

MONDAY

Poster session I

Monday, 4
september,
16:40-18:30

Rooms 302
and 304

Chemical Sensors

M-CS-	302-	1003	Phosphorescent Oxygen Sensors and Imaging Probes for Biomedical Research	D. Papkovsky	University College Cork, Ireland
M-CS-	302-	1022	Reliable Long-Term Data from Low-Cost Gas Sensor Networks in the Environment	G. Miskell{2}, J. Salmond{2}, S. Grange{2}, L. Weissert{2}, G. Henshaw{1}, D. Williams{2}	{1}Aeroqual Ltd., New Zealand; {2}University of Auckland, New Zealand
M-CS-	302-	1035	Plasma Oxidized W-WOx Sensor for sub-ppm H2S Detection	S. Benedict, N. Bhat	Indian Institute of Science, India
M-CS-	302-	1053	Modification of SnO2 Nanowires with TeO2 Branches and Their Enhanced Gas Sensing	M. Choi{1}, J. Bang{1}, A. Mirzaei{3}, H. Kim{1}, S. Kim{2}	{1}Hanyang University, Korea; {2}Inha University, Korea; {3}Research Institute of Industrial Science, Hanyang University, Korea
M-CS-	302-	1068	Enhance of Sensitivity of Corrole Functionalized Polymeric Microspheres Coated Quartz Micro Balances	A. Savoldelli{1}, G. Magna{1}, S. Nardis{1}, F. Fronczek{2}, K. Smith{2}, C. Di Natale{1}, R. Paolesse{1}	{1}Università degli Studi di Roma Tor Vergata, Italy; {2}University of Louisiana, United States
M-CS-	302-	1070	MgO-Doped (Zr,Sr)TiO3 Perovskite Humidity Sensors: Microstructural Effects on Water Permeation	H. Farahani{1}, R. Wagiran{2}, G. Urban{1}	{1}Albert-Ludwigs-Universität Freiburg, Germany; {2}University Putra Malaysia (UPM), Malaysia
M-CS-	302-	1084	Enhanced Characteristics of Nondispersive Infrared CO2 Gas Sensor by Deposition of Hydrophobic Thin Film	J. Kim{2}, J. Lee{2}, K. Lee{1}, S. Yi{2}	{1}Humas Corp., Korea; {2}Korea National University of Transportation, Korea
M-CS-	302-	1104	Improving the Performance of Electrochemical Sensors by Means of Synergy. Combinations of Gold Nanoparticles and Phthalocyanines	M. Rodriguez-Mendez{1}, A. Ruiz-Carmuega{1}, A. Sastre{2}, J. Ortiz{2}, C. Garcia-Hernandez{1}, C. Garcia-Cabezon{3}	{1}Universidad de Valladolid, Spain; {2}Universidad Miguel Hernandez, Spain; {3}Universidad de Valladolid, Spain
M-CS-	302-	1114	NAP-XPS Study of Ethanol Adsorption on TiO2 Surfaces and its Impact on Microwave-Based Gas Sensors Response	G. Bailly, J. Rossignol, D. Stuerger, P. Pribetich, B. Domenichini	Université de Bourgogne, France
M-CS-	302-	1143	Method for Determining the Concentration of Unknown Combustible Gas	A. Karelin{3}, E. Karpov{3}, A. Baranov{3}, S. Mironov{1}, E. Karpova{2}	{1}LLC "NTC IGD", Russia; {2}Moscow State Technological University, Russia; {3}Smartsens Ltd., Russia
M-CS-	302-	1175	Direct Catalyst Conversion Sensor in Form of a Single Self-Heated Mixed-Potential Device	T. Ritter, G. Hagen, R. Moos	Universität Bayreuth, Germany
M-CS-	302-	1185	Deposition Rate Influence in O3 Sensing Response of Sputtered ZnO Thin Films	Y. Colmenares, W. Correr, V. Mastelaro	Universidade de São Paulo, Brazil
M-CS-	302-	1197	Picomolar Detection of Heavy Ions with Surface Acoustic Wave Sensors Functionalized with New Synthesized Anthracene Derivates	G. Attia{4}, S. Teka{4}, S. Rahali{1}, N. Fourati{2}, C. Zerrouki{2}, M. Seydou{6}, N. Yaakoubi{5}, S. Chehimi{3}, R. Ben Chaabane{4}	{1}Campus universitaire Farhat-Hached, Tunisia; {2}Conservatoire national des arts et métiers, France; {3}École d'ingénieur généraliste en informatique et technologies du numérique, France; {4}Faculté des Sciences de Monastir, Tunisia; {5}Université du Maine, France; {6}Université Paris Sorbonne Paris Cité, France
M-CS-	302-	1207	Investigation of Behavior Stability of Activated Polyaniline Films for Gas Measurements	S. Krutovertsev, A. Tarasova, O. Ivanova, L. Krutovertseva	JSC Ecological sensors and systems, Russia
M-CS-	302-	1233	Submersible Dielectric Probe for in Situ Monitoring of Suspensions and its Application to Activated Sludge in Waste Water Treatment Plant	M. Perdicakis, J. Bessière, J. Cortot	CNRS - Université de Lorraine, France
M-CS-	302-	1242	Electron Capture Detector with Non-Radioactive Electron Source	E. Bunert, A. Kirk, J. Oermann, S. Zimmermann	Leibniz Universität Hannover, Germany
M-CS-	302-	1251	Influence of Electrical Modes on Radiation Sensitivity of Hydrogen Sensors Based on Pd-Ta2O5-SiO2-Si Structures	B. Podlepetsky{2}, A. Kovalenko{1}, M. Nikiforova{2}	{1}Induko Ltd, Russia; {2}National Research Nuclear University MEPhI, Russia

