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Thermal treatments of precursors of molybdenum and vanadium oxides and the formed $\text{Mo}_x\text{V}_y\text{O}_z$ phases active in the oxidehydration of glycerol

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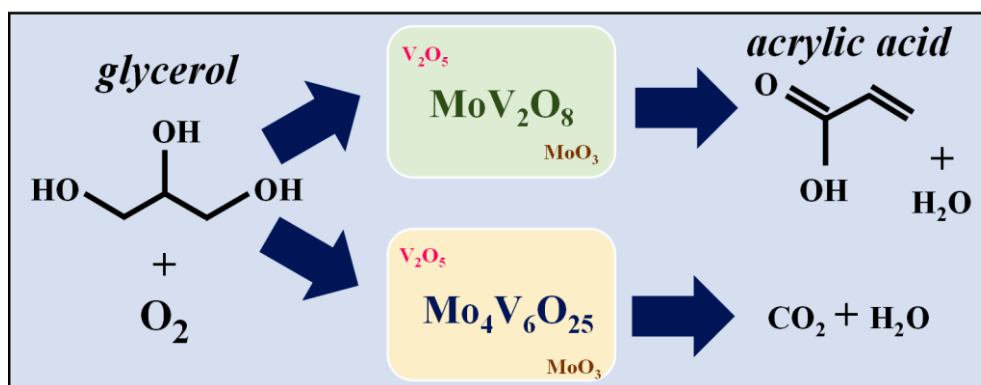
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Graphical abstract



Highlights

- Characterization of catalytic properties of mixed oxides of V and Mo
- The orthorhombic MoV_2O_8 structure was most active in glycerol conversion
- Acrylic acid was the main reaction product
- CO_x is preferentially formed by feeding 100 % of O_2
- The oxidation states $\text{V}^{5+}/\text{V}^{4+}$ and $\text{Mo}^{6+}/\text{Mo}^{4+}$ were monitored by XAS and XPS

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