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(54) Title: USE OF FLUORINATED HYDROCARBONS AS REACTION MEDIA FOR SELECTIVE EPOXIDATION OF OLEFINS

(57) Abstract: The present invention is directed to a process for the selective epoxidation of non-allylic olefins. The process includes the step of contacting a gas mixture comprising a non-allylic olefin, oxygen, and a fluorinated hydrocarbon with a silver epoxidation catalyst at conditions effective to epoxidize the non-allylic olefin. The fluorinated hydrocarbon has a C-F bond dissociation energy of 110 kcal/mole or greater, and sufficiently non-acidic C-H bonds, if present, so as to avoid abstraction of HF from the fluorinated hydrocarbon under reaction conditions.

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