M-CS-	302-	1261	Study of Poly(3-Hexylthiophene) Polymer Sensing Properties in Nerve Agent Simulant (DMMP) Detection	P. Powroźnik, A. Stolarczyk, J. Wrotniak, W. Jakubik	Silesian University of Technology, Poland
M-CS-	302-	1277	Title Enhancement of the Sensitivity of a Volatile Organic Compounds MOF-Sensor by Means of its Structure	D. Lopez-Torres{1}, A. Lopez-Aldaba{1}, C. Elosua{1}, J. Auguste{2}, R. Jamier{2}, P. Roy{2}, M. Lopez-Amo{1}, F. Arregui{1}	{1}Universidad Pública de Navarra, Spain; {2}University Of Limoges, France
M-CS-	302-	1288	2D SnS ₂ – a Material for Impedance-Based Low Temperature NO _x Sensing?	D. Schönauer-Kamin{3}, Y. Li{2}, W. Włodarski{1}, S. Ippolito{1}, R. Moos{3}	{1}RMIT University, Australia; {2}RMIT University / Chinese Academy of Sciences, Australia; {3}Universität Bayreuth, Germany
M-CS-	302-	1291	Gas Sensing Characterization of Single-Nanowire Sensor Array Systems Based on Non-Functionalized and Pt-Functionalized Tungsten Oxide	O. Chmela{1}, J. Sadílek{1}, J. Somer{1}, J. Samà{3}, G. Domènech-Gil{3}, A. Romano-Rodríguez{3}, J. Hubálek{1}, S. Vallejós{2}	{1}Brno University of Technology, Czech Rep.; {2}Brno University of Technology / Consejo Superior de Investigaciones Científicas, Czech Rep.; {3}Universitat de Barcelona, Spain
M-CS-	302-	1310	Influence of Metal Catalyst on SnO ₂ Nanowires Growth and Gas Sensing Performance	D. Zappa{3}, R. Melloni{3}, V. Maraloiu{2}, N. Poli{3}, M. Rizzoni{3}, V. Sberveglieri{1}, O. Sisman{3}, M. Soprani{3}, E. Comini{3}	{1}CNR-IBBR Institute of Biosciences and Bioresources, Italy; {2}NIMP, Romania; {3}Università degli Studi di Brescia, Italy
M-CS-	302-	1325	Facile Quantification Method for Reducing Gases Over a Wide Concentration Range Using a MOS Sensor in Temperature Cycled Operation	C. Schultealbert, X. Shi, T. Baur, A. Schütze, T. Sauerwald	Universität des Saarlandes, Germany
M-CS-	302-	1329	Pt-AlGaIn/GaN HEMT-Sensor for Hydrogen Sulfide (H ₂ S) Detection	R. Sokolovskij{2}, E. Iervolino{1}, C. Zhao{1}, F. Santagata{2}, F. Wang{1}, H. Yu{1}, P. Sarro{2}, K. Zhang{2}	{1}Southern University of Science and Technology, China; {2}Technische Universiteit Delft, China; {2}Technische Universiteit Delft, Netherlands
M-CS-	302-	1347	H ₂ -Sensing Performance of 2D WO ₃ Nanostructure - Effect of Anodization Parameter	A. Wisitsora-at{1}, D. Phokharatkul{1}, K. Jaruwongrangsee{1}, T. Daniels{1}, W. Włodarski{2}	{1}National Electronics and Computer Technology Center, Thailand; {2}RMIT University, Australia
