

Title (en)  
MODULAR CHEMICAL MICROSYSTEM

Title (de)  
MODULARES CHEMISCHES MIKROSYSTEM

Title (fr)  
MICROSYSTEME CHIMIQUE MODULAIRE

Publication  
**EP 1175258 A1 20020130 (DE)**

Application  
**EP 00925197 A 20000411**

Priority  
• DE 19917398 A 19990416  
• EP 0003222 W 20000411

Abstract (en)  
[origin: DE19917398A1] The apparatus coupling rail (1) includes electrical connections (3) for the control computer (10), which communicates through a system bus. It also includes fluid connections (4) for substances, stored and/or collected in vessels (13). Channels from the connections (4) transfer substances within the microsystem. Identical interfaces (5) are provided for modules (2a-f), connecting system bus and substances to each. The modules have complementary connections. In the modules, substances undergo processing under control. They are connected along the rail in any desired order, thus joining both their channels and buses. Control signals are exchanged between modules, other modules and/or the controller. Preferred features: At each connection interface (6), each module has inputs and outputs for substances and control signals. Channels transfer fluids. The controller (10) is a personal computer. Chemical reactions can run continuously in the microsystem. Switches in the modules, operated through the system bus, control flow(s) inside the modules. Control signals are electrical or optical. Numbers of coupling rails may be included in the system. Micro-module types are listed: mixer, pump, valve, reactor, timer, delay unit, heater, cooler, separator, extractor, branch, evaporator, boiler and sensor.

IPC 1-7  
**B01J 19/00**

IPC 8 full level  
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Cited by  
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