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	Z. Barikbin ¹ , M.T. Rahman ¹ , P. Parthiban ² , A.S. Rane ¹ , V. Jain ¹ , and S.A. Khan ^{1,2} ¹ Singapore-MIT Alliance for Research and Technology (SMART) Centre, SINGAPORE and ² National University of Singapore, SINGAPORE	
W25D	SELF-SORTING OF DEFORMABLE PARTICLES IN A MICROFLUIDIC CIRCUIT	1826
	M.S. Raafat, M. Cartas Ayala, and R. Karnik <i>Massachusetts Institute of Technology, USA</i>	
W26D	SOLUTION CONCENTRATION CHANGE OF PICOLITER-SIZED MICRODROPLET REACTORS	1829
	M. Takinoue, H. Onoe, and S. Takeuchi <i>University of Tokyo, JAPAN</i>	

Poster Session Microfluidics - Multi-Scale/Integrative Microfluidics

W27D	INTEGRATED MICROFLUIDICS FOR SEROTYPE IDENTIFICATION OF FOOT AND MOUTH DISEASE VIRUS	1832
	H. Sant ¹ , S. Sundberg ¹ , A. Miles ² , M. Johnson ¹ , E. Liddiard ¹ , and B. Gale ^{1,2} ¹ University of Utah, USA and ² Wasatch Microfluidics, USA	
W28D	MICROFLUIDIC CULTURE CHAMBER FOR THE LONG-TERM PERFUSION AND PRECISE CHEMICAL STIMULATION OF ORGANOTYPIC BRAIN TISSUE SLICES	1835
	H.H. Caicedo ¹ , M. Vignes ^{2,3} , B. Brugg ² , and J.M. Peyrin ² ¹ University of Illinois, Chicago, USA, ² Universite Pierre et Marie Curie, FRANCE, and ³ Institut Curie, FRANCE	
W29D	PRECISION MICROFLUIDIC OSCILLATORS FOR ON-CHIP TIMING AND CONTROL	1838
	P.N. Duncan, T.V. Nguyen, and E.E. Hui <i>University of California, Irvine, USA</i>	

Poster Session Microfluidics - Others

W30D	ACTIVE MICROFLUIDIC MIXER USING VIRTUAL SOURCE-SINK PAIRS FOR DNA PURIFICATION	1841
	H.C. Tekin, C. Vandevyver, and M.A.M. Gijs <i>École Polytechnique Fédérale de Lausanne (EPFL), SWITZERLAND</i>	

W31D	FLOATING MICROFLUIDIC GRADIENTS	1844
	M.A. Qasaimeh and D. Juncker <i>McGill University, CANADA</i>	
W32D	MICROFLUIDIC GENERATION OF MAGNETIC SEMIFLEXIBLE CHAIN BASED ON CHITOSAN MICROCAPSULES	1847
	K. Jiang, C. Arya, S.R. Raghavan, and D.L. DeVoe <i>University of Maryland, USA</i>	
W33D	OPTOFLUIDIC FABRICATION OF FOLDABLE HYDROGEL PARTICLES TOWARD INTUITIVE DRUG DELIVERY CARRIERS	1850
	T.S. Shim, S.-H. Kim, C.-J. Heo, J.-H. Choi, and S.-M. Yang <i>Korea Advanced Institute of Science and Technology (KAIST), SOUTH KOREA</i>	
W34D	USE OF INTEGRATED ELECTRODES AND EMBRYO TRAPS FOR INDIVIDUALLY ADDRESSABLE LOADING, CULTURING AND MONITORING OF <i>C. elegans</i>	1853
	J. Krajniak and H. Lu <i>Georgia Institute of Technology, USA</i>	