M-CS-	304-	1353	Individual Gallium Oxide Nanowires for Humidity Sensing at Low Temperature	G. Domènech-Gil{3}, I. Peiró Riera{3}, E. López-Aymerich{3}, P. Pellegrino{3}, S. Barth{2}, I. Gràcia{1}, C. Cané{1}, J. Prades{3}, M. Moreno-Sereno{3}, A. Romano-Rodríguez{3}	{1}Consejo Superior de Investigaciones Científicas, Spain; {2}Technische Universität Wien, Austria; {3}Universitat de Barcelona, Spain
M-CS-	304-	1364	No ₂ Measurements with RGB Sensors for Easy in-Field Test	L. Fernández{2}, A. Pons{2}, O. Monereo{2}, I. Benito-Altamirano{2}, E. Xuriguera{2}, O. Casals{2}, C. Fàbrega{2}, A. Waag{1}, J. Prades{2}	{1}Technische Universität Braunschweig, Germany; {2}Universitat de Barcelona, Spain
M-CS-	304-	1371	Cairsens NO ₂ : a Miniature Device Dedicated to the Indicative Measurement of Nitrogen Dioxide in Ambient Air	B. Berthelot{1}, A. Ben Daoud{2}, B. Hellio{1}, R. Akiki{1}	{1}Environnement SA - Cairpol, France; {2}ESIEE / Environnement SA - Cairpol, France
M-CS-	304-	1394	Hydrogen Sensing on Single Gold Nanorods by Surface Plasmon Spectroscopy	M. Cittadini{2}, S. Collins{1}, P. Mulvaney{1}, A. Martucci{2}	{1}Melbourne University, Australia; {2}Università di Padova, Italy
M-CS-	304-	1402	Dual Gate Microsensors and Nanomaterials for Chemical Detection	L. Donero{3}, L. Le Brizoulau{1}, A. El Mel{2}, P. Tessier{2}, F. Le Bihan{1}	{1}IETR, France; {2}IMN, France; {3}IMN, IETR, France
M-CS-	304-	1415	Conducting Polymers for Ammonia Sensing: Electrodeposition, Hybrid Materials and Heterojunctions	M. Bouvet, M. Mateos, R. Meunier-Prest, J. Suisse	Université Bourgogne Franche-Comté, France
M-CS-	304-	1419	A Novel, Low-Cost, Portable PID Sensor for Detection of VOC	S. Agbroko, J. Covington	University of Warwick, United Kingdom
M-CS-	304-	1422	Ozone Gas Sensor Based on One-Dimensional V ₂ O ₅ /TiO ₂ Heterostructures	W. Avansi Jr.{3}, T. Fiorido{1}, L. da Silva{3}, V. Mastelaro{2}, K. Aguir{1}	{1}Aix Marseille Université / Université de Toulon, France; {2}Universidade de São Paulo, Brazil; {3}Universidade Federal de São Carlos, Brazil
M-CS-	304-	1440	Ultrasensitive Gas Sensors Based on Electrospun TiO ₂ and ZnO	A. Fioravanti{1}, S. Morandi{2}, A. Rubin Pedrazzo{2}, P. Bracco{2}, M. Zanetti{2}, M. Manzoli{2}, M. Mazzocchi{1}, M. Carotta{1}	{1}Consiglio Nazionale delle Ricerche, Italy; {2}Università di Torino, Italy

