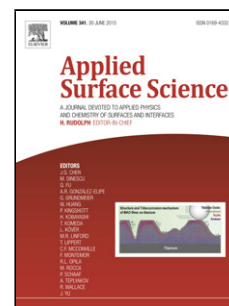


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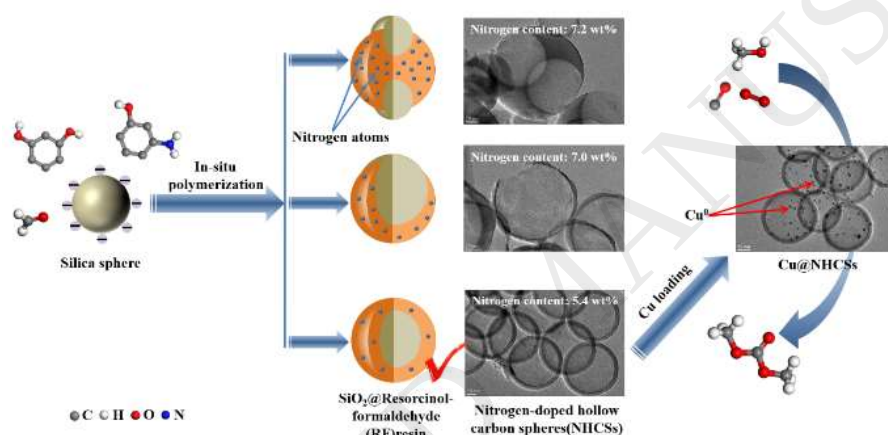
Remarkable Activity of Nitrogen-doped Hollow Carbon Spheres Encapsulated Cu on Synthesis of Dimethyl Carbonate: Role of Effective Nitrogen

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Graphical abstract



Nitrogen content of NHCSs has an important influence on formation core-shell structure and catalytic performance for the synthesis of DMC.

Highlights:

- Nitrogen content of NHCSs can be controlled successfully.
- Perfect spheres are obtained when nitrogen content is not higher than 5.4 wt.%.
- Particle size of Cu is greatly influenced by effective nitrogen content.
- TOF value of Cu@NHCSs is 6 times higher than non-doped Cu@Carbon on DMC synthesis.

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