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Supplementary Information

Fabrication and Evaluation of a Micro(Bio)Sensor Array Chip for Multiple Parallel Measurements of Important Cell Biomarkers. *Sensors* 2014, *14*, 20519-20532

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Figure S1. Overall view of the design for the 5-well MEMS sensor chip with five sensors per well base (25 sensors in total).

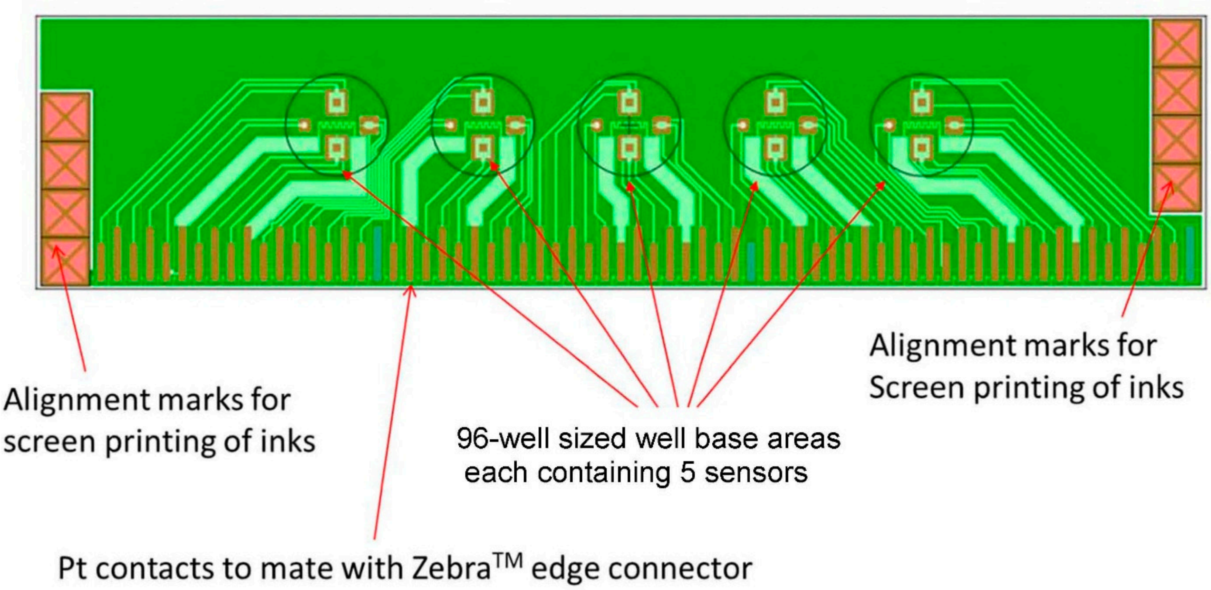

Figure S2. Temperature sensor: (**a**) Photograph of microfabricated Pt resistance track (**b**) Graph of resistance *vs.* temperature.

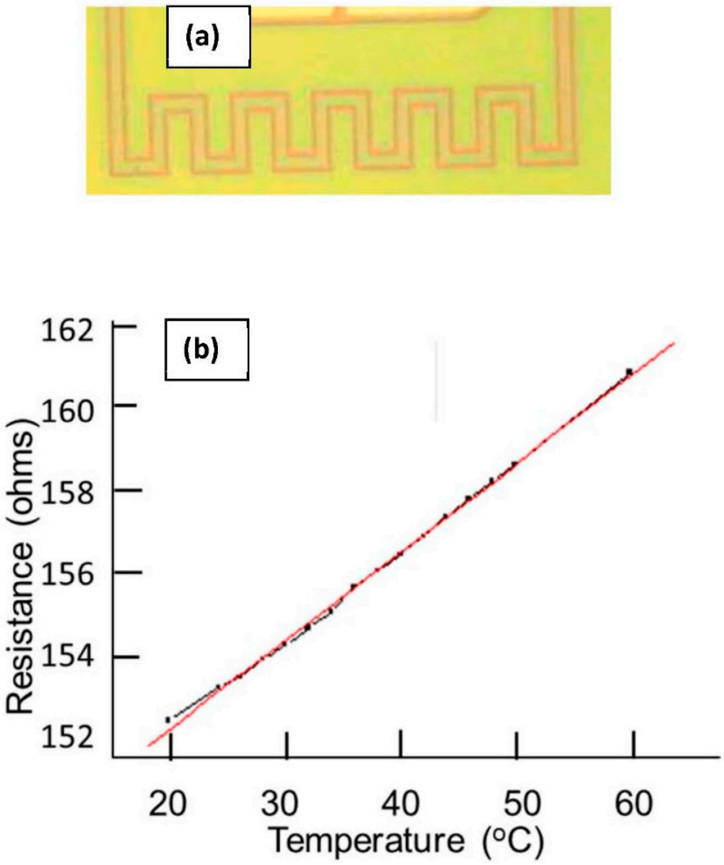

Figure S3. 5-well sensor strips. Bottomless wells have been added to the surface of the MEMS chips. These are now ready for insertion into the connector box, followed by addition of culture medium and cells.

