Electronic Supplementary Material (ESI) for Lab on a Chip. This journal is © The Royal Society of Chemistry 2017

Supplementary Material (ESI) for Lab on a Chip

## Cancer Immunotherapy µ-environment LabChip: Taking

## **Advantage of Optoelectronic Tweezers**

Ling-Yi Ke<sup>a</sup>, Zong-Keng Kuo<sup>b,c</sup>, Yu-Shih Chen<sup>b</sup>, Tsu-Yi Yeh<sup>a</sup>, Minxiang Dong<sup>a</sup>, Hsiang-Wen Tseng<sup>c</sup> and Cheng-Hsien Liu<sup>a,b</sup>

a.Department of Power Mechanical Engineering, National Tsing Hua University, Hsinchu City 30013, Taiwan, R.O.C.

b. Institute of Nanoengineering and Microsystems, National Tsing Hua University, Hsinchu City 30013, Taiwan, R.O.C.

c. Pharmacodynamics Technology Department, Center of Excellence for Drug Development, Biomedical Technology and Device Research Labs, Industrial Technology Research Institute, Hsinchu City 30011, Taiwan, R.O.C.

**Video.** Video S1 shows the demonstration of TiOPc-based OET for precision manipulation of single micro-beads in cancer immunotherapy  $\mu$ -environment LabChip. The operating conditions of our OET are 3 - 5 Vpp at 10 kHz - 100 kHz. Videos S2 shows the diffusion in time series for PEG-DA hydrogel FLCS microwells in cancer immunotherapy  $\mu$ -environment LabChip.