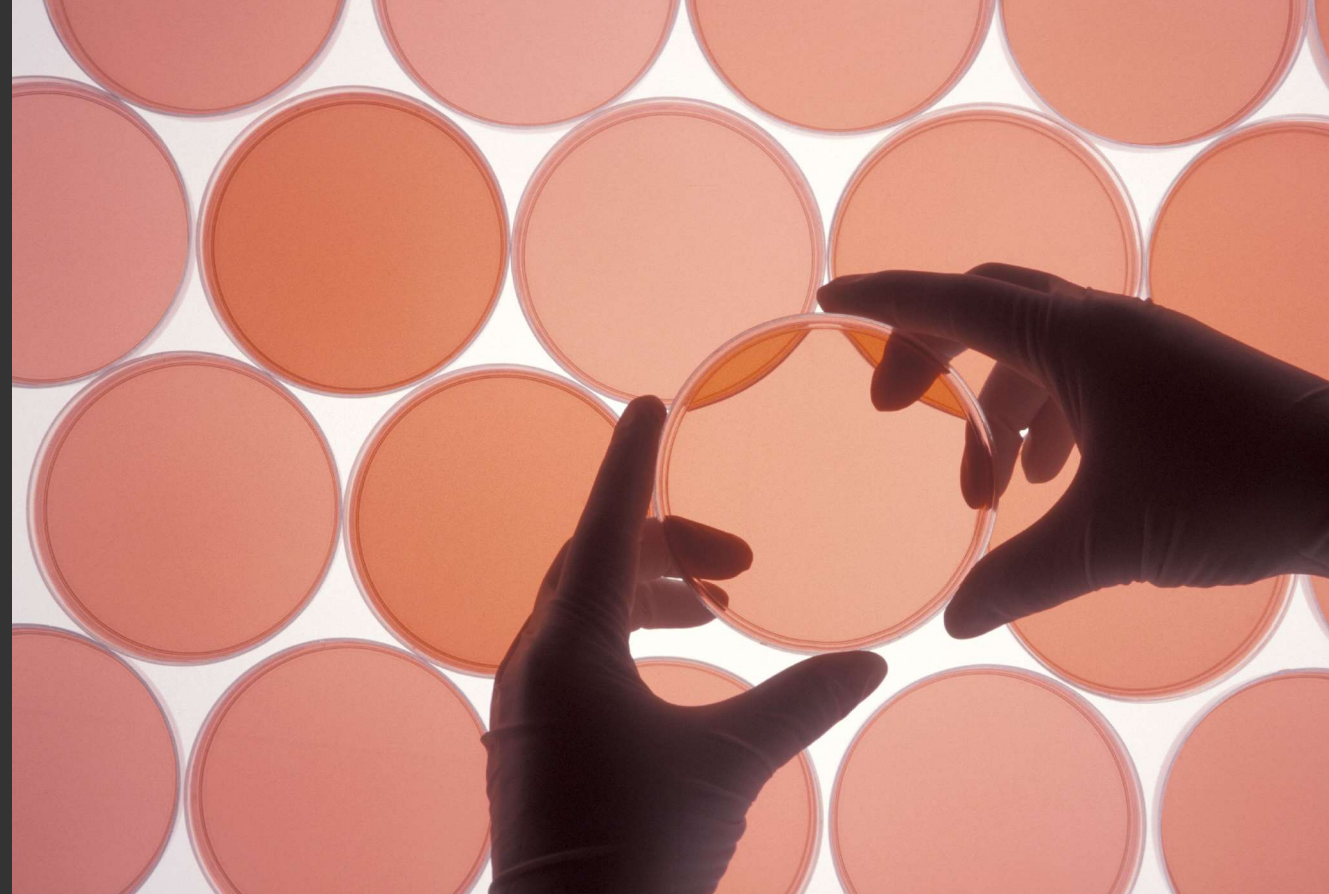


Microactuation systems are currently enabled only using large external apparatus. This essentially defeats the original purpose of miniaturization. We employ flagellated bacteria as reconfigurable actuators in low Reynolds number fluidic environments. The bacteria are self-contained and are able to draw energy directly from the surrounding environment. Furthermore, flagellated bacteria can be utilized as both individual microactuators and in arrays to create useful works in a variety of microfluidic environments, and controlled in a directed manner using many different kinds of external stimuli, such as temperature, food, and a specific wavelength of lights. The book is addressed to professionals in Science and Technology like fluid mechanics, microbiologists and nanoengineers. It is also directed towards researchers in Microfluidics, Micro/Nanofabrication and Biophysics.

MinJun Kim

Bacterial Microfluidics



**MinJun Kim,**  
Microfluidics: Bacterial Flows: Mixing and Pumping  
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