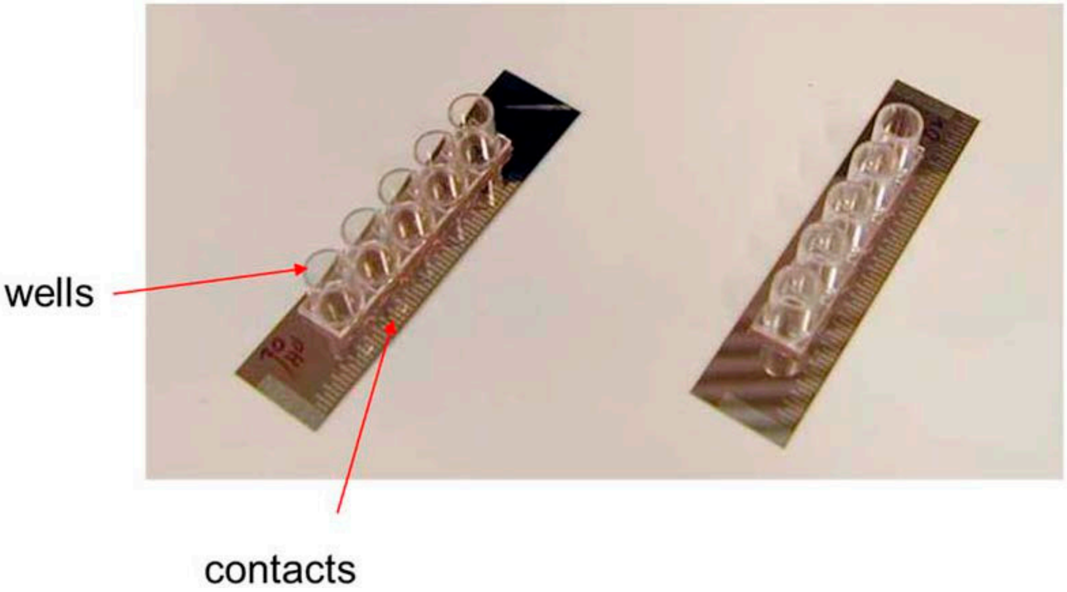

Figure S4. Current responses obtained for a 200 micron diameter oxygen sensor tested in 10 mL bulk solution of phosphate buffer, pH 7.3, versus a commercial Ag/AgCl reference electrode; $E_{app} = -0.6$ V. Graph shows response upon alternate purging with Nitrogen gas and equilibration with air.

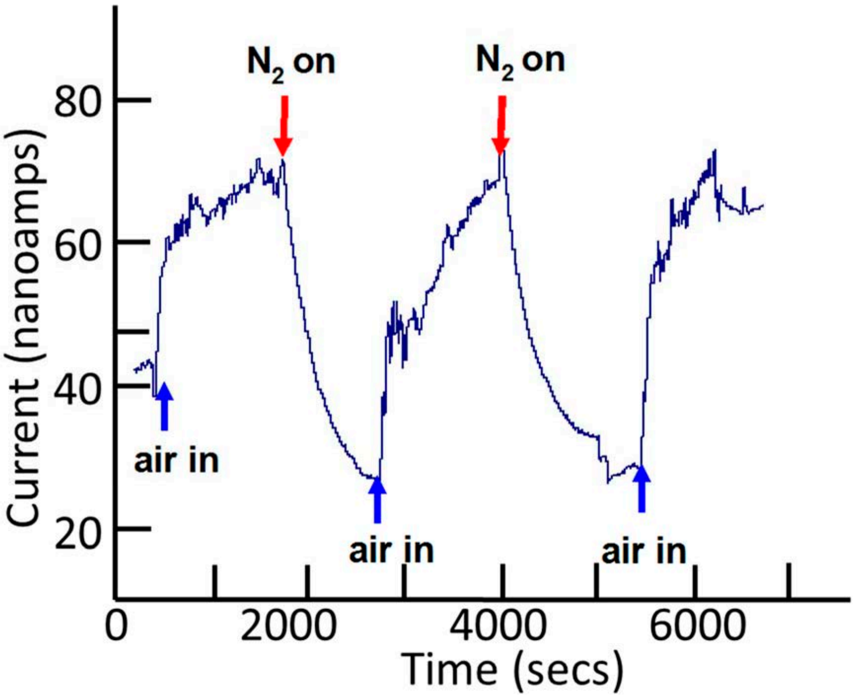

Figure S5. Current responses obtained for a 6 × 10 m diameter oxygen sensor tested in a 96-well sensor strip solution of phosphate buffer, pH 7.3. 3-electrode system; $E_{app} = -0.6$ V. Graph shows response upon alternate purging with Nitrogen gas and equilibration with air. Illustrates drifting baseline.