			M-CS-	304-	1449	Oxyhydrogen and Hydrogen Detection by Gasochromic Coloration of Highly Porous Tungsten Oxide with Fractal-Like Pd Nanoparticles	M. Ranjbar{1}, G. Sberveglieri{2}	{1}Isfahan University of Technology, Iran; {2}Università degli Studi di Brescia, Italy
			M-CS-	304-	1483	Hierarchical NiO cube/nitrogen-doped reduced graphene oxide composites with enhanced H ₂ S sensing properties at low temperature	M. Yang, X. Zhang, X. Cheng, Y. Xu, S. Gao, H. Zhao, L. Huo	Key Laboratory of Functional Inorganic Material Chemistry, Heilongjiang University, Harbin, P.R.China
Monday, 4 september, 16:40-18:30	Rooms 302	Sensors for Factory of the future	M-FF-	302-	1094	Oversight of a Deep Geological Repository and the Role of Monitoring	J. Bertrand, R. Farhoud, G. Hermand, B. Yven, S. Lesoille	Andra, France
			M-FF-	302-	1307	Surface Integrated Printed Interdigital Structure for Process Monitoring the Curing of an Adhesive Joint	M. Hübner, W. Lang, G. Dumstorff	Universität Bremen, Germany
Monday, 4 september, 16:40-18:30	Rooms 204, 205, 304	Printed and flexible electronics	M-PF-	204-	1006	3DInkPack – Inkjet Printing of Discrete Sensor Packages for Advanced Rapid Prototyping	M. Krivec, A. Roshanghias, A. Binder	CTR Carinthian Tech Research AG, Austria
			M-PF-	204-	1040	A Spray Processed Polymer-Based High Temperature Organic/Metal Thermocouple for Embedding in Organic Coatings of Steel Substrates	M. Knoll, C. Offenzeller, B. Jakoby, W. Hilber	Johannes Kepler Universität Linz, Austria
			M-PF-	204-	1075	Screen-Printed Interdigital Structure on Flexible RTM6 Substrate	M. Kahali Moghaddam{1}, M. Hübner{2}, W. Lang{2}	{1}Friedrich-Wilhelm-Bessel-Institut Forschungsgesellschaft m.b.H, Germany; {2}Universität Bremen, Germany
			M-PF-	204-	1142	Design, Fabrication and Testing of the First 3D-Printed and Wet Metallized Z-Axis Accelerometer	C. Credi, V. Zega, R. Bernasconi, G. Langfelder, A. Cigada, L. Magagnin, M. Levi, A. Corigliano	Politecnico di Milano, Italy
			M-PF-	205-	1260	Low-Cost Thin and Flexible Screen-Printed Pressure Sensor	D. Gräbner{1}, M. Tintelott{2}, G. Dumstorff{3}, W. Lang{3}	{1}Friedrich-Wilhelm-Bessel-Institut Forschungsgesellschaft m.b.H, Germany; {2}FWBI Forschungsgesellschaft, Germany; {3}Universität Bremen, Germany
			M-PF-	205-	1286	Aerosol/Ink Jet Printing Technology for High-Temperature MEMS Sensors	A. Vasiliev{1}, A. Nisan{3}, N. Samotaev{2}	{1}National Research Center Kurchatov Institute, Russia; {2}National Research Nuclear University MEPhI, Russia; {3}Ostec Group, Russia
			M-PF-	205-	1316	Inkjet-Printed On/Off Force Sensor on Flexible Substrate for Ultra-Low Power Applications	E. Bènevent, M. Dankoco, M. Bendahan	Aix Marseille Université / Université de Toulon, France
			M-PF-	205-	1435	Realization of Flexible NMR Microcoils	M. Khelifa{2}, N. Yaakoubi{2}, C. Dridi{1}, P. Picart{2}, L. Fagri-Bouchet{1}	{1}LAUM, France; {1}LAUM, Tunisia; {2}Université du Maine, France
			M-PF-	304-	1039	Optical Imaging of Intrinsic Neural Signals and Simultaneous microECoG Recording Using Polyimide Implants	A. Zátónyi{2}, Z. Borhegyi{1}, D. Cserpán{2}, Z. Somogyvári{2}, M. Srivastava{3}, Z. Kisvárday{3}, Z. Fekete{2}	{1}Eötvös Loránd University, Hungary; {2}Hungarian Academy of Sciences, Hungary; {3}University of Debrecen, Hungary
			M-PF-	304-	1133	Improving the Durability of Screen Printed Conductors on Woven Fabrics for E-Textile Applications	A. Komolafe, R. Torah, J. Tudor, S. Beeby	University of Southampton, United Kingdom
			M-PF-	304-	1340	Synthesis and Inkjet Printing of SnO ₂ Ink on a Flexible Substrate for Gas Sensor Application	O. Kassem, M. Saadaoui, M. Rieu, J. Viricelle	École Nationale Supérieure des Mines Saint Étienne, France
			M-PF-	304-	1381	Estimation of the Number of Volatile Compounds in Simple Mixtures	O. Hotel, J. Poli, C. Mer-Calfati, E. Scorsoni, S. Saada	Commissariat à l'Energie Atomique et aux Energies Alternatives, France
Monday, 4 september, 16:40-18:30	Rooms 204 and 205	Biological Sensors, Microfluidic	M-BM-	204-	1018	Label-Free Immunodetection in High Ionic Strength Solutions Using Carbon Nanotube Transistors with Nanobody Receptors	M. Filipiak{2}, M. Rother{3}, N. Andoy{1}, A. Knudsen{1}, S. Grimm{3}, C. Bachran{1}, L. Swee{1}, J. Zaumseil{3}, A. Tarasov{2}	{1}BioMedX GmbH, Germany; {2}BioMedX GmbH / Ruprecht-Karls-Universität Heidelberg, Germany; {3}Ruprecht-Karls-Universität Heidelberg, Germany

