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	A. Densmore ¹ , D.-X. Xu ¹ , P. Cheben ¹ , M. Vachon ¹ , S. Janz ¹ , R. Ma ¹ , R. Halir ² , I. Molina-Fernandez ² , Y. Li ¹ , G. Lopinski ¹ , A. Deläge ¹ , and J.H. Schmid ¹ ¹ National Research Council Canada, CANADA and ² Universidad de Malaga, SPAIN	
B2P-K2	SENSITIVITY INVESTIGATIONS OF SURFACE STRESS CAPACITIVE DNA SENSOR	1554
	S. Chatzandroulis ¹ , V. Tsouti ¹ , M. Ioannou ² , C. Boutopoulos ³ , I. Zergioti ³ , D. Goustouridis ¹ , J. Hue ⁴ , R. Rousier ⁴ , D. Tsoukalas ³ , P. Normand ¹ , and D. Kafetzopoulos ² ¹ NCSR Demokritos, GREECE, ² FORTH, Institute of Molecular Biology and Biotechnology, GREECE, ³ National Technical University of Athens, GREECE, and ⁴ CEA - LETI, FRANCE	
B2P-K3	A PORTABLE IMPEDANCE BIOSENSOR INSTRUMENT FOR RAPID DETECTION OF AVIAN INFLUENZA VIRUS	1558
	J. Lin ¹ , J. Lum ¹ , R. Wang ¹ , S. Tung ¹ , H. Lu ² , B. Hargis ¹ , Y. Li ¹ , and L. Berghman ¹ University of Arkansas, USA, ² Pennsylvania State University, USA, and ³ Texas A&M University, USA	
B2P-K4	WHOLE FIELD LIVING CELL MAPPING USING DIFFRACTION MOIRÉ SENSOR	1564
	X. Zheng and X. Zhang <i>Boston University, USA</i>	
B2P-K5	A BACTERIAL BIOFILM SURFACE ACOUSTIC WAVE SENSOR FOR REAL TIME GROWTH MONITORING	1568
	Y.W. Kim, S.E. Sardari, A.A. Iliadis, and R. Ghodssi <i>University of Maryland, USA</i>	
B2P-K6	A NOVEL MULTI-WORKING ELECTRODES POTENTIOSTAT FOR ELECTROCHEMICAL DETECTION OF METABOLITES	1572
	D. De Venuto ¹ , M.D. Torre ^{1,2} , C. Boero ² , S. Carrara ² , and G. De Micheli ² ¹ Politecnico di Bari, ITALY and ² Ecole Polytechnique Fédérale de Lausanne (EPFL), SWITZERLAND	
B2P-K7	HIGH SENSITIVE CIRCULAR HALL EFFECT SENSOR FOR MAGNETIC BEAD LABELED IMMUNOASSAY	1578
	B. Zhang, E. Korman, and M. Zaghoul <i>George Washington University, USA</i>	
B2P-K8	MICROPOST ARRAY FOR FORCE MAPPING OF VASCULAR SMOOTH MUSCLE CELLS	1583
	Q. Cheng, Z. Sun, G.A. Meininger, and M. Almasri <i>University of Missouri, Columbia, USA</i>	

B2P-K9	TUNING OF LUMINESCENT SENSOR RESPONSE AND DEGRADATION THROUGH MANIPULATION OF NANOFILM COATING PROPERTIES 1587 B. Collier, J. Park, and M. McShane <i>Texas A&M University, USA</i>
B2P-K10	A NEW HYBRID CATHETER-TIP TACTILE SENSOR WITH RELATIVE HARDNESS MEASURING CAPABILITY FOR USE IN CATHETER-BASED HEART SURGERY 1592 R. Ahmadi ¹ , J. Dargahi ¹ , M. Packirisamy ¹ , and R. Cecere ² <i>¹Concordia University, CANADA and ²McGill University, CANADA</i>
B2P-K11	PRINTED ELECTROCHEMICAL BASED BIOSENSORS ON FLEXIBLE SUBSTRATES 1596 A.S.G. Reddy, B. Narakathu, M.Z. Atashbar, M. Rebros, E. Hrehorova, and M. Joyce <i>Western Michigan University, USA</i>
B2P-K12	FLEXIBLE NEURAL MICROELECTRODE ARRAYS REINFORCED WITH EMBEDDED METALLIC MICRO-NEEDLES 1601 A.A. Fomani and R.R. Mansour <i>University of Waterloo, CANADA</i>
B2P-K13	A DISPOSABLE POLYMER WAVEGUIDE LAB-ON-A-CHIP FOR REAL-TIME DETECTION OF PROTEIN C USING EVANESCENT WAVE 1605 D.J. Oh, J.H. Jung, J.Y. Kang, and S.H. Lee <i>Korea Institute of Science and Technology (KIST), SOUTH KOREA</i>
B2P-K14	DEVELOPMENT OF A THREE DIMENSIONAL (3-D) SILICON MICRO-ARRAY FOR CELL CAPTURING 1609 M. Nikkhah, J.S. Strobl, and M. Agah <i>Virginia Polytechnic Institute and State University, USA</i>
B2P-K15	POST-CMOS PARYLENE PACKAGING FOR ON-CHIP BIOSENSOR ARRAYS 1613 L. Li and A.J. Mason <i>Michigan State University, USA</i>
B2P-K16	DIFFRACTOMETRIC BIOCHEMICAL SENSING WITH SMART HYDROGELS 1617 C.-L. Chang, Z. Ding, V.N.L.R. Patchigolla, B. Ziaie, and C.A. Savran <i>Purdue University, USA</i>
B2P-K17	MODELING SENSING MECHANISMS IN CARBON NANOTUBE BIOSENSORS 1622 G.B. Abadir, K. Walus, and D.L. Pulfrey <i>University of British Columbia, CANADA</i>
B2P-K18	A NOVEL MICRODROPLET CASSETTE FOR BIOCHEMICAL SCREENING 1627 L.L. Wu ¹ , Y. Zhang ¹ , W. Xu ² , G.-P. Li ¹ , and M. Bachman ¹ <i>¹University of California, Irvine, USA and ²University of North Carolina, USA</i>
B2P-K19	A FULLY MICROFABRICATED COPLANAR SINGLE-WALLED CARBON NANOTUBE THREE-ELECTRODE SYSTEM FOR BIOSENSORS 1632 J.H. Kim ¹ , J.Y. Lee ¹ , C. Park ² , and N.K. Min ¹ <i>¹Korea University, SOUTH KOREA and ²Kangwon National University, SOUTH KOREA</i>