Poster Session Nanotechnologies - Nanofluidics

W1E	CLOSED-END NANOCHANNELS: MODEL PLATFORM FOR NANOFLUIDIC FLOWS	1856
	P. Joseph ¹ , V.N. Phan ² , P. Dubreuil ¹ , P. Abgrall ² , A.-M. Gué ¹ , and N.-T. Nguyen ² <i>¹Université de Toulouse, FRANCE and ²Nanyang Technological University, SINGAPORE</i>	
W2E	SELECTIVE PRECONCENTRATION WITHIN MICRO-NANOFLUIDIC DEVICE: A SINGLE STEP FOR ON CHIP BIOMOLECULE PRECONCENTRATION AND SEPARATION	1859
	C. Nanteuil, A.C. Louër, A. Plecis, and A.M. Haghiri-Gosnet <i>Centre National de la Recherche Scientifique (CNRS), FRANCE</i>	

Poster Session Nanotechnologies - Nanoengineering

W3E	VERTICAL NANOTUBES CONNECTED BY A SUBSURFACE NANOCHANNEL	1862
	H. Persson ¹ , J. Beech ¹ , W. Hällström ¹ , C. Niman ¹ , L. Samuelson ¹ , M. Kanje ¹ , S. Oredsson ¹ , C.N. Prinz ¹ , and J.O. Tegenfeldt ^{1,2} <i>¹Lund University, SWEDEN and ²University of Gothenburg, SWEDEN</i>	

Poster Session Nanotechnologies - Nanobiotechnology

W4E	AN OPEN MICROFLUIDIC DEVICE WITH ACTIVE VALVES FOR ACCURATE TRAPPING OF DNA BY SILICON NANOTWEEZERS	1865
	N. Lafitte, M. Kumemura, M. Nagai, L. Jalabert, D. Collard, and H. Fujita <i>University of Tokyo, JAPAN</i>	
W5E	DYNAMIC TRACKING OF SINGLE CELL SYNTHESIS OF CdSe QUANTUM DOTS WITH A MICROFLUIDIC DEVICE	1868
	L. Wang ¹ , Z.-L. Zhang ¹ , R. Cui ¹ , H.-H. Liu ¹ , J. Li ¹ , S.-L. Liu ¹ , Z.-X. Xie ¹ , Y. Chen ² , and D.-W. Pang ¹ <i>¹Wuhan University, CHINA and ²Ecole Normale Supérieure, FRANCE</i>	
W6E	FABRICATION OF SILICON NANOPATE AND NANOWIRE BIOSENSOR ARRAYS WITH HIGH SPECIFICITY AND SUB-PICOMOLAR LIMITS OF DETECTION	1871
	B. Dorvel ¹ , B. Reddy Jr. ¹ , D. Bergstrom ² , M.A. Alam ² , S. Clare ³ , and R. Bashir ¹ <i>¹University of Illinois, Chicago, USA, ²Purdue University, USA, and ³Indianapolis University School of Medicine, USA</i>	
W7E	NANOFLUIDIC SINGLE-MOLECULE SORTER CONCEPTUALLY PROVEN BY SORTING OF DNA	1874
	T. Yamamoto ¹ and T. Fujii ² <i>¹Tokyo Institute of Technology, JAPAN and ²University of Tokyo, JAPAN</i>	

- W8E ON-CHIP NANOMANIPULATION OF SINGLE INFLUENZA VIRUS USING DIELECTROPHORETIC CONCENTRATION AND OPTICAL TWEEZERS** 1877
H. Maruyama¹, K. Kotani², A. Honda³, T. Takahata³, and F. Arai¹
¹Nagoya University, JAPAN, ²Tohoku University, JAPAN, and ³Hosei University, JAPAN

- W9E REAL-TIME OBSERVATION OF DNA CONFORMATIONAL TRANSITIONS AT A SINGLE-MOLECULE LEVEL BY MICROFLUIDIC DEVICES** 1880
H. Suzuki¹, N. Kaji¹, Y. Okamoto¹, M. Tokeshi¹, and Y. Baba^{1,2}
¹Nagoya University, JAPAN and
²National Institute of Advanced Industrial Science and Technology (AIST), JAPAN