M-BM-	204-	1051	Fabricating a Highly Sensitive QCM Sensor Using AAO Nanoholes and its Application for Biosensing	N. Asai, T. Shimizu, S. Shingubara, T. Ito	Kansai University, Japan
M-BM-	204-	1106	DNA Grafting on Si: Toward an Eco-Friendly Process Functionalization Based on Epoxy Silane	F. Morisot, T. Demes, T. N'Guyen, E. Pernot, C. Jimenez, C. Ternon, V. Stambouli	Université Grenoble Alpes, France
M-BM-	204-	1132	Stretchable Material for Microfluidic Applications	Y. Fouillet{3}, C. Parent{3}, G. Gropplero{1}, L. Davoust{4}, J. Achard{2}, F. Revol-Cavalier{1}, N. Verplanck{3}	{1}CEA-LETI, France; {2}CNRS, France; {3}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {4}Grenoble INP, France
M-BM-	204-	1215	Vertical 3D GaN Nanoarchitectures Towards an Integrated Optoelectronic Biosensing Platform in Microbial Fuel Cells	H. Boht{1}, H. Wichmann{1}, G. Scholz{1}, F. Yu{1}, K. Stempel{1}, S. Mariana{1}, M. Fatahilah{1}, I. Manglano Clavero{1}, J. Prades{2}, U. Schröder{1}, H. Wasisto{1}, A. Waag{1}	{1}Technische Universität Braunschweig, Germany; {2}Universitat de Barcelona, Spain
M-BM-	204-	1247	Impact of Channel Geometry on the Discrimination of Mechanically Impaired Red Blood Cells in Passive Microfluidics	A. Amirouche, R. Ferrigno, M. Faivre	Université Claude Bernard Lyon 1, France
M-BM-	204-	1267	Study on Cell-Capturing Microfluidic Device in High Flow Rates Through Controlling Shape of Microstructures and Their Alignments	D. Lee{1}, J. Park{1}, M. Jung{1}, C. Ihm{2}	{1}Electronics and Telecommunications Research Institute, Korea; {2}Eulji University Hospital, Korea
M-BM-	204-	1280	Differential Inductive Sensor for Continuous Non-Invasive Cell Growth Monitoring in Disposable Bioreactors	M. Allers, T. Reinecke, T. Nagraik, D. Solle, K. Bakes, M. Berger, T. Scheper, S. Zimmermann	Leibniz Universität Hannover, Germany
M-BM-	205-	1315	Highly Sensitive Electrochemical Glutamate Microsensors for Food Analysis	A. Weltin, J. Kieninger, G. Urban	Albert-Ludwigs-Universität Freiburg, Germany
M-BM-	205-	1323	Microwave Sensor Within a Microfluidic Chip for Biological Applications	A. El Fellahi{3}, T. Bore{4}, L. Rousseau{2}, B. Le Pioufle{1}, O. Francois{2}	{1}École Normale Supérieure Paris-Saclay, France; {2}ESIEE, France; {3}SATIE, France; {4}University Of Queensland, Australia
M-BM-	205-	1337	Light-Stimulated Hydrogels with Incorporated Graphene Oxide as Actuator Material for Flow Control in Microfluidic Applications	L. Breuer{1}, E. Guthmann{1}, M. Schöning{2}, R. Thoelen{3}, T. Wagner{2}	{1}Aachen University of Applied Sciences, Germany; {2}FH Aachen – University of Applied Sciences, Germany; {3}Hasselt University, Belgium
M-BM-	205-	1362	A Miniaturized SPLIT System for on-Line Protein Separation	A. Capuano{2}, A. Adami{1}, V. Mulloni{1}, L. Lorenzelli{1}	{1}Fondazione Bruno Kessler, Italy; {2}Fondazione Bruno Kessler / Università di Trento, Italy
M-BM-	205-	1366	Femtomolar Prostate-Specific Antigen Detection with Molecularly Imprinted Polymer Based Electrochemical Sensor	Z. Mazouz{4}, N. Blel{5}, N. Fourati{1}, M. Souiri{5}, A. Omezzine{3}, A. Bouslema{2}, N. Yaakoubi{6}, R. Kalfat{4}, A. Othmane{5}, C. Zerrouki{1}	{1}Conservatoire national des arts et métiers, France; {2}Hôpital Universitaire Sahloul, Sousse, Tunisia; {3}Hôpital Universitaire Sahloul, Sousse,, Tunisia; {4}Institut national de recherche et d'analyse physico-chimique, Tunisia; {5}Université de Monastir, Tunisia; {6}Université du Maine, France
M-BM-	205-	1374	Multiphysics Simulations of a Magnetic Sensor in a Microfluidic Structure for Immunoassays	A. Rabehi{4}, H. Kokabi{4}, F. Shanehsazzadeh{2}, K. Ngo{3}, H. Krause{1}	{1}Forschungszentrum Jülich / Peter Grünberg Institute, Germany; {2}Sharif University of Technology-Superconductive Electronics Research Lab, Iran; {3}Université Pierre et Marie CURIE, France; {4}UPMC-Laboratoire d'électronique et d'électromagnétisme (L2E), France
M-BM-	205-	1378	Towards Personalized Cancer Treatment by Means of a Multifunctional Platform Based on Organ on Chip and Time Lapse Microscopy Analysis	D. Di Giuseppe{3}, A. De Ninno{1}, F. Bertani{1}, A. Mencattini{3}, A. Gerardino{1}, M. Nguyen{2}, M. Parrini{2}, L. Businaro{1}, C. Di Natale{3}, E. Martinelli{3}	{1}Consiglio Nazionale delle Ricerche, Italy; {2}Curie Institute, France; {3}Università degli Studi di Roma Tor Vergata, Italy

