DESCRIPTION

"A HYDROGEN OR OXYGEN ELECTROCHEMICAL PUMPING CATALYTIC MEMBRANE REACTOR AND ITS APPLICATIONS"

Technical Field

This invention describes a hydrogen or oxygen electrochemical pumping catalytic membrane reactor, whose purpose is to increase the conversion and/or the selectivity of hydrogenation, dehydrogenation, deoxidation and oxidation reactions, both in liquid or gas phases.

This invention further describes the use of a hydrogen or oxygen electrochemical pumping catalytic membrane reactor for the direct amination of hydrocarbons, particularly for the conversion of benzene into aniline, by reacting it with ammonia.

Summary of the Invention

This invention proposes a new electrochemical catalytic membrane reactor, which increases the yield of direct amination reactions of hydrocarbons by electrochemical pumping of oxygen and/or hydrogen.

One of the purposes of this invention is to disclose a electrochemical catalytic membrane reactor, with means for the electrochemical pumping hydrogen and/or oxygen.

A preferred embodiment of present invention is the description of a electrochemical catalytic membrane reactor, provided with means for carrying out the

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