Title (en)

PROCESS FOR OBTAINING DINITROGEN MONOXIDE ($N^2O$)

Title (de)

VERFAHREN ZUR GEWINNUNG VON DISTICKSTOFFMONOOXID ($N^2O$)

Title (fr)

PROCÉDÉ D'OBTENTION DE MONOXYDE DE DIAZOTE ($N^2O$)

Publication

**EP 2591118 A2 20130515 (DE)**

Application

**EP 11719001 A 20110511**

Priority

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Abstract (en)

[origin: WO2012004026A2] The invention relates to a process for obtaining dinitrogen monoxide (N2O), also referred to as nitrous oxide, by microbiological or enzymatic processes, starting from nitrogenous substances, in particular from biomass and/or waste material and/or wastewater and/or other substances which comprise nitrogenous compounds, in particular ammonium compounds. In this case, the microorganisms, bacteria, Archaea, eukaryotes, fungi, parasites, phages, cells, cell fractions or membrane fractions and/or enzymes and/or a combination of these is/are selected or manipulated, or, using suitable measures, subjected to partial or complete reversible and/or irreversible inhibition, or the corresponding microbiological or enzymatic processes are controlled, for example by suitable process conditions, in such a way that dinitrogen monoxide (N2O) is formed either by part or all of the nitrogenous compounds of the nitrogenous substances. The corresponding process conditions are furthermore chosen such that the population of the microorganisms, bacteria, Archaea, eukaryotes, fungi, parasites, phages, cells, cell fractions or membrane fractions and/or enzymes and/or a combination of these which is/are employed correspondingly and which contribute(s) to the production of nitrous oxide and/or the reaction sequences involved and/or the work-up of the nitrogenous substances remains as constant as possible or, if at all possible, increases as the result of multiplication and the reactions and/or their subsequent reaction sequences and/or reactions or processes for the work-up of nitrogenous substances which form the basis of the nitrous oxide production proceed as completely and as rapidly as possible. Dinitrogen monoxide generated in these reactions is separated off, obtained, collected, if necessary purified, and/or supplied to further processes, in particular combustion processes, for example processes for the combustion of sewage gas and biogas.

IPC 8 full level

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