B2P-K20	RAPID DETECTION OF DNA HYBRIDIZATION ON SURFACE PLASMON RESONANCE BASED MICROARRAYS	1636
	A. Kick ¹ , M. Bönsch ¹ , A. Herr ² , W. Brabetz ² , M. Jung ² , F. Sonntag ³ , and M. Mertig ¹	
	¹ Technische Universität Dresden, GERMANY, ² Biotype Diagnostic GmbH, GERMANY, and	
	³ Fraunhofer IWS, GERMANY	

POSTER SESSION W5 - Optical Sensors

B2P-L1	DIFFUSE-LIGHT ABSORPTION SPECTROSCOPY AND CHEMOMETRICS FOR DISCRIMINATION AND QUANTIFICATION OF EXTRA VIRGIN OLIVE OIL ADULTERANTS	1640
	A.G. Mignani ¹ , L. Ciaccheri ¹ , H. Ottevaere ² , H. Thienpont ² , L. Conte ³ , M. Marega ³ , A. Cichelli ⁴ , C. Attilio ¹ , and A. Cimato ¹	
	¹ Consiglio Nazionale delle Ricerche (CNR), ITALY, ² Vrije Universiteit Brussel, BELGIUM,	
	³ Università degli Studi di Udine, ITALY, and ⁴ Università degli Studi G. D'Annunzio (DASTA), ITALY	
B2P-L2	OPTICAL SENSING OF SOLVENTS USING SELECTIVE TENSILE EFFECTS OF A PDMS-COATED FIBER BRAGG GRATING	1645
	K.-I. Joo ¹ , C.-S. Park ¹ , Y. Han ¹ , Y.W. Lee ² , S.H. Kong ¹ , S.-W. Kang ¹ , and H.-R. Kim ¹	
	¹ Kyungpook National University, SOUTH KOREA and ² Pukyong National University, SOUTH KOREA	
B2P-L3	IN-PIXEL BURIED-CHANNEL SOURCE FOLLOWER IN CMOS IMAGE SENSORS EXPOSED TO X-RAY RADIATION	1649
	Y. Chen ¹ , J. Tan ¹ , X. Wang ² , A.J. Mierop ³ , and A.J.P. Theuwissen ^{1,4}	
	¹ Delft University of Technology, THE NETHERLANDS, ² CMOSIS nv, BELGIUM,	
	³ DALSA B.V., THE NETHERLANDS, and ⁴ Harvest Imaging, BELGIUM	
B2P-L4	LOW-POWER AND HIGH-SPEED CURRENT-MODE CMOS IMAGER WITH 1T BIASING SCHEME	1653
	F. Tang and A. Bermak	
	Hong Kong University of Science and Technology, HONG KONG	
B2P-L5	MODELING A PROTOTYPE OPTICAL COLLISION AVOIDANCE SENSOR FOR UNMANNED ARIAL VEHICLES	1657
	C. Minwalla ¹ , M. Tekeste ¹ , K. Watters ¹ , P. Thomas ² , R.I. Hornsey ² , K. Ellis ³ , and S. Jennings ³	
	¹ York University, CANADA, ² Topaz Technology Inc., CANADA, and ³ NRC Canada, CANADA	
B2P-L6	OPTICAL FIBRE RADIATION DOSIMETRY FOR LOW DOSE APPLICATIONS	1663
	D. McCarthy, S. O'Keeffe, G. Leen, and E. Lewis	
	University of Limerick, IRELAND	
B2P-L7	A HYBRID FIBER OPTIC SENSING SYSTEM FOR STRUCTURAL HEALTH MONITORING	1667
	S.K. Ghorai, S. Sengupta, S. Sidhishwari, and D.R. Roy	
	Birla Institute of Technology, INDIA	
B2P-L8	FIBER-OPTIC TWO-PHOTON FLUORESCENCE CORRELATION SPECTROSCOPY FOR REMOTE CELL FLOW VELOCITY MEASUREMENTS	1671
	Y.-C. Chang ¹ , J.Y. Ye ² , T.P. Thomas ³ , J.R. Baker, Jr. ³ , and T.B. Norris ³	
	¹ National Changhua University of Education, TAIWAN, ² University of Texas, San Antonio, USA, and	
	³ University of Michigan, USA	

