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Characterisation of well-adhered  $\text{ZrO}_2$  layers produced on structured reactors using the sonochemical sol-gel method.

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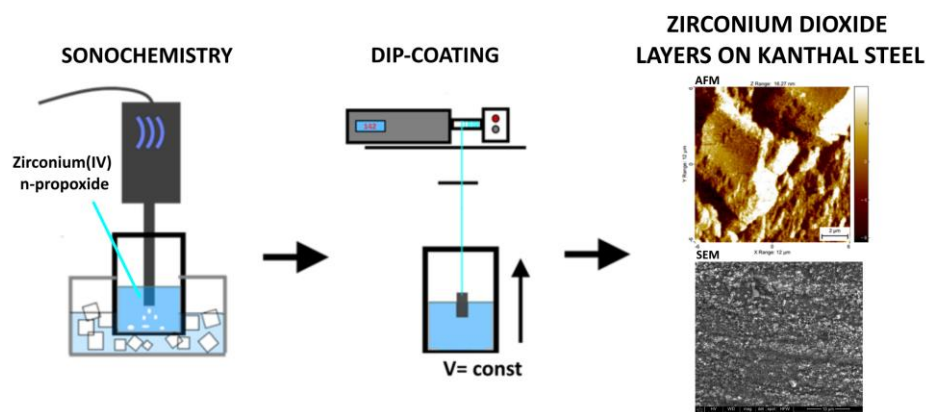
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Graphical abstract



Highlights

- Method of preparation of  $\text{ZrO}_2$  layers via *in situ* sonochemical process is proposed
- $\text{ZrO}_2$  layers are deposited onto the metallic supports
- $\text{ZrO}_2$  coatings are uniform and cracks-free
- Deposited  $\text{ZrO}_2$  layers are highly resistant to mechanical factors

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