Title (en)
METHOD FOR CALCULATING FREQUENCY AND AMPLITUDE MODULATION FOR ADIABATIC ELECTROMAGNETIC PULSES

Title (de)
VERFAHREN ZUR BERECHNUNG VON FREQUENZ- UND AMPLITUDENMODULATION FÜR ADIABATISCHE ELEKTROMAGNETISCHE PULSE

Title (fr)
PROCEDE DE CALCUL DE MODULATION DE FREQUENCE ET D'AMPLITUDE POUR DES IMPULSIONS ELECTROMAGNETIQUES ADIABATIQUES

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Abstract (en)
[origin: WO02073229A1] The invention relates to a method for calculating parameters for frequency and/or amplitude modulated electromagnetic pulses for adiabatic transfer steps in a quantum mechanical system. The dynamic steps of the quantum mechanic system comprise a Hamilton Operator (H(t)) of a current system of co-ordinates. The inventive method consists of the following steps: a) transformation of the Hamilton Operator (H(t)) of a current system of co-ordinates into a subsequent system of co-ordinates for describing the time dependency of the change in direction of the Hamilton Operator (H(t)); b) determination of the automatic commutation of the Hamilton Operator (H(t)) at a time t and the Hamilton Operator (H(t')) at a time t' in the corresponding system of co-ordinates, whereby a differential equation system is obtained; c) calculation of the parameters from the differential equation system thus obtained.

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