B2P-L9	GROOVED FIBER SENSORS FOR DEFORMATION IMAGING	1675
	N. Nurgiyatna, P. Scully, and K.B. Ozanyan <i>University of Manchester, UK</i>	
B2P-L10	NEAR-FIELD PROBES USING METAMATERIAL INCLUSIONS FOR ENHANCED SENSITIVITY	1681
	O.M. Ramahi, Z. Ren, and M.S. Boybay <i>University of Waterloo, CANADA</i>	
B2P-L11	OPTIMIZED MARKS FOR QUALITATIVE MATERIAL DISCRIMINATION	1685
	O.M. Conde, L. Uriarte, P.B. Garcia-Allende, A.M. Cubillas, and J.M. Lopez-Higuera <i>University of Cantabria, SPAIN</i>	
B2P-L12	DESIGN AND ANALYSIS OF A NOVEL ELECTRO-OPTICAL MEMS GYROSCOPE FOR NAVIGATION APPLICATIONS	1690
	R. Waters, C. Tally, B. Dick, H. Jazo, M. Fralick, M. Kerber, and A. Wang <i>Space and Naval Warfare Systems Center Pacific, USA</i>	
B2P-L13	MISMATCH REDUCTION FOR DARK CURRENT SUPPRESSION	1696
	D. Sander and P. Abshire <i>University of Maryland, USA</i>	
B2P-L14	PH SENSING BASED ON THIN FILM HYDROGEL COATED SILICON GRATINGS	1701
	A.K. Mudraboyina, J. Markowski, and J. Sabarinathan <i>University of Western Ontario, CANADA</i>	
B2P-L15	FLUORESCENT IMAGING AND LOCALIZATION WITH ANGLE SENSITIVE PIXEL ARRAYS IN STANDARD CMOS	1706
	A. Wang, P.R. Gill, and A. Molnar <i>Cornell University, USA</i>	
B2P-L16	Pd COATED EDGE-EMITTING LASERS FOR HYDROGEN SENSING APPLICATIONS	1710
	B.G. Griffin, C.-L. Chang, A. Arbabi, and L.L. Goddard <i>University of Illinois, Urbana-Champaign, USA</i>	
B2P-L17	COMPOSITE CAVITY FIBER LASER SENSOR BASED ON FEEDBACK MODULATION	1714
	J. Zhang ¹ , Q. Chai ¹ , X. Li ¹ , Q. Hao ¹ , Q. Li ¹ , W. Sun ¹ , L. Yuan ¹ , P. Lu ² , and G.D. Peng ³ ¹ Harbin Engineering University, CHINA, ² Communications Research Centre, CANADA, and ³ University of New South Wales, AUSTRALIA	

POSTER SESSION W6 - Mechanical & Physical Sensors

B2P-M1	MAGNETIC SENSOR EMPLOYING PIEZOELECTRIC CERAMIC/RARE-EARTH IRON ALLOY/HIGH-PERMEABILITY FeCuNbSiB COMPOSITE	1718
	P. Li, L. Chen, Y. Wen, D. Wang, and X. Huang <i>Chongqing University, CHINA</i>	

