

Title (en)  
IMPROVED SOLAR THERMOCHEMICAL REDOX METHOD

Title (de)  
VERBESSERTES SOLARTHERMOCHEMISCHES REDOX-VERFAHREN

Title (fr)  
PROCÉDÉ AMÉLIORÉ DE REDOX THERMOCHIMIQUE SOLAIRE

Publication  
**EP 4313849 A1 20240207 (DE)**

Application  
**EP 22719518 A 20220328**

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Abstract (en)  
[origin: WO2022207553A1] The present invention relates to a method for producing one or more organic compounds, characterised in that a) synthesis gas is produced in a two-stage thermochemical cyclical process using a redox material, b) the synthesis gas thus obtained is subsequently converted into a primary product, consisting of at least one organic compound, using a synthesis method, with gaseous hydrocarbons  $C_nH_m$  with  $n=1$  to 4 and  $m = 4$  for  $n = 1$  and  $m = 2$  to  $2n+2$  for  $n = 2$  to 4 are produced as a by-product, and c) the gaseous hydrocarbons are used in the thermochemical cyclical process as a reducing agent for the redox material, the primary product from the synthesis method being one, or a mixture of two or more, organic compounds of general formula  $X-(Z)_n-Y$ , where Z is selected from  $(CH_2)$  and/or  $(CH=CH)$ , n is 2 to 50, in particular 5 to 50, X and Y are, independently of one another, selected from  $-CH_3$ ,  $-OH$ ,  $-COOH$ ,  $-NH_2$ ,  $-O-KW$ , KW representing alkyl, aryl, heteroaryl, in particular having 1 to 5 carbon atoms.

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