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Molecular Sieve Catalysts

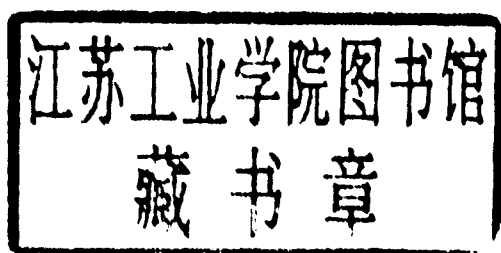


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The surveys of this series have been made by the examiners of the European Patent Office at The Hague (The Netherlands) who are most competent in the technology concerned.

The present survey encompasses the most recent developments in the field and rests on a selection made by the authors among the patent and non-patent literature available at the EUROPEAN PATENT OFFICE (EPO).

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PREFACE

This monograph aims to present a timely summary of the recent developments in the field of catalysis with molecular sieves containing catalysts. It is the result of a study of the search-files of the European Patent Office (EPO) at The Hague in the fields of catalysis with molecular sieve catalysts and of conversion of hydrocarbon fractions.

It covers the period from 1975 till now; nevertheless some important basic documents from before that date have been incorporated as an illustration of the state of the art.

The study is divided in two parts :

- (1) The preparation and activation of molecular sieve catalysts.
- (2) The applications of molecular sieve catalysts in the oil industry, for conversion of hydrocarbon fractions.

Part One discusses the use of molecular sieve zeolitic catalysts, that means three-dimensional. Two-dimensional clay-type molecular sieves (e.g. SMM) have been excluded.

The monograph includes the documents of the systematic documentation in the field of catalysis; that means that for synthesis of the molecular sieves only those documents have been taken into consideration if they are included in that part of the documentation.

Part One is subdivided following the molecular sieve type with a first general head including these documents that treat aspects not directly bound to a specific type of molecular sieve. Each of the subdivisions of the first general heading may be important for corresponding subdivision of chapters directed to a well defined type of zeolite.

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Part Two deals with the application of molecular sieves in conversion of hydrocarbon fractions.

The documents are listed according to the process or the reaction in which the molecular sieve serves as a catalyst. This implies that a certain document can be mentioned more than once if the molecular sieve catalyst can be used in different processes.

NOTE ON CITED PATENT DOCUMENTS

In this monograph, a great number of patents and published patent applications *) are cited, using an international two-letter country code, i.e. :

AU = Australia
B = US published patent applications
BE = Belgium
DD = East Germany
DE = Germany (Federal Republic)
EP = European Patents (or patent applications)
FR = France
GB = United Kingdom
NL = Netherlands
PL = Poland
JP = Japan **)
RO = Rumania
su = Sovjet Union
US = United States of America
WO = PCT

*) The patent literature covered by the search files of the European Patent Office at The Hague encompasses patent publications of following countries or Offices : Australia, Austria, Canada, France, Germany (Federal Republic), Japan, Switzerland, United Kingdom, USA, USSR, European Patent Office, World Intellectual Property Organization, African Intellectual Property Organization, Belgium, Luxemburg and The Netherlands.

**) All cited patent documents are published patent applications (KOKAI TOKKYO).

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