B2P-M2	DIGITAL CLOSED-LOOP CONTROL BASED ON ADAPTIVE FILTER FOR DRIVE MODE OF A MEMS GYROSCOPE	1722
	D. Liu, N.N. Lu, J. Cui, L.T. Lin, H.T. Ding, Z.C. Yang, Y.L. Hao, and G. Yan <i>Peking University, CHINA</i>	
B2P-M4	OPTICAL MEMS VIBRATION SENSOR	1731
	W. Hortschitz ¹ , M. Sachse ¹ , H. Steiner ¹ , F. Kohl ¹ , J. Schalko ² , F. Keplinger ² , and T. Sauter ¹ ¹ <i>Austrian Academy of Sciences, AUSTRIA</i> and ² <i>Vienna University of Technology, AUSTRIA</i>	
B2P-M5	IMPLEMENTATION OF A FLEXIBLE SILICON-BASED TACTILE SENSOR ARRAY	1736
	C.-F. Hu, H.-Y. Huang, C.-C. Wen, L.-Y. Lin, and W. Fang <i>National Tsing Hua University, TAIWAN</i>	
B2P-M6	A SEMI-NUMERICAL MODEL OF A LATERAL FIELD EXCITED PIEZOELECTRIC FLUID SENSOR	1740
	T. Voglhuber-Brunnmaier, A.O. Niedermayer, and B. Jakoby <i>Johannes Kepler University, AUSTRIA</i>	
B2P-M7	NO-POWER VACUUM ACTUATED BI-STABLE MEMS SPDT SWITCH	1745
	U.R. Gowrishetty, K.M. Walsh, and D. Jackson <i>University of Louisville, USA</i>	
B2P-M8	DOUBLE MEMBRANE SENSORS FOR LIQUID VISCOSITY AND MASS DENSITY FACILITATING MEASUREMENTS IN A LARGE FREQUENCY RANGE	1750
	M. Heinisch ¹ , E.K. Reichel ² , T. Voglhuber-Brunnmaier ¹ , A. Niedermayer ¹ , and B. Jakoby ¹ ¹ <i>Johannes Kepler University, AUSTRIA</i> and ² <i>Katholike Universiteit Leuven, BELGIUM</i>	
B2P-M9	CAPACITIVE ICING MEASUREMENT IN A 220 kV OVERHEAD POWER LINE ENVIRONMENT	1754
	M.J. Moser, T. Bretterklieber, H. Zangl, and G. Brasseur <i>Graz University of Technology, AUSTRIA</i>	
B2P-M10	TIME-GATED TECHNIQUE FOR CONTACTLESS ELECTROMAGNETIC INTERROGATION OF MEMS RESONATORS	1759
	M. Baù, V. Ferrari, D. Marioli, and E. Tonoli <i>University of Brescia, ITALY</i>	
B2P-M11	ASSESSING MICROMECHANICAL SENSOR CHARACTERISTICS VIA OPTICAL AND ELECTRICAL METROLOGY	1765
	G. Langfelder ¹ , A. Tocchio ¹ , M.J. Thompson ² , G. Jaramillo ² , and D.A. Horsley ² ¹ <i>Politecnico di Milano, ITALY</i> and ² <i>University of California, Davis, USA</i>	
B2P-M12	SILICON MULTI-STAGE CURRENT-MODE PIEZORESISTIVE PRESSURE SENSOR	1770
	G. de Oliveira Coraucci and F. Fruett <i>University of Campinas, BRAZIL</i>	
B2P-M13	RESONANCE FREQUENCY TUNING METHOD USING CNT WIRE SYNTHESIS	1775
	J. Sung, J. Kim, T. An, S. Seok, J. Heo, and G. Lim <i>Pohang University of Science and Technology (POSTECH), SOUTH KOREA</i>	

B2P-M15	A SURFACE-MICROMACHINED MEMS ACOUSTIC SENSOR WITH 0.8 UM CMOS IMPEDANCE TRANSDUCER	1779
	J. Lee, C.H. Je, W.S. Yang, Y.S. Yang, and J. Kim <i>Electronics and Telecommunications Research Institute (ETRI), SOUTH KOREA</i>	
B2P-M15	SUB-PICOGRAM RESOLUTION MASS SENSING IN A LIQUID ENVIRONMENT USING LOW-LOSS QUARTZ CRYSTAL MICROBALANCE	1783
	C.R. Kirkendall, and J.W. Kwon <i>University of Missouri, Columbia, USA</i>	
B2P-M16	HIGH-PERFORMANCE CAPACITIVE MICROACCELEROMETER USING LARGE PROOF-MASS AND HIGH-AMPLITUDE SENSE VOLTAGE	1787
	M. Yoo and K.-H. Han <i>Inje University, SOUTH KOREA</i>	
B2P-M17	A NOVEL 3D CMOS MICRO-FLUXGATE MAGNETIC SENSOR FOR LOW MAGNETIC FIELD DETECTION	1791
	W.-S. Huang ¹ , J.-T. Jeng ² , and C.-C. Lu ¹ ¹ National Taipei University of Technology, TAIWAN and ² National Kaohsiung University of Applied Sciences, TAIWAN	
B2P-M18	COMPACT FLUXGATE SENSOR WITH A VECTOR COMPENSATION OF A MEASURED MAGNETIC FIELD	1795
	V. Petrucha and P. Kaspar <i>Czech Technical University in Prague, CZECH REPUBLIC</i>	
B2P-M19	METHOD FOR SENSITIVITY IMPROVEMENT AND OPTIMAL DESIGN OF A PIEZORESISTIVE PRESSURE SENSOR	1799
	H.-S. Hsieh, H.-C. Chang, C.-F. Hu, C.-P. Hsu, and W. Fang <i>National Tsing Hua University, TAIWAN</i>	
B2P-M20	SURFACE-SHAPE CAPTURE WITH BOUNDARY ELECTRODES	1803
	A.G. Kirk ¹ , C.C. Ho ¹ , and D. Garmire ² ¹ Univeristy of California, Berkeley, USA and ² University of Hawaii, Manoa, USA	
B2P-M21	HAIR-LIKE AIRFLOW SENSING WITH PIEZOELECTRIC VIBRATING DIAPHRAGM	1809
	X.M. Jing ¹ , J.M. Miao ¹ , T. Xu ¹ , and L. Norford ² ¹ Nanyang Technological University, SINGAPORE and ² Massachusetts Institute of Technology, USA	

