

Title (en)
CATALYTICALLY ACTIVE COMPOSITION, MEMBRANE-ELECTRODE UNIT COMPRISING THE SAME, AND CATALYST COMPRISING/MADE OF THE SAME

Title (de)
KATALYTISCH AKTIVE ZUSAMMENSETZUNG, MEMBRAN-ELEKTRODEN-EINHEIT MIT DER ZUSAMMENSETZUNG UND KATALYSATOR MIT/AUS DER ZUSAMMENSETZUNG

Title (fr)
COMPOSITION CATALYTIQUEMENT ACTIVE, ASSEMBLAGE MEMBRANE-ELECTRODES POURVU DE CETTE COMPOSITION ET CATALYSEUR POURVU/CONSTITUE DE LADITE COMPOSITION

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Application
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Abstract (en)
[origin: WO2007031346A2] The invention relates to a catalytically active composition comprising at least one polysiloxane, the catalytic effect being created by integrating metallic centers such as platinum, nickel, etc. Also disclosed are a membrane-electrode unit (MEA) comprising said composition as well as a catalyst containing/made of the same. Based on its properties, the inventive catalytically active composition can preferably be used as an electrocatalyst in electrochemical applications, especially in a polymer electrolyte membrane fuel cell (PEMFC), and for reacting inorganic and organic compounds, e.g. when synthesizing organic compounds with the aid of membrane reactors or purifying exhaust gases. The disclosed catalytically active composition contains at least one polysiloxane comprising metal ions and/or metal atoms. In its most simple embodiment, the catalytically active composition can be obtained using a method that comprises a step in which at least one initial organosilicon compound is polymerized in the presence of metal ions. Advantageously, the initial siloxane compound and the metal ions are provided at the most homogeneous possible distribution during the polymerization process.

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