Monday, 4
september,
16:40-18:30

Room 305

Materials and
micro- nano-
technology,
Microfabrication

M-BM-	205-	1392	A Resazurin Based Bio Sensor for Detection of Organic Pollutants in Water	A. Migaou, A. Gue, M. Blatche, D. Esteve, A. Boukabache	Laboratory for Analysis and Architecture of Systems, France
M-BM-	205-	1407	In-Situ Electrophoretic Mobility Determination by Particle Image Velocimetry for Efficient Microfluidic Enrichment of Bacteria	R. Rietzel{1}, M. Hügler{1}, G. Dame{2}, O. Behrmann{1}, G. Urban{1}	{1}Albert-Ludwigs-Universität Freiburg, Germany; {2}Brandenburg Medical School Fontane, Germany
M-BM-	205-	1427	Integration and Bio-Functionalization of Vertically Aligned Carbon Nanotube Forests on High Frequency AIN Gravimetric Sensors	J. Escolano{2}, B. Marco{2}, T. Mirea{2}, J. Olivares{2}, M. Clement{2}, D. Megias{1}, E. Iborra{2}	{1}Spanish National Cancer Research Centre, Spain; {2}Universidad Politécnica de Madrid, Spain
M-BM-	205-	1429	Integration of Graphene on AIN Based High Frequency Resonators and Their Functionalization for Biosensing	B. Marco{2}, L. Gordillo{2}, J. Escolano{2}, J. Olivares{2}, M. Clement{2}, D. Megias{1}, E. Iborra{2}	{1}Spanish National Cancer Research Centre, Spain; {2}Universidad Politécnica de Madrid, Spain
M-BM-	205-	1446	Reference-Incorporating Microwave Resonator-Based Sensors for Biological Sensing Applications	B. Camli, H. Torun, G. Dundar, A. Yalcinkaya	Boğaziçi Üniversitesi, Turkey
M-MN-	305-	1005	Towards Nanostructured ITO-Based Electrochemical Sensors: Fabrication, Characterization and Functionalization	R. Pruna, F. Palacio, M. López	Universitat de Barcelona, Spain
M-MN-	305-	1086	NiO/WO3 Heterostructures: Vapor Phase Growth and Integration Into Gas Sensing Devices	N. Kaur, E. Comini, D. Zappa, N. Poli, G. Sberveglieri	Università degli Studi di Brescia, Italy
M-MN-	305-	1095	