Poster Session Nanotechnologies - Nanoassembly

- W10E SIMULTANEOUS CONTROL OF LENGTH AND LOCATION OF METAL-ORGANIC NANOWIRES GROWN BY HYDRODYNAMIC FOCUSING IN A MULTILAYER MICROFLUIDIC DEVICE** 1883
P. Kuhn¹, J. Puigmartí-Luis¹, I. Imaz², D. Maspoch², and P.S. Dittrich¹
¹ETH Zürich, SWITZERLAND and
²Centre d'Investigacions en Nanociència i Nanotecnologia (ICN-CSIC), SPAIN

Poster Session Nanotechnologies - Nanostructured Materials

- W11E CHEMICAL SG-SELEX ON THE NANOPOROUS SILICON SUBSTRATE CAN GENERATE HIGH AFFINITY ssDNA APTAMERS AGAINST NON-SOLUBLE CHEMICALS** 1886
J.-Y. Ahn¹, S.W. Lee², M. Jo¹, M. Kim¹, H. Bae¹, T. Laurell², O.C. Jeong³, and S. Kim¹
¹Dongguk University, SOUTH KOREA, ²Lund University, SWEDEN, and
³Inje University, SOUTH KOREA
- W12E INVESTIGATION OF PHONON-ASSISTED OPTICAL NEAR-FIELD EXCITATION ON NANOSTRUCTURED TiO₂ TOWARDS ON-CHIP FUEL CELL APPLICATION** 1889
Thu.H.H. Le, K. Mawatari, K. Kitamura, T. Yatsui, T. Kawazoe, M. Ohtsu, and T. Kitamori
University of Tokyo, JAPAN
- W13E SELECTIVE DEPOSITION OF ELECTROSPUN ALGINATE-BASED NANOFIBERS ON CELL-REPELLING HYDROGEL SURFACES FOR CELL-BASED MICROARRAY** 1892
S.H. Huang¹, T.C. Chien¹, K.Y. Hung², and Y.C. Chung²
¹National Taiwan Ocean University, TAIWAN and ²Mingchi University of Technology, TAIWAN

Poster Session MEMS & NEMS Technologies - Micro- & Nanomachining

- W1F A NOVEL FABRICATION METHOD OF HOLLOW NANONEEDLES APPLICABLE FOR SINGLE CELL OPERATION** 1895
Y. Zhang, X. Ji, C. Li, W. Wu, and Z. Li
Peking University, CHINA
- W2F ENHANCED MICROFABRICATION CAPABILITIES OF THERMOPLASTICS ELASTOMERS FOR CD LAB SYSTEM INCLUDING: LYSING, PCR AND HYBRIDIZATION MICROFLUIDIC FUNCTIONS** 1898
E. Roy¹, M. Mounier¹, R. Peytavi², J. Siegrist³, R. Gorkin³, M. Madou², M.G. Bergeron² and T. Veres¹
¹National Research Council Canada, CANADA, ²Laval University, CANADA, and
³University of California, Irvine, USA
- W3F FABRICATION OF A MRI STANDARDIZATION DEVICE BY STACKING HIGHLY PATTERNED THIN PDMS LAYERS** 1901
R. Samuel, H.J. Sant, F. Jiao, C.R. Johnson, and B.K. Gale
University of Utah, USA
- W4F FLEXIBLE MICROPOST ARRAYS FOR STUDYING TRACTION FORCES OF VASCULAR SMOOTH MUSCLE CELLS** 1904
Q. Cheng, Z. Sun, G.A. Meininger, and M. Almasri
University of Missouri, USA

W5F MICROMACHINING OF PYREX7740 GLASS FOR MICRO-FLUIDIC DEVICES 1907
J.W. Liu, Q.A. Huang, J.T. Shang, and J.Y. Tang
Southeast University, CHINA

W6F WAX PATTERNS BY DECAL-TRANSFER-MICROLITHOGRAPHY AND ITS USE FOR LOW-TEMPERATURE-BONDING OF BIO-FUNCTIONALIZED μ TAS 1910
M. Díaz-González and A. Baldi
Instituto de Microelectrónica de Barcelona (IMB-CNM), SPAIN

