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(54) Title: DIRECT EPOXIDATION PROCESS

(57) Abstract: A process is disclosed for reacting an olefin, hydrogen, and oxygen in a reactor in the presence of a catalyst comprising a transition metal zeolite and a noble metal to produce a reaction mixture comprising an epoxide and acidic byproducts. A portion of the reaction mixture is contacted with an adsorbent so that a treated mixture having a reduced amount of byproducts is produced. The treated mixture is recycled back to the reactor. Including an adsorption step should improve the catalyst productivity and epoxide selectivity.



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