POSTER SESSION W7 - Sensor Networks

B2P-N1	ADAPTIVE SWARM INTELLIGENCE ROUTING ALGORITHMS FOR WSN IN A CHANGING ENVIRONMENT	1813
	D. Bruneo ¹ , M. Scarpa ¹ , A. Bobbio ² , D. Cerotti ² , and M. Gribaudo ³ ¹ Università di Messina, ITALY, ² Università del Piemonte Orientale, ITALY, and ³ Politecnico di Milano, ITALY	
B2P-N2	SENSOR AUTHENTICATION SCHEME FOR CLUSTERING ROUTING PROTOCOLS IN WIRELESS SENSOR NETWORKS	1819
	S. Lee and K. Kim <i>Gwangju Institute of Science and Technology (GIST), SOUTH KOREA</i>	

B2P-N3	ENERGY EFFICIENCY AND PACKET ERROR RATE IN WIRELESS SENSOR NETWORKS WITH COOPERATIVE RELAY	1823
	L. Shi and A.O. Fapojuwo <i>University of Calgary, CANADA</i>	
B2P-N4	DEPENDABILITY EVALUATION OF WIRELESS SENSOR NETWORKS: REDUNDANCY AND TOPOLOGICAL ASPECTS	1827
	D. Bruneo, A. Puliafito, and M. Scarpa <i>Università di Messina, ITALY</i>	
B2P-N5	MOBILE TARGETS REGION-OF-INTEREST VIA DISTRIBUTED PYROELECTRIC SENSOR NETWORK: TOWARDS A ROBUST, REAL-TIME CONTEXT REASONING	1832
	F. Hu, Q. Sun and Q. Hao <i>University of Alabama, USA</i>	
B2P-N6	AN OCEAN OBSERVATORY SENSOR NETWORK APPLICATION	1837
	R. Herlien ¹ , T. O'Reilly ¹ , K. Headley ¹ , D.R. Edgington ¹ , S. Tilak ² , T. Fountain ² , and P. Shin ² <i>¹Monterey Bay Aquarium Research Institute, USA and ²University of California, San Diego, USA</i>	
B2P-N7	ENERGY-EFFICIENT MODEL INFERENCE IN WIRELESS SENSING: ASYMMETRIC DATA PROCESSING	1843
	P.G. Flikkema <i>Northern Arizona University, USA</i>	
B2P-N8	A PROPOSAL OF DISASTER INFORMATION SYSTEM BASED ON THE INTERNET TECHNOLOGIES	1848
	K. Hiroi, M. Yamanouchi, and H. Sunahara <i>Keio University, JAPAN</i>	
B2P-N9	SMART SPATIALLY-AWARE SENSING AND ACTUATION SYSTEM	1854
	J.A. Baloch and B.S. Hoyle <i>University of Leeds, UK</i>	
 POSTER SESSION W8 - Applications		
B2P-P1	A SYSTEM TO SENSE NEAR-SURFACE ATMOSPHERIC GASES OF POSSIBLE BIOLOGICAL ORIGIN ON MARS	1858
	E.W. Wilson ² , J. Tolson ¹ , C. Sheesley ¹ , E. Tunstel ³ , S. Mohammed ¹ , S. Mahdi ¹ , and I. Mohammad ¹ <i>¹University of Arkansas, USA, ²Harding University, USA, and ³Johns Hopkins University, USA</i>	
B2P-P2	PULSE SPECTROSCOPY SYSTEM FOR NON-INVASIVE REAL-TIME MONITORING OF THE HEART BEAT VOLUME	1863
	S. Andruschenko ¹ , U. Timm ² , M. Hinz ¹ , S. Koball ¹ , J. Kraitl ¹ , E. Lewis ² , and H. Ewald ¹ <i>¹University of Rostock, GERMANY and ²University of Limerick, IRELAND</i>	
B2P-P3	CHARACTERIZATION AND OPTIMIZATION OF A NOVEL ELECTROMAGNETIC TRANSDUCTION TECHNIQUE FOR ROTATIONAL ENERGY HARVESTING	1869
	M. Fralick, B. Dick, H. Jazo, R. Waters, and T. Russin <i>Space and Naval Warfare Systems Center Pacific, USA</i>	

