

Title (en)

GAS SPECIE ELECTRON-JUMP CHEMICAL ENERGY CONVERTER

Title (de)

CHEMISCHER GASSPEZIEN-ELEKTRONENSPRUNGENERGIEWANDLER

Title (fr)

CONVERTISSEUR D'ENERGIE CHIMIQUE DE TRANSITION ELECTRONIQUE D'UNE ESPECE DE GAZ

Publication

EP 1415350 A1 20040506 (EN)

Application

EP 02734364 A 20020510

Priority

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- US 29005801 P 20010510

Abstract (en)

[origin: WO02091479A1] An apparatus and method for extracting energy is provided. In one aspect the method includes using chemical reactions to generate vibrationally excited molecules (101), such as high-quantum-number-vibrationally-excited gas molecules in a region. The vibration energy in the vibrationally excited molecules is converted into hot electrons when the excited molecules contact a conductor (103). A geometry is provided so that the excited molecules may travel, diffuse or wander into a conductor (103) before losing a useful fraction of the vibrational energy. Optionally, the generating and the converting process may be thermally separated, at least in part. The short lived hot electrons are converted into longer lived entities such as carriers and potentials in a semiconductor, where the energy is converted into a useful form.

IPC 1-7

H01L 31/00; **H02N 11/00**

IPC 8 full level

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