We address the design of optimal reactors for supporting biological cultures using the method of topology optimization. For some years this method have been used to design various optimal microfluidic devices.1-4 We apply this method to distribute optimally biologic cultures within a flow of nutrition. From this optimized distribution alone the metabolic rate in the reactor increase by close to a factor 20.
Keywords: Microfluidics, Bio-reactors, Topology optimization
DOIs:
10.1166/jctn.2007.016
Source: orbit
Source-ID: 205605
Research output: Research - peer-review › Journal article – Annual report year: 2007