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Title: Effect of transition metal dopants (M= Nb, La, Zr, and Y) on the M-TiO₂ supported V₂O₅ catalysts in the selective oxidation of H₂S to elemental sulfur

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Revised Manuscript

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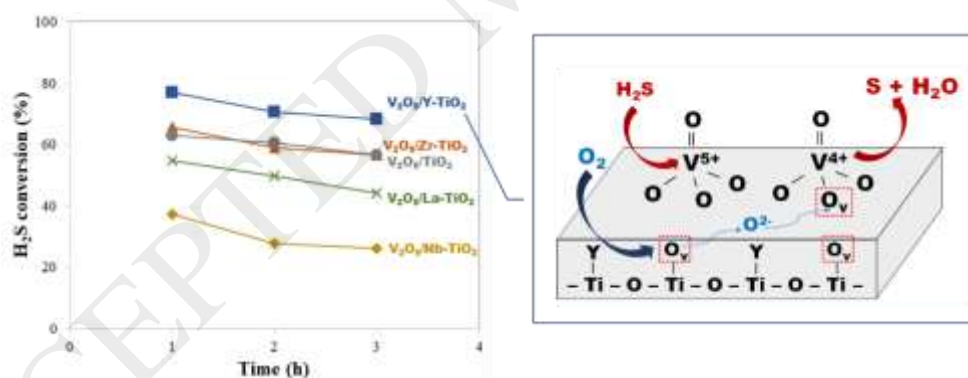
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Graphical abstract



Highlights:

- Low temperature selective H₂S oxidation on modified-TiO₂ supported V₂O₅.
- P-25 TiO₂ was modified by addition of different dopants (Nb, La, Zr, and Y).
- V₂O₅/Y-TiO₂ showed highest H₂S conversion at ~77% with low SO₂ formation.
- Y addition promoted more surface oxygen formation than that of Zr.
- Nb or La addition suppressed surface oxygen being formed.

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