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Catalytic epoxidation of propylene glycol and its acetates

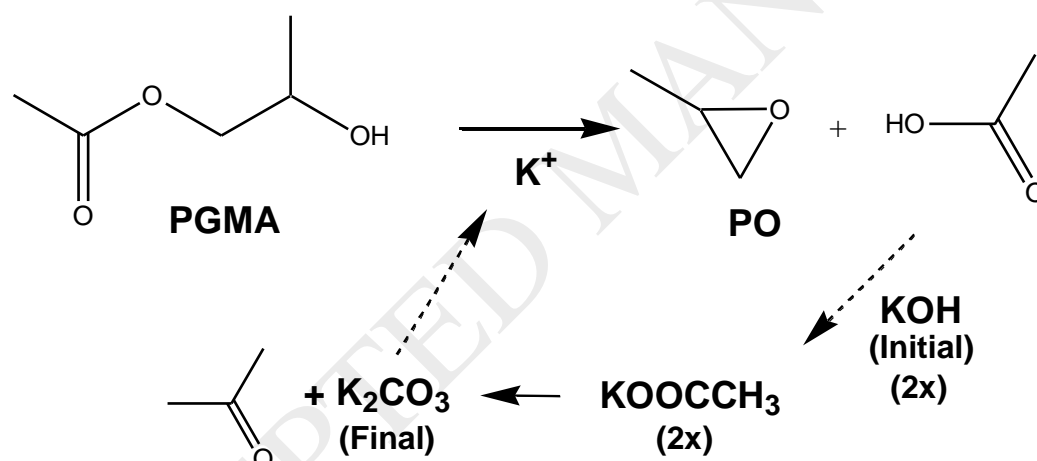
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Graphical abstract



Highlights

- The active form of potassium salt catalysts for epoxidation of propylene glycol acetates to propylene oxide is described.
- Surface analysis of pre- and post-reaction catalysts show the presence of K_2CO_3 as the active species at high loadings and K-O-Si surface species at sub-monolayer loadings.
- Potassium catalysts produce propylene oxide from propylene glycol acetates at selectivity as high as 80%, opening an improved alternate route to propylene oxide from renewable feed stocks.

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