

Title (en)

DYNAMICALLY CONTROLLED CRYSTALLIZATION METHOD AND APPARATUS AND CRYSTALS OBTAINED THEREBY

Title (de)

DYNAMISCH KONTROLLIERTES KRISTALLISATIONSVERFAHREN, VORRICHTUNG UND DAMIT ERZEUGTE KRISTALLE

Title (fr)

PROCEDE ET APPAREIL DE CRISTALLISATION A COMMANDE DYNAMIQUE ET CRISTAUX OBTENUS AU MOYEN DE CEUX-CI

Publication

EP 1059976 A4 20010228 (EN)

Application

EP 99914879 A 19990218

Priority

- IL 12821699 A 19990215
- US 9903515 W 19990218
- US 2547598 A 19980218

Abstract (en)

[origin: WO9942191A1] A method and apparatus for dynamically controlling the crystallization of molecules including a crystallization chamber (14) or chambers for holding molecules in a precipitant solution, one or more precipitant solution reservoirs (16, 18), communication passages (17, 19) respectively coupling the crystallization chamber(s) with each of the precipitant solution reservoirs, and transfer mechanisms (20, 21, 22, 24, 26, 28) configured to respectively transfer precipitant solution between each of the precipitant solution reservoirs and the crystallization chamber(s). The transfer mechanisms are interlocked to maintain a constant volume of precipitant solution in the crystallization chamber(s). Precipitant solutions of different concentrations are transferred into and out of the crystallization chamber(s) to adjust the concentration of precipitant in the crystallization chamber(s) to achieve precise control of the crystallization process. The method and apparatus can be used effectively to grow crystals under reduced gravity conditions such as microgravity conditions of space, and under conditions of reduced or enhanced effective gravity as induced by a powerful magnetic field.

IPC 1-7

B01D 9/00; **C30B 23/00**; **C30B 7/00**

IPC 8 full level

B01D 9/00 (2006.01); **B01D 9/02** (2006.01); **B01J 19/24** (2006.01); **C30B 7/00** (2006.01); **C30B 23/00** (2006.01); **C30B 29/58** (2006.01)

CPC (source: EP)

C30B 7/00 (2013.01)

Citation (search report)

- [A] EP 0343040 A1 19891123 - AEROSPATIALE [FR]
- [A] US 5643540 A 19970701 - CARTER DANIEL C [US], et al
- See references of WO 9942191A1

Designated contracting state (EPC)

CH DE FR GB IE IT LI SE

DOCDB simple family (publication)

WO 9942191 A1 19990826; AU 3352999 A 19990906; EP 1059976 A1 20001220; EP 1059976 A4 20010228; JP 2002503538 A 20020205

DOCDB simple family (application)

US 9903515 W 19990218; AU 3352999 A 19990218; EP 99914879 A 19990218; JP 2000532196 A 19990218