Poster Session MEMS & NEMS Technologies - Microfluidic Components/Packaging

W7F A DISPOSABLE MICROFLUIDIC ARRAY PLATFORM FOR AUTOMATIC ION CHANNEL RECORDING 1913
M. Rossi¹, F. Thei¹, H. Morgan², and M. Tartagni¹
¹University of Bologna, ITALY and ²University of Southampton, UK

W8F ALL IN ONE LATERAL-FLOW CHIP FOR ARRAY IMMUNOASSAY 1916
T. Miura, T. Horiuchi, J. Takahashi, Y. Iwasaki, M. Seyama, and E. Tamechika
NTT Microsystem Integration Laboratories, JAPAN

W9F FREQUENCY ADDRESSABLE ACOUSTIC COLLECTION, SEPARATION AND MIXING IN A PZT DRIVEN GLASS CAPILLARY MICROFLUIDIC ACTUATOR 1919
M.K. Araz and A. Lal
Cornell University, USA

W10F METABOLOMIC NMR BY INDUCTIVE COUPLING 1922
A. Zaß¹, K. Wang¹, J. Korvink¹, M. Reed², J. Landers¹, and M. Utz¹
¹University of Virginia, USA and ²Albert Ludwig - Universität, GERMANY

W11F PDMS NANOSTRUCTURES FABRICATED BY TWO-STEP MOLDING PROCESS USED FOR TUNABLE SERS INTEGRATED WITH MICROFLUIDICS 1925
X. Wang¹, Z. Geng^{1,2}, W. Wang¹, and Z. Li¹
¹Peking University, CHINA and ²Minzu University, CHINA

Poster Session MEMS & NEMS Technologies - Integration Strategies

W12F A TWO CHAMBER SU8 LABONACHIP WITH INTEGRATED BURST VALVE FOR SAMPLE PREPARATION, SAMPLE CONCENTRATION AND PCR 1928
V. Calvo¹, M. Agirregabiria¹, L.J. Fernandez¹, A. Ezkerra¹, J. Berganzo¹, J. Elizalde¹, K. Mayora¹, D. Verdoy², and J.M. Ruano-Lopez¹
¹Ikerlan S. Coop, SPAIN and ²Gaiker, SPAIN

W13F FACILE AND CONTROLLED INTEGRATION OF FUNCTIONAL NANOSTRUCTURES IN MICROFLUIDIC DEVICE 1931
J. Kim and I. Park
Korea Advanced Institute of Science and Technology (KAIST), SOUTH KOREA

Poster Session MEMS & NEMS Technologies - New Chip Materials

W14F FLUOROTHERMOPLASTIC CHIPS FOR DROPLET MICROFLUIDICS AND DNA ANALYSIS 1934
S. Begolo, G. Colas, L. Malaquin, and J.-L. Viovy
Institut Curie, FRANCE

W15F MICROFLUIDIC DEVICES MADE OF UV-CURABLE GLUE (NOA81) FOR FLUORESCENCE DETECTION BASED APPLICATIONS 1937
Ph. Wägli, B.Y. Guélat, A. Homsy, and N.F. de Rooij
École Polytechnique Fédérale de Lausanne (EPFL), SWITZERLAND

Poster Session MEMS & NEMS Technologies - Surface Modification

W16F A HEMOCOMPATIBLE ARRAY CYLINDRICAL NANOSHELL WITH A REDUCED EFFECTIVE BLOOD CONTACT AREA 1940
H. Im, Y.-B. Park, J. Suk, M. Im, C.O. Joe, and Y.-K. Choi
Korea Advanced Institute of Science and Technology (KAIST), SOUTH KOREA

