

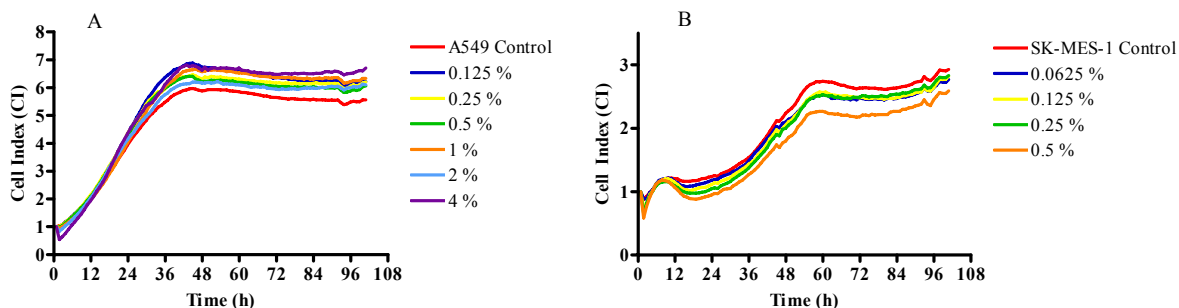
## **Supplemental Information**

### **Cell-electronic Sensing of Particle-induced Cellular Responses**

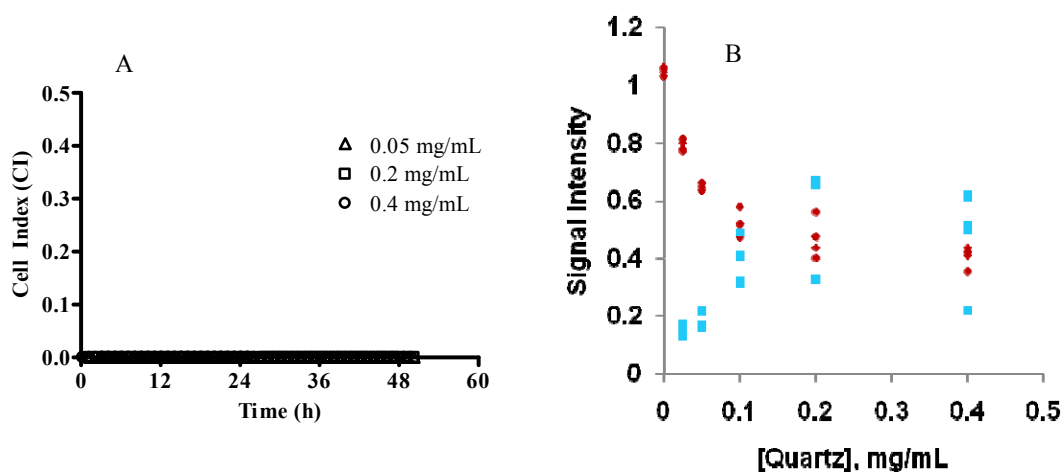
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**Supplemental information includes Figure S1 and S2.**



**Figure S1:** RT-CES sensing of methanol effects on A) A549 and B) SK-MES cell lines. These results show that methanol (0-0.5%) in the culture medium does not cause significant interference on the RT-CES sensing of both cell lines compared to the control cells in the standard medium without methanol. For A549 cells, no significant difference in the RT-CES signals was observed when the cells were incubated with the medium containing methanol up to 4% compared to the controls without methanol.



**Figure S2:** Quartz particle interference in the A) RT-CES system and B) acid phosphatase (AP) test. Figure S2 (A) show the RT-CES signals when the media contain 0.05, 0.2 and 0.4 mg/mL of quartz particles without cells. Figure S2 (B) show the average absorbance (n=4) of the quartz particle suspensions (0 to 0.4 mg/ml), where blue dots represent the signals from particles alone and the red dots represent the total signals of the particle-treated cell cultures. Figure S2 (B) shows the interference of quartz particles on AP test when the suspension contains higher than 0.1 mg/ml quartz particles.