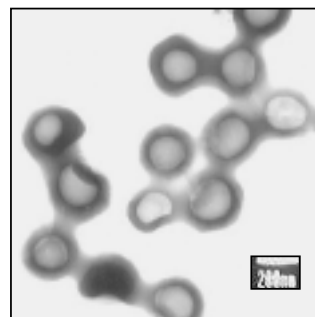
(0.05 M PTMS, 0.72×10^{-2} M HNO₃, 50 °C)



0.5 min



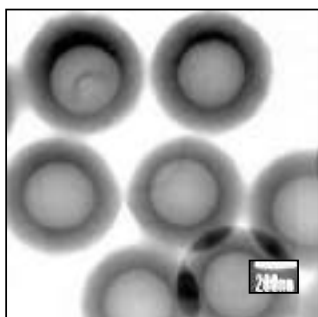
3 min



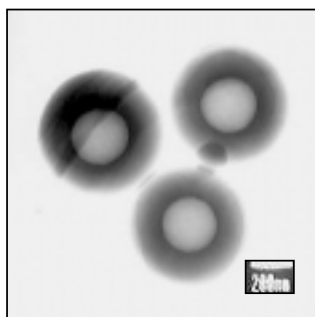
10 min

Reaction Temperature :

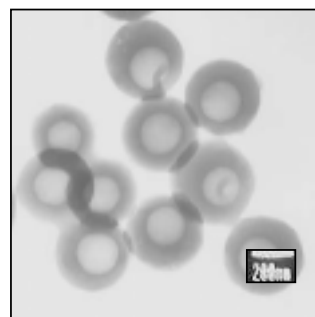
(0.05 M PTMS, 0.14×10^{-2} M HNO₃, hydrolysis time 4 min)



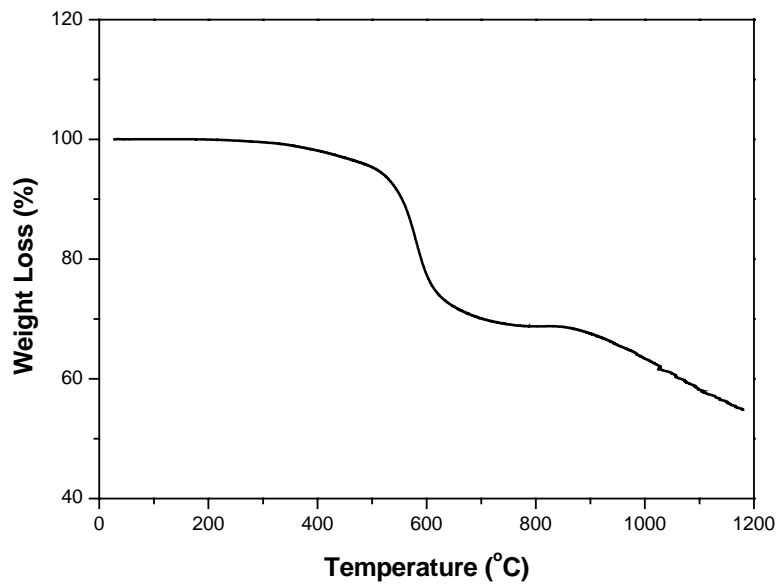
40 °C



50 °C



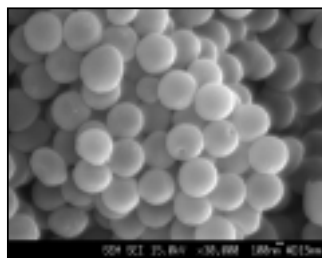
80 °C

TGA of hollow particles :

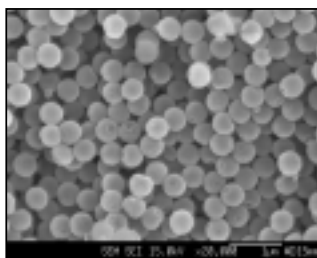
* 10 °C/min to 1200 °C under N₂

3

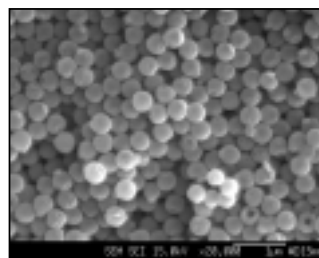
Calcination :



350 °C



550 °C



1200 °C

BET measurement (N₂ sorption) :

Sample	Surface area (m ² /g)	Pore volume (cm ³ /g)
Hollow Particles	16.57	0.033
Calcined Hollow Particles (550 °C)	605.66	0.307