W17F	IN-SITU SOL-GEL MODIFICATION OF PDMS ELECTROPHORETIC ANALYTICAL DEVICES	1943
	I. Hoek ¹ , A. Bubendorfer ¹ , T. Kemmitt ^{1,2} , and W.M. Arnold ^{1,2} ¹ Industrial Research Ltd., NEW ZEALAND and ² Victoria University, NEW ZEALAND	
W18F	SIMPLE AND FUNCTIONAL MODIFICATION OF PDMS SURFACE FOR MICROCHANNEL ELECTROPHORESIS	1946
	T. Shirai, M. Takai, and K. Ishihara University of Tokyo, JAPAN	
W19F	WETTABILITY PATTERNING IN MICROFLUIDIC SYSTEMS BY POLY(ACRYLIC ACID) GRAFT POLYMERIZATION	1949
	M.H. Schneider ^{1,2} , B. Kozlov ^{1,2} , H. Willaime ¹ , Y. Tran ¹ , F. Rezgui ² , and P. Tabeling ¹ ¹ École Supérieure de Physique et de Chimie Industrielles (ESPCI), FRANCE and ² Études et Production Schlumberger, FRANCE	

Poster Session Imaging & Detection Technologies - Flow Visualization

W1G	MEASUREMENT OF PERIODIC FLOW USING MICRO PARTICLE IMAGE VELOCIMETRY WITH PHASE SAMPLING TECHNIQUE	1952
	W.-I. Wu, D. Ewing, P.R. Selvaganapathy, and C.Y. Ching McMaster University, CANADA	

Poster Session Imaging & Detection Technologies - Optical

W2G	A POLYMERIC MICRO-OPTIC DEVICE FOR THE DETECTION OF MICROFLUIDIC FLOW SPATIAL PROFILE	1955
	F. Sapuppo ¹ , A. Llobera ² , F. Schembri ¹ , and M. Bucolo ¹ ¹ Università degli Studi di Catania, ITALY and ² Centro Nacional de Microelectrónica (CNM), SPAIN	
W3G	CMOS-BASED LUMINESCENCE DETECTION FOR LAB-ON-A-CHIP	1958
	L. Shen ¹ , M. Ratterman ¹ , D. Klotzkin ² , and I. Papautsky ¹ ¹ University of Cincinnati, USA and ² State University of New York, Binghamton, USA	
W4G	FIBER FREE PLUG AND PLAY ON-CHIP SCATTERING CYTOMETER MODULE – FOR IMPLEMENTATION IN MICROFLUIDIC POINT OF CARE DEVICES	1961
	T.G. Jensen and J.P. Kutter Danmarks Tekniske Universitet (DTU), DENMARK	
W5G	HYDRATION LAYERS OF ALCOHOL AND PROTEINS ANALYZED BY THZ BIOMEMS	1964
	S. Laurette, A. Treizebre, and B. Bocquet Université de Lille, FRANCE	
W6G	INVESTIGATION OF PLASMONIC NANODOT ARRAYS COMPARED WITH NANO HOLE ARRAYS FABRICATED BY A SEQUENTIAL NANOIMPRINT TECHNIQUE	1967
	K. Nakamoto ^{1,2} , R. Kurita ² , and O. Niwa ^{1,2} ¹ University of Tsukuba, JAPAN and ² National Institute of Advanced Industrial Science and Technology (AIST), JAPAN	
W7G	LONG-RANGE SPR SENSOR WITH MICRO LIQUID CHANNELS FOR MAINTAINING SYMMETRICAL CONDITION	1970
	T. Kan ¹ , H. Kojo ² , E. Iwase ³ , K. Matsumoto ¹ , and I. Shimoyama ¹ ¹ University of Tokyo, JAPAN, ² Cannon Corp., JAPAN, and ³ Harvard University, USA	
W8G	REAL-TIME BIOCHEMICAL RESPONSE UPON CHEMICAL STIMULATION OF LIVING MONOCYTES INVESTIGATED BY FOURIER TRANSFORM INFRARED MICROSCOPY (μ-FTIR)	1973
	G. Birarda ^{1,2} , G. Greci ² , L. Businaro ² , S. Pacor ³ , M. Tormen ² , and L. Vaccari ¹ ¹ Elettra Synchrotron Light Laboratory, ITALY, ² Consiglio Nazionale delle Ricerche (CNR), ITALY, and ³ Trieste University, ITALY	

