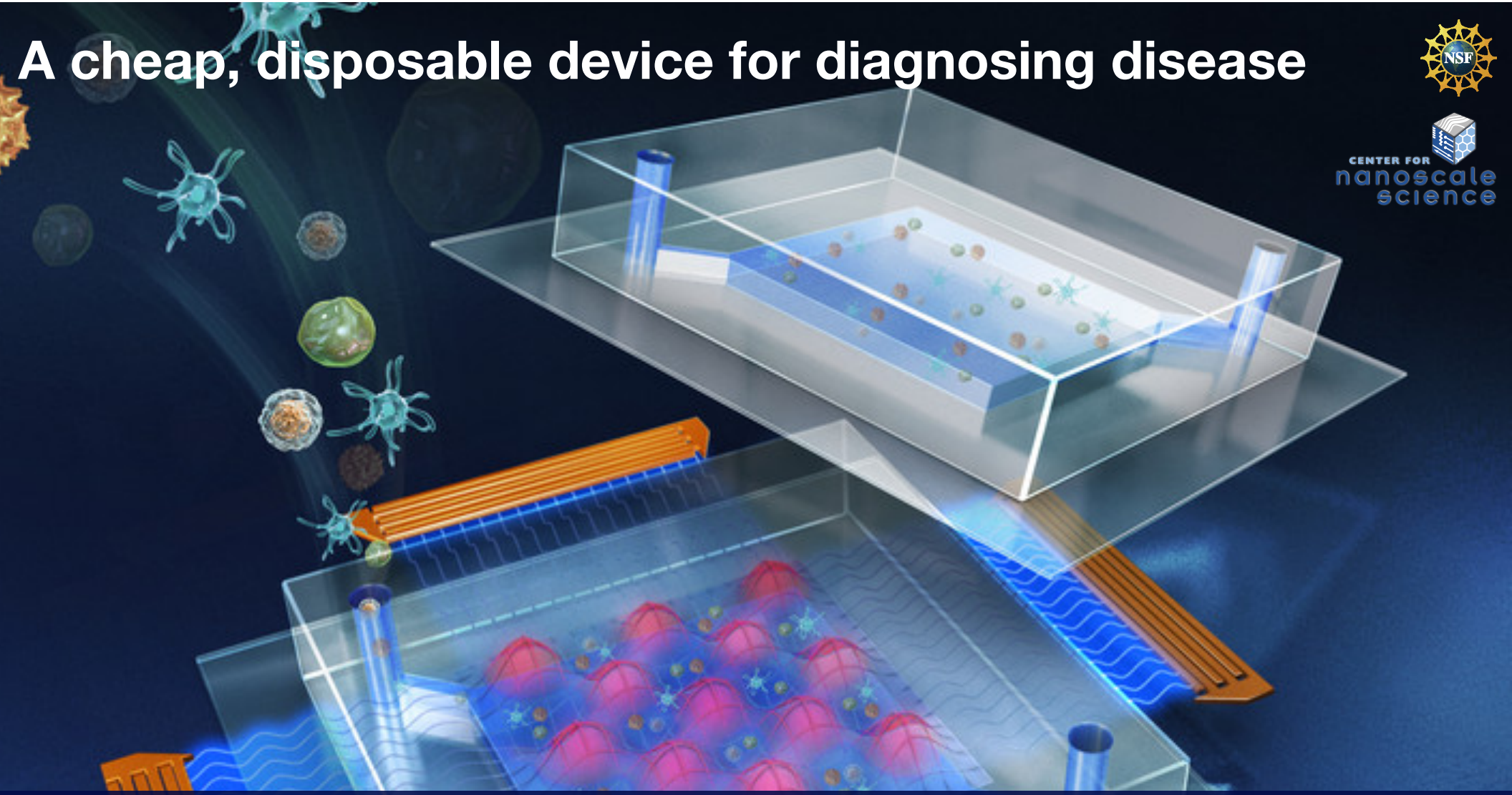
A cheap, disposable device for diagnosing disease



MRSEC-supported researchers have developed a reusable microfluidic device based on “acoustic tweezers” that can sort and manipulate cells and other micro/nanometer scale objects, potentially making biomedical diagnosis of diseases cheaper and more convenient in regions where medical facilities are sparse or cost is prohibitive. The team has found a way to separate the fluid-containing part of the device from the much more expensive ultrasound-producing piezoelectric substrate, which makes disposable acoustic tweezers possible.

Feng Guo, Yuliang Xie, Sixing Li, James Lata, Liqiang Ren, Zhangming Mao, Baiyang Ren, Mengxi Wu, Adem Ozcelik, and Tony Jun Huang, Lab on a Chip, Vol. 15, pp. 4517 - 4523, 2015. NSF DMR-1420620 (with additional support from NIH).