


Prof. Dries Braeken

	Speaker	Dries Braeken
	Talk Title	Cell and tissue technology interfaces for healthcare applications
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Brief Biography

Dr. Dries Braeken obtained his PhD degree in Medical Sciences from the KU Leuven, Belgium, in 2009 in collaboration with IMEC. From 2009 to 2012 he worked as senior scientist in the Bioelectronics group in IMEC. In 2012 he became R&D Team Leader in the Life Science Technologies department in IMEC and in 2017 R&D manager and group leader. His research focuses on the development of CMOS multi-electrode arrays using silicon fabrication processes and electrophysiological characterization of cell-electrode interfaces. He has (co-) authored over 45 publications and 7 patents. He has managed several Flemish and international public funded projects as well as bilateral contracts.

List of Representative Publications

1. R. Huys, D. Braeken, D. Jans, A. Stassen, N. Collaert et al., “Single-cell recording and stimulation with a 16k micro-nail electrode array integrated on a 0.18 μm CMOS chip”, Lab Chip, 12(7):1274-1280, 2012.
2. D. Braeken, D. Jans, R. Huys, A. Stassen, N. Collaert, L. Hoffman, W. Eberle, P. Peumans. G. Callewaert, “Open-cell recording of action potentials using active electrode arrays”, Lab Chip, 12(21):4397-402, 2012.

3. N. Collaert, C.M. Lopez, D.J. Cott, J. Cools, D. Braeken, M. De Volder, "In vitro recording of neural activity using carbon nanosheet microelectrodes", *Carbon*, 67: 178-184, 2014.
4. M. Welkenhuysen, L. Hoffman, Z. Luo, A. De Proft, C. Van den Haute, V. Baekelandt, Z. Debyser, G. Gielen, R. Puers, D. Braeken, "An Integrated Multi-electrode-optrode Array for In Vitro Optogenetics", *Sci. Rep.*, 6:20353, 2016.
5. D. Jans, G. Callewaert, O. Krylychkina, L. Hoffman, F. Gullo, D. Prodanov, D. Braeken, "Action potential-based MEA platform for in vitro screening of drug-induced cardiotoxicity using human iPSCs and rat neonatal myocytes", *J. Pharm. And Tox. Methods*, 87, 2017.
6. J. Cools, D. Copic, Z. Luo, G. Callewaert, D. Braeken, M. De Volder, "3D Microstructured carbon nanotube electrodes for trapping and recording electrogenic cells", *Adv. Funct. Mat.*, 27(36), 2017.