B2P-P4	HIGHLY CATALYTIC MACROPOROUS Au-/nPts HYBRID ELECTRODE FOR NONENZYMATIC GLUCOSE BIOFUEL CELL APPLICATIONS	1875
	Y.J. Lee and J.Y. Park <i>Kwangwoon University, SOUTH KOREA</i>	
B2P-P5	POSITION TRACKING SYSTEM FOR COMMODITIES IN AN INDOOR ENVIRONMENT	1879
	K. Murakami ¹ , K. Matsuo ¹ , T. Hasegawa ¹ , Y. Nohara ¹ , B.W. Ahn ² , and R. Kurazume ¹ ¹ <i>Kyushu University, JAPAN</i> and ² <i>Mokpo Maritime University, SOUTH KOREA</i>	
B2P-P6	COMPUTATIONAL DESIGN OF QUARTZ CRYSTAL NANOBALANCE FOR UNIFORM SENSITIVITY DISTRIBUTION	1883
	R. Singh ¹ , S.K.R.S. Sankaranarayanan ² and V. Bhethanabotla ¹ ¹ <i>University South Florida, USA</i> and ² <i>Argonne National Laboratory, USA</i>	
B2P-P7	ADAPTIVE TUNABLE LASER SPECTROMETER FOR SPACE APPLICATIONS	1887
	G. Flesch and D. Keymeulen <i>California Institute of Technology, USA</i>	
B2P-P8	DEVELOPMENT OF AN OPTICAL SURFACE CHARACTERIZATION SENSOR FOR SIMULTANEOUSLY MEASURING BOTH 3-D SURFACE TEXTURE AND MECHANICAL PROPERTIES	1892
	Y. Shen ¹ , Y. Wang ² , and J. Zaklit ¹ ¹ <i>University of Nevada, Reno, USA</i> and ² <i>Shanghai Jiaotong University, CHINA</i>	
B2P-P9	DESIGN AND FABRICATION OF MEMS TEST SOCKET FOR BGA IC PACKAGES	1896
	S. Kim ¹ , D. Kong ¹ , C. Cho ¹ , J. Nam ² , B. Kim ³ , and J. Lee ¹ ¹ <i>Kyungpook National University, SOUTH KOREA</i> , ² <i>CoreMEMS Inc., USA</i> , and ³ <i>Catholic University of Daegu, SOUTH KOREA</i>	
B2P-P10	A SMART FOREST-FIRE EARLY DETECTION SENSORY SYSTEM: ANOTHER APPROACH OF UTILIZING WIRELESS SENSOR AND NEURAL NETWORKS	1900
	H. Soliman, K. Sudan, and A. Mishra <i>New Mexico Institute of Mining and Technology, USA</i>	
B2P-P11	A BROADBAND VIBRATION ENERGY HARVESTER USING MAGNETOELECTRIC TRANSDUCER	1905
	J. Yang, Y. Wen, P. Li, X. Dai, and M. Li <i>Chongqing University, CHINA</i>	
B2P-P12	ATMOSPHERIC PLASMA JET FROM A MICRO NOZZLE ARRAY AND ITS BIOLOGICAL EFFECTS ON LIVING CELLS FOR CANCER THERAPY	1910
	K. Kim ¹ , J.D. Choi ² , G. Kim ¹ , J.-S. Lee ¹ , and S.S. Yang ¹ ¹ <i>Ajou University, SOUTH KOREA</i> and ² <i>Seoul University, SOUTH KOREA</i>	
B2P-P13	CANTILEVER-TYPE ELECTRODE ARRAY BASED SORTING SYSTEM	1914
	Y. Kim ¹ , J. Lee ¹ , S. Park ² , and B. Kim ¹ ¹ <i>Korea Aerospace University, SOUTH KOREA</i> and ² <i>Chonnam National University, SOUTH KOREA</i>	
B2P-P14	NANOWATT-POWER-LEVEL AUTOMATIC SWITCH CIRCUIT COMBINING CMOS AND PHOTODIODE	1918
	F. Utsunomiya and T. Douseki <i>Ritsumeikan University, JAPAN</i>	

B2P-P15	WATCH YOUR HEAD: A WEARABLE COLLISION WARNING SENSOR SYSTEM FOR THE BLIND	1922
	B. Jameson and R. Manduchi <i>University of California, Santa Cruz, USA</i>	
B2P-P16	VISION-BASED DISPLACEMENT SENSOR FOR MONITORING DYNAMIC RESPONSE USING ROBUST OBJECT SEARCH ALGORITHM	1928
	Y. Fukuda ¹ , Y. Narita ² , S. Kaneko ² , M. Feng ¹ , and T. Tanaka ² ¹ <i>University of California, Irvine, USA</i> and ² <i>Hokkaido University, JAPAN</i>	
B2P-P17	FAST CELL IMMOBILIZATION BY USING NON-IMMUNOLOGICAL METHOD FOR CELL BASED BIOSENSOR	1932
	J. Park ^{1,4} , M. Müller ¹ , E. Jang ² , J. Kim ¹ , L.-Y. Hong ³ , D.-P. Kim ³ , H. Seidel ⁴ , and W.-G. Koh ² ¹ <i>Korea Institute of Science and Technology Europe GmbH, GERMANY</i> , ² <i>Yonsei University, SOUTH KOREA</i> , ³ <i>Chungnam National University, SOUTH KOREA</i> , and ⁴ <i>University of Saarland, GERMANY</i>	
B2P-P18	OBJECT CLASSIFICATION FROM AERIAL VISUAL IMAGERY	1936
	C. Ippolito, and A. Nefian <i>NASA Ames Research Center, USA and Carnegie Mellon University, USA</i>	

