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ACCEPTED MANUSCRIPT

Fabrication of perovskite-type macro/mesoporous $La_{1-x}K_xFeO_{3-\delta}$ nanotubes as an efficient catalyst for soot combustion

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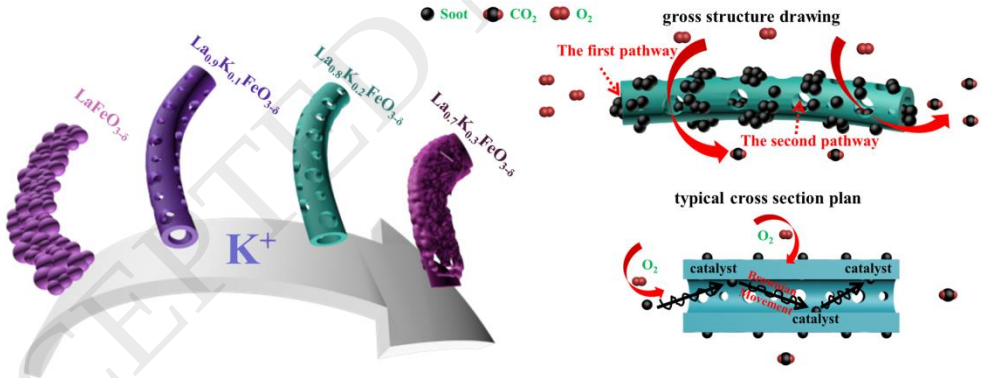
Graphical abstract



Highlights

- The perovskite-type $La_{1-x}K_xFeO_{3-\delta}$ nanotubes were prepared by electrospinning.
- The influence of K^+ on the macro/mesoporous nanotubular structure was captured.
- The substitution of K^+ in $LaFeO_{3-\delta}$ improves the redox ability of catalyst.
- $La_{0.8}K_{0.2}FeO_{3-\delta}$ nanotubes showed high activity and stability for soot combustion.

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