

Title (en)  
APPARATUS AND METHOD FOR PHOTOCATALYTIC PURIFICATION AND DISINFECTION OF WATER AND ULTRAPURE WATER

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR PHOTOKATALYTISCHEN REINIGUNG UND DESINFEKTION VON WASSER UND ULTRAREINEM WASSER

Title (fr)  
APPAREIL ET PROCEDE DE PURIFICATION ET DE DESINFECTION PHOTOCATALYTIQUE D'EAU ET EAU ULTRAPURE

Publication  
**EP 1434737 A1 20040707 (EN)**

Application  
**EP 01927447 A 20010412**

Priority  
US 0140515 W 20010412

Abstract (en)  
[origin: WO02083570A1] An apparatus and method for the photocatalytic purification and ultrapurification of water. Water containing organic, inorganic, and/or biological contaminants is directed through a rigid, three-dimensionally open celled, fluid permeable, semiconductor unit (18). Within the unit, a semiconductor surface capable of promoting electrons from its valence band to its conduction band, when exposed to a photoactivating light source (38, 40), removes the contaminants through a photocatalytic reaction.

IPC 1-7  
**A61L 2/08**; B01J 19/12; C02F 1/30; C02F 1/32; C02F 1/72

IPC 8 full level  
**A61L 2/08** (2006.01); **B01J 19/12** (2006.01); **B01J 21/06** (2006.01); **B01J 23/42** (2006.01); **B01J 35/02** (2006.01); **C02F 1/30** (2006.01); **C02F 1/32** (2006.01); **C02F 1/72** (2006.01); B01J 35/00 (2006.01); B01J 35/04 (2006.01); B01J 37/02 (2006.01); C02F 1/78 (2006.01)

CPC (source: EP)  
**A61L 2/088** (2013.01); **B01J 19/123** (2013.01); **B01J 19/127** (2013.01); **C02F 1/30** (2013.01); **C02F 1/325** (2013.01); **C02F 1/725** (2013.01); A61L 2202/16 (2013.01); B01J 21/063 (2013.01); B01J 35/39 (2024.01); B01J 35/56 (2024.01); B01J 37/0215 (2013.01); B01J 2219/00772 (2013.01); B01J 2219/0884 (2013.01); B01J 2219/0892 (2013.01); C02F 1/722 (2013.01); C02F 1/727 (2013.01); C02F 1/78 (2013.01); C02F 2103/04 (2013.01); C02F 2201/3227 (2013.01); C02F 2305/10 (2013.01)

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02083570 A1 20021024**; CA 2444385 A1 20021024; EP 1434737 A1 20040707; EP 1434737 A4 20041103; JP 2004528171 A 20040916

DOCDB simple family (application)  
**US 0140515 W 20010412**; CA 2444385 A 20010412; EP 01927447 A 20010412; JP 2002581331 A 20010412