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(54) Title: OXIDATION OF HYDROCARBONS

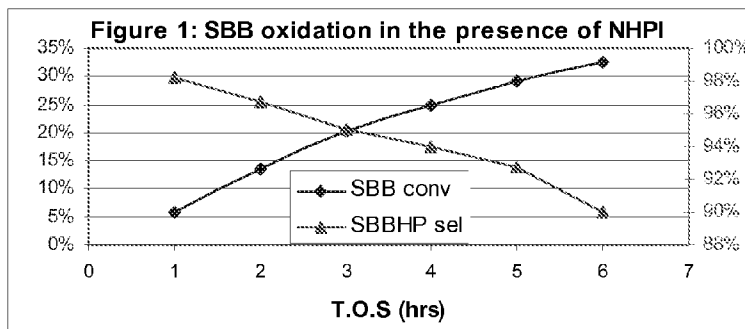
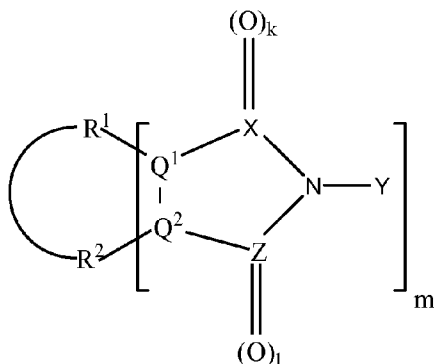


Figure 1



(57) Abstract: In a process for oxidizing a hydrocarbon to a corresponding hydroperoxide, alcohol, ketone, carboxylic acid or dicarboxylic acid, the hydrocarbon is contacted with an oxygen-containing gas in the presence of a catalyst comprising a cyclic imide of the general formula (I), wherein each of R¹ and R² is independently selected from hydrocarbyl and substituted hydrocarbyl radicals having 1 to 20 carbon atoms, or from the groups SO₃H, NH₂, OH and NO₂, or from the atoms H, F, Cl, Br and I provided that R¹ and R² can be linked to one another via a covalent bond; each of Q¹ and Q² is independently selected from C, CH, N and CR³; each of X and Z is independently selected from C, S, CH₂, N, P and an element of Group 4 of the Periodic Table; Y is O or OH; k is 0, 1, or 2; l is 0, 1, or 2; m is 1 to 3, and R³ can be any of the entities listed for R¹. The contacting produces an effluent comprising an oxidized hydrocarbon product and unreacted imide catalyst of formula (I) and the effluent is treated with an aqueous solution of a base to produce an aqueous phase comprising at least part of the unreacted imide catalyst of formula (I) and an organic phase comprising oxidized hydrocarbon product. The organic phase can then be recovered.



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