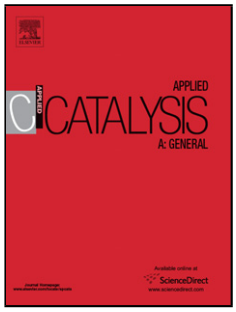

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A sinter resistant Co Fischer-Tropsch catalyst promoted with Ru and supported on titania encapsulated by mesoporous silica

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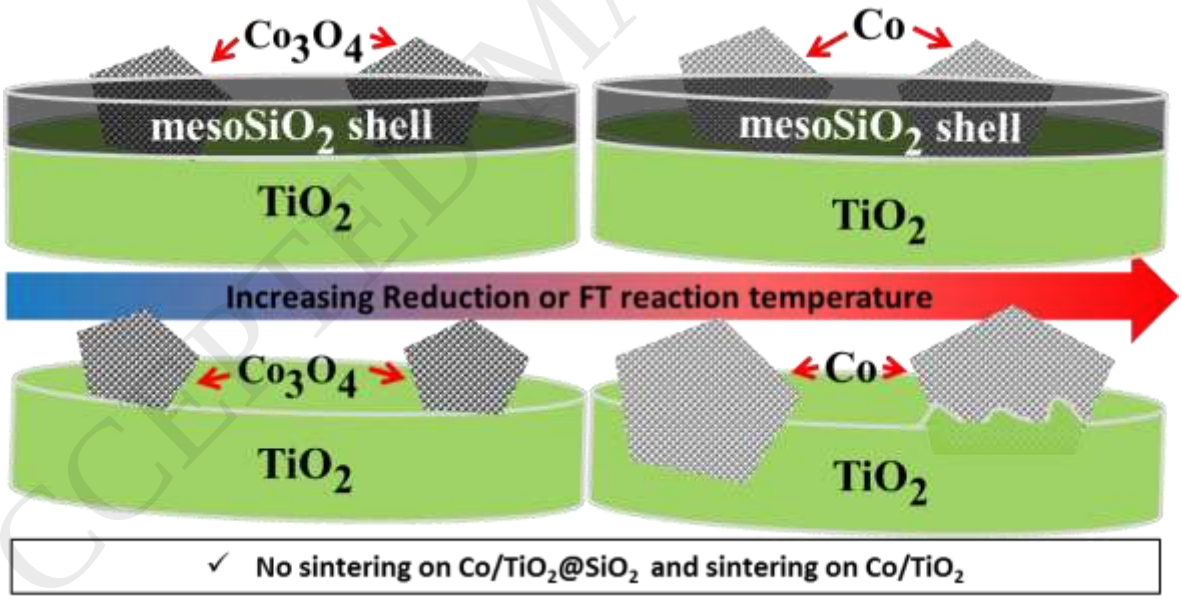
Graphical abstract



Highlights

- Fischer-Tropsch catalyst with a silica shell coating was prepared
- Silica shell is highly porous
- Shell renders supported Co nanoparticles sinter resistant
- Limited Co crystallite growth during reduction as evidenced by in situ PXRD analysis