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B3L-A1	OPTIMIZATION WITH PROCESS LIMITS AND APPLICATION REQUIREMENTS FOR FORCE SENSORS	1946
	S.-J. Park, J.C. Doll, N. Harjee, and B.L. Pruitt <i>Stanford University, USA</i>	
B3L-A3	NONLINEAR PIEZORESISTANCE OF SILICON	1950
	B. Lemke ¹ , M.E. Schmidt ¹ , J. Gutmann ¹ , P. Gieschke ¹ , P. Alpuim ² , J. Gaspar ¹ , and O. Paul ¹ ¹ <i>University of Freiburg - IMTEK, GERMANY</i> and ² <i>University of Minho, PORTUGAL</i>	
B3L-A4	FABRICATION OF POLYMER CANTILEVER INTEGRATED FULL-BRIDGE AS A PIEZORESISTIVE SENSOR	1954
	J.H. Ahn and D.-W. Lee <i>Chonnam National University, SOUTH KOREA</i>	
B3L-A5	PIEZORESISTIVE RESONANT CANTILEVER SELF-ASSEMBLED WITH SPECIFIC-GROUP-MODIFIED CNTs FOR DETECTION OF TRACE-LEVEL VOC VAPORS	1958
	P. Xu, H. Yu, and X. Li <i>Chinese Academy of Science, CHINA</i>	
B3L-A6	COAXIAL TIP PIEZORESISTIVE SCANNING PROBES WITH SUB-NANOMETER VERTICAL DISPLACEMENT RESOLUTION	1962
	N. Harjee, A. Haemmerli, D. Goldhaber-Gordon, and B.L. Pruitt <i>Stanford University, USA</i>	

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B3L-B1	MULTI-POINT ATP SENSING FOR RAPID PRECISE FISH FRESHNESS CHECK	1967
	D. Itoh ¹ , T. Nishi ² , S. Murata ³ , and H. Suzuki ¹	
	¹ University of Tsukuba, JAPAN, ² Fujidenolo Co., Ltd., JAPAN, and	
	³ National Research Institute of Fisheries Science, JAPAN	
B3L-B2	DIGITAL MICROFLUIDIC CHIP FOR RAPID PORTABLE DETECTION OF MERCURY (II)	1971
	X. Liu, A. Gao, T. Li, Q. Yang, L. Wang, C. Fan, P. Zhou, and Y. Wang	
	Chinese Academy of Science, CHINA	
B3L-B3	WIRELESS TRANSMISSION OF SENSOR SIGNALS FOR PHONOCARDIOLOGY APPLICATIONS	1975
	A. Sa-Ngasoongsong and S.T.S. Bukkapatnam	
	Oklahoma State University, USA	
B3L-B4	CYLINDRICAL MULTIPHASE INTERFACES IN MICROFLUIDIC CHANNELS FOR LAB-ON-A-CHIP	1979
	D. Cheng and H. Jiang	
	University of Wisconsin, USA	
B3L-B5	NOVEL PDMS LEAKY WAVEGUIDE WITH SELF-ASSEMBLED GOLD NANO-PARTICLES FOR ssDNA DETECTION	1983
	C.-H. Lin ¹ , Y.-C. Chen ¹ , C.-H. Tsai ² , and W.-L. Tseng ¹	
	¹ National Sun Yat-sen University, TAIWAN and ² National Ping-Tung University, TAIWAN	
B3L-B6	NOVEL FLOW CYTOMETRER UTILIZING WAVELENGTH-RESOLVED DETECTION UNDER A DIASCOPIIC ILLUMINATION CONFIGURATION	1987
	S.-W. Lin ¹ , C.-H. Chang ¹ , C.-Y. Lee ² , L.-M. Fu ² , and C.-H. Lin ³	
	¹ National Cheng Kung University, TAIWAN, ² National Pingtung University of Science and Technology, TAIWAN, and ³ National Sun Yat-sen University, TAIWAN	

SESSION B3L-C Resonators

B3L-C1	A MICROMECHANICAL RESONATOR TO REACH THE QUANTUM REGIME	1991
	M. Bahriz ¹ , O. Ducloux ¹ , S. Masson ¹ , D. Janiaud ¹ , O. Le Traon ¹ , A. Kuhn ² , A. Heidmann ²	
	C. Molinelli ² , T. Briant ² , P.-F. Cohadon ² , C. Michel ³ , L. Pinard ³ , and R. Flaminio ³	
	¹ ONERA, FRANCE, ² University Paris et M. Curie, FRANCE, and ³ CNRS, FRANCE	
B3L-C2	GEOMETRICAL OPTIMIZATION OF RESONANT CANTILEVERS VIBRATING IN IN-PLANE FLEXURAL MODES	1996
	L.A. Beardslee ¹ , A.M. Addous ¹ , K.S. Demirci ¹ , S.M. Heinrich ² , F. Josse ² , and O. Brand ¹	
	¹ Georgia Institute of Technology, USA and ² Marquette University, USA	
B3L-C3	DETECTION AND MASS MEASUREMENT OF INDIVIDUAL AIR-BORNE PARTICLES USING HIGH FREQUENCY MICROMECHANICAL RESONATORS	2000
	A. Hajjam, J.C. Wilson, A. Rahafrooz, and S. Pourkamali	
	University of Denver, USA	
B3L-C4	DYNAMICS OF IMMersed CLAMPED-CLAMPED MICRORESONATORS	2005
	W.J. Venstra, H.J.R. Westra, and H.S.J. van der Zant	
	Delft University of Technology, THE NETHERLANDS	