Poster Session Imaging & Detection Technologies - Electrochemical

- W9G 3-D CARBON INTERDIGITATED ARRAY NANOELECTRODES FOR HIGHLY SENSITIVE SENSING OF NEUROTRANSMITTERS** 1976
J.-I. Heo¹, D.-S. Shim¹, R.M. Duarte², M. Madou², and H. Shin¹
¹Ulsan National Institute of Science & Technology (UNIST), SOUTH KOREA and
²University of California, Irvine, USA
- W10G INTEGRATED ELECTROCHEMICAL MICRO-SENSORS FOR METABOLISM STUDIES OF YEAST CELLS** 1979
F. Zhang^{1,2}, J.J. Liu¹, J.H. Tian¹, L. Wang¹, P.G. He², and Y. Chen^{1,3}
¹École Normale Supérieure (ENS), FRANCE, ²East China Normal University, CHINA, and
³Kyoto University, JAPAN
- W11G SIGNIFICANT IMPROVEMENT IN SENSITIVITY OF LEAKAGE CURRENT MICROSENSOR BY USING DENATURANT AND ELECTROLYTE-ENTRAPPING DPPC LIPOSOMES** 1982
P. Lorchirachoonkul¹, T. Shimanouchi², K. Yamashita¹, H. Umakoshi², R. Kuboi², and M. Noda¹
¹Kyoto Institute of Technology, THAILAND and ²Osaka University, JAPAN

Poster Session Imaging & Detection Technologies - Mass Spectrometry

- W12G CHIP-BASED HEATERLESS NANO-APCI-MS** 1985
R.J. Raterink, M. de Korte, H. van der Linden, and T. Hankemeier
Leiden University, THE NETHERLANDS
- W13G IDENTIFYING PSA BIOMARKER WITH SOL-GEL INTEGRATED MICROARRAY AND MALDI-TOF MS** 1988
J.-Y. Ahn¹, S.W. Lee², M. Jo¹, S. Ren¹, J. Kang¹, S. Lee¹, T. Laurell², and S. Kim¹
¹Dongguk University, SOUTH KOREA and ²Lund University, SWEDEN

Poster Session Imaging & Detection Technologies - Optofluidics

- W14G CHARACTERIZATION OF AN OPTOFLUIDIC MICROFLOW CYTOMETER FOR SINGLE PARTICLE ANALYSIS** 1991
M. Rosenauer and M.J. Vellekoop
Vienna University of Technology, AUSTRIA
- W15G ELASTOMER MEMBRANE PRESSURE SENSORS FOR MICROFLUIDICS** 1994
A.G. Orth, E.F. Schonbrun, and K.B. Crozier
Harvard University, USA
- W16G ON-CHIP REFRACTIVE INDEX MEASUREMENT VIA INTERFACIAL REFRACTION OF TWO PHASE FLOW STREAMS** 1997
S. Xiong^{1,2}, Y. Yang¹, Y. Chen², G.J. Zhang², G.Q. Lo², D.L. Kwong², and A.Q. Liu¹
¹Nanyang Technological University, SINGAPORE and
²Agency for Science, Technology and Research (A*STAR), SINGAPORE

Poster Session Imaging & Detection Technologies - Others

- W17G A CORONA DISCHARGE PROCESS BASED MICRO ELECTRIC NO_x CONVERTER FOR THE TOTAL NO_x EVALUATION IN AIR** 2000
S.I. Yoon, Y.H. Choi, M.S. Kim, and Y.J. Kim
Yonsei University, SOUTH KOREA
- W18G CHARACTERIZATION OF PDMS MICROVALVES USING MUSIC** 2003
A.K. Au, P. Liu, and A. Folch
University of Washington, USA
- W19G DETECTION OF TRACE EXPLOSIVES BY SERS USING 3-D NANOCHANNEL ARRAYS** 2005
K. Jiang, I. White, and D.L. DeVoe
University of Maryland, USA

