

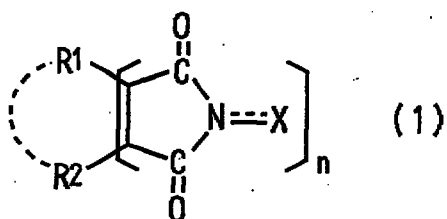
ABSTRACT OF THE DISCLOSURE

OXIDATION PROCESS OF BRANCHED ALIPHATIC HYDROCARBONS

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AND PROCESS FOR PRODUCING THE OXIDE

A non-cyclic branched aliphatic hydrocarbon
(e.g., isobutane) is oxidized with oxygen in the
presence of an oxidation catalyst comprising an imide
10 compound of the following formula (1) (e.g., N-
hydroxyphthalimide) or an oxidation catalyst comprising
the imide compound and a co-catalyst (e.g., a transition
metal compound of selected from Group 3A, 4A, 5A, 6A,
7A, 8 and 1B elements of the Periodic Table of
15 elements), for the formation of an oxide (e.g., t-
butanol, acetone):



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wherein R^1 and R^2 represent a substituent such
as a hydrogen atom or a halogen atom, or R^1 and R^2 may
together form a double bond or an aromatic or nonaro-
matic 5- to 12-membered ring, X is O or OH, and n is 1
25 to 3.

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