B3L-C5	GaN-BASED LAMB-WAVE MASS-SENSORS ON SILICON SUBSTRATES	2008
	C.M. Lee, K.M. Wong, P. Chen and K.M. Lau <i>Hong Kong University of Science and Technology, HONG KONG</i>	

B3L-C6	PULSE ACTUATION-READOUT SCHEME FOR BULK DISK RESONATOR BASED MASS SENSOR	2012
	A. Cagliani, M. Tang, and Z.J. Davis <i>Technical University of Denmark, DENMARK</i>	

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B3L-D1	2D COMMUNICATION SENSOR NETWORKS USING SINGLE FREQUENCY FOR CONCURRENT POWER SUPPLY AND DATA TRANSMISSION	2016
	T. Oota ¹ , A.-O. Lim ² , K. Hattori ³ , Y. Kado ¹ , and B. Zhang ¹ ¹ National Institute of Information Communications Technology, JAPAN and ² Japan Advanced Institute Science Technology (JAIST), JAPAN, ³ University of Electro-Communications, JAPAN	

B3L-D2	CLOCK SYNCHRONIZATION SIMULATION FOR WIRELESS SENSOR NETWORKS	2022
	F. Ring, A. Nagy, G. Gaderer, and P. Loschmidt <i>Austrian Academy of Sciences, AUSTRIA</i>	

B3L-D3	GENERALIZED VERNIER EFFECT AND ITS APPLICATION TO PRECISE RF TIME-OF-FLIGHT MEASUREMENT FOR WIRELESS SENSOR NETWORKS	2027
	S.-I. Ko, G. Aikawa, J.-Y. Takayama, and S. Ohyama <i>Tokyo Institute of Technology, JAPAN</i>	

B3L-D4	SENSOR NODE LOCALIZATION USING WEIGHTED AND ITERATIVE MAXIMUM LIKELIHOOD	2033
	Y. Endo and T. Miyazaki <i>University of Aizu, JAPAN</i>	

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	K. Daniel, S. Rohde, N. Goddemeier, and C. Wietfeld <i>Technische Universität Dortmund, GERMANY</i>	

B3L-D6	THE SPANISH INQUISITION PROTOCOL - MODEL-BASED TRANSMISSION REDUCTION FOR WIRELESS SENSOR NETWORKS	2043
	D. Goldsmith, and J. Brusey <i>Coventry University, UK</i>	

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	M.W. Pruessner, T.H. Stievater, W.S. Rabinovich, R. Bass, and J.B. Boos <i>Naval Research Laboratory, USA</i>	

B3L-E2	HIGH-THROUGHPUT MICROPATTERNING OF OPTICAL OXYGEN SENSORS	2053
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	V.D. Jangampet ¹ , R. Dixit ¹ , I. Papautsky ² , and D. Klotzkin ¹ ¹ <i>Binghamton University, USA</i> and ² <i>University of Cincinnati, USA</i>	
B3L-E4	DUALFUNCTIONAL MEMS OPTICAL DEVICE WITH COMPOUND ELECTROSTATIC ACTUATORS FOR COMPACT AND FLEXIBLE PHOTONIC NETWORKS	2061
	Q. Chen, W. Wu, H. Mao, B. Du, L. Li, and Y. Hao <i>Peking University, CHINA</i>	
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B4L-A3	A ROBUST AND SENSITIVE SILICON TACTILE IMAGER WITH INDIVIDUALLY FORMED SU-8 PROTECTIVE LAYERS ON PIEZORESISTOR PIXELS	2079
	H. Takao ¹ , H. Okada ² , M. Ishida ² , K. Terao ¹ , T. Suzuki ¹ , and F. Oohira ¹ ¹ <i>Kagawa University, JAPAN</i> and ² <i>Toyohashi University of Technology, JAPAN</i>	
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	K. Noda, K. Matsumoto, and I. Shimoyama <i>University of Tokyo, JAPAN</i>	
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	J. Wei ¹ , T.C. Duc ² , and P.M. Sarro ¹ ¹ <i>Delft University of Technology, THE NETHERLANDS</i> and ² <i>Vietnam National University, VIETNAM</i>	

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¹*Science Research Laboratory (SRL), USA* and ²*CNRI MEMS Exchange, USA*

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	¹ <i>Bilkent University, TURKEY</i> and ² <i>Colorado State University, USA</i>	

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MGJ Y QTF R PFGZ

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