W20G IN SITU MICRO DROPLET TYPING SYSTEM USING 3 ϕ METHOD 2008
 N. Yi, D. Kim, and J. Park
Pohang University of Science and Technology (POSTECH), SOUTH KOREA

W21G SAPPHIRE DIELECTRIC RESONATORS FOR MICROFLUIDIC COMPOSITIONAL ANALYSIS 2011
 A. Porch, A. Masood, A.J. Naylor, A. Sulaimalebbe, and D.A. Barrow
Cardiff University, UK

Poster Special Focus Session - Tissue Engineering

W1H BEAD-BASED RAPID CONSTRUCTION OF HETEROGENEOUS 3D TISSUE ARCHITECTURE 2014
 Y. Tsuda^{1,2}, H. Onoe¹, and S. Takeuchi^{1,2}
¹University of Tokyo, JAPAN and ²BEANS Project, JAPAN

W2H DEVELOPMENT OF INSULIN DELIVERY DEVICES COMPOSED OF LANGERHANS ISLETS AND CARDIOMYOCYTES 2017
 H. Akaike¹, Y. Tanaka^{1,2}, Y. Sugii^{1,2}, and T. Kitamori^{1,2}
¹University of Tokyo, JAPAN and ²Japan Science and Technology Agency (JST), JAPAN

W3H HIGHLY ALIGNED SKELETAL MUSCLE FIBERS 2020
 Y. Shimoyama, H. Onoe, Y. Tsuda, and S. Takeuchi
University of Tokyo, JAPAN

W4H MICROARRAYS FOR THE SCALABLE PRODUCTION OF UNIFORM AND METABOLICALLY RELEVANT TUMOUR SPHEROIDS 2023
 H. Hardelauf¹, J.-P. Frimat¹, W. Schormann², J.D. Stewart², Y.-Y. Chiang¹, C. Cadenas², J. Franzke¹, J.G. Hengstler², L.A. Kunz-Schughart³, and J. West¹
¹Institute for Analytical Sciences (ISAS), GERMANY, ²IfAdo, GERMANY, and ³University of Dresden, GERMANY

W5H SCULPTING TISSUE SCAFFOLDS WITH EMBEDDED 3-D VASCULATURE 2026
 J.-H. Huang, J. Kim, A. Jayaraman, and V.M. Ugaz
Texas A&M University, USA

W6H PREPARATION OF ALGINATE MICROFIBERS FOR CELL ENTRAPMENT USING A MICROFLUIDIC DEVICE 2029
 L. Capretto¹, S. Mazzitelli², X. Zhang¹, and C. Nastruzzi²
¹University of Southampton, UK and ²University of Ferrara, ITALY

Poster Special Focus Session - Electrowetting-Driven Digital Microfluidics

W7H A FEEDBACK CONTROL SYSTEM FOR HIGH-FIDELITY DIGITAL MICROFLUIDICS 2032
 S.C.C. Shih¹, R. Fobel¹, P. Kumar², and A.R. Wheeler¹
¹University of Toronto, CANADA and ²Indian Institute of Technology, INDIA

W8H DIGITAL MICROFLUIDIC HUB FOR AUTOMATED NUCLEIC ACID SAMPLE PREPARATION 2035
 H. Kim, M.S. Bartsch, R.F. Renzi, G.L. Pezzola, E.M. Remillard, E.A. Kittlaus, J. He, and K.D. Patel
Sandia National Laboratories, USA

W9H MODELING THE SPONTANEOUS INSERTION OF ONE LIQUID INTO ANOTHER ON A DROPLET MICROFLUIDIC PLATFORM 2038
 D. Chatterjee, A.K. Tucker-Schwartz, and R.L. Garrell
University of California, Los Angeles, USA

Session 3A3 - Cell Analysis II

HIGH-DENSITY ARRAY OF SINGLE CELL TRAPS FOR HIGH-THROUGHPUT IMAGING OF CALCIUM DYNAMICS IN RESPONSE TO OXIDATIVE STRESS 2041
 C.A. Rivet, K. Chung, M.L. Kemp, and H. Lu
Georgia Institute of Technology, USA

SEPARATION AND DETECTION OF RARE CELLS VIA MULTISTAGE MAGNETIC GRADIENT IN A MICROFLUIDIC DISK	2044
C.-L. Chen, K.-C. Chen, Y.-C. Pan, T.-P. Lee, C.-W. Yang, L.-C. Hsiung, C.-M. Lin, C.-Y. Chen, C.-H. Lin, B.-L. Chiang, and A.M. Wo	
<i>National Taiwan University, TAIWAN</i>	

SICKLING RED BLOOD CELLS IN DROPLET ARRAYS	2047
P. Abbyad ¹ , R. Dangla ¹ , P.-L. Tharaux ² , A. Alexandrou ¹ , and C.N. Baroud ¹	
¹ Ecole Polytechnique, FRANCE and ² Paris-Cardiovascular Research Centre, FRANCE	

Session 3B3 - Assays for Trauma & Disease

BURN INJURY INHIBITS NEUTROPHIL CHEMOTAXIS IN MICROFLUIDIC DEVICES	2050
K.L. Butler, V. Ambravaneswaran, N. Agrawal, M. Bilodeau, M. Toner, R.G. Tompkins, S. Fagan, and D. Irimia	
<i>Massachusetts General Hospital, Shriners Hospital for Children and Harvard Medical School, USA</i>	

REAL TIME ELECTROCHEMICAL DNA QUANTIFICATION IN A COC LAB ON A CHIP: TOWARDS LOW-COST DIAGNOSIS OF NOSOCOMIAL INFECTIONS	2053
V. Taniga ¹ , G. Mottet ¹ , S. Miserere ¹ , L. Malaquin ¹ , J.L. Viovy ¹ , F. Kivlehan ² , F. Mavre ² , D. Marchal ² , B. Limoges ² , A. Le Nel ³ , and J. Goulpeau ³	
¹ Institut Curie, FRANCE, ² Université Paris, FRANCE, and ³ FLUIGENT, FRANCE	

ASSESSING THE TRAUMATIC BRAIN INJURY MARKERS S100 AND C-REACTIVE PROTEIN IN HUMAN CEREBROSPINAL FLUID VIA MICROFLUIDIC IMMUNOSUBTRACTION	2056
A.A. Apori and A.E. Herr	
<i>University of California, Berkeley, USA</i>	

Session 3C3 - Advanced Fluid Handling

DROPS ON RAILS	2059
R. Dangla, S. Lee, and C.N. Baroud	
<i>École Polytechnique, FRANCE</i>	

BIOLOGICALLY INSPIRED BIDIRECTIONAL FLUIDIC DIODE	2062
H. Cho, A. Kimteng, and L.P. Lee	
<i>University of California, Berkeley, USA</i>	

ON-CHIP POROUS POLYMER MONOLITHS FOR SOLID PHASE EXTRACTION USING DIGITAL MICROFLUIDICS	2065
H. Yang, J.M. Mudrik, M. Jebrail, and A.R. Wheeler	
<i>University of Toronto, CANADA</i>	

Session 3D3 - Nanobiotechnology Separation

SIMULTANEOUS CONCENTRATION AND SEPARATION OF PROTEINS IN NANOCHANNELS	2068
D.W. Inglis, N. Calander, and E.M. Goldys	
<i>Macquarie University, AUSTRALIA</i>	

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M. Uetz¹, M.J.T. Reinders², D. Stamatialis¹, C. van Blitterswijk¹, and J. de Boer¹

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University of California, Berkeley, USA

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O. Öhman

Meje AB, SWEDEN

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Invited Presentation

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J. Elders

Thermo Fisher Scientific, THE NETHERLANDS

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³Mitsubishi Chemical Medience Co. Ltd., JAPAN

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