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(54) Title: GAS PHASE EPOXIDATION OF NON-ALLYLIC OLEFINS

(57) Abstract: Disclosed herein is an improved gas phase process for the selective epoxidation of non-allylic olefins wherein the epoxidation is carried out in the presence of one or more volatile, nitrogen-containing, basic compounds. The presence of a nitrogen-containing basic compound in the olefin-containing reaction gas or vapor suppresses the formation of an organic resinous material which coats the catalyst, thereby decreasing catalyst activity and life and also increases substantially the activity of the epoxidation catalyst. The disclosed process is particularly useful for the continuous manufacture of 3,4-epoxy-1-butene from 1,3-butadiene.