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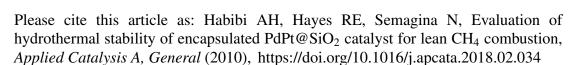
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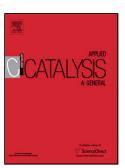
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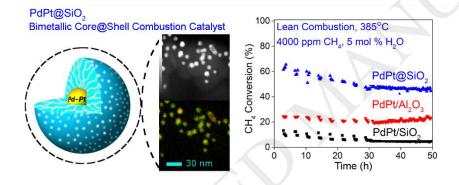
# Evaluation of hydrothermal stability of encapsulated PdPt@SiO<sub>2</sub> catalyst for lean CH<sub>4</sub> combustion

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#### Graphical abstract



#### **Research** Highlights:

- PdPt nanoparticles are encapsulated in silica for wet methane combustion catalysis
- The encapsulated catalyst shows higher conversion than impregnated Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub>
- The shell remains intact but PdPt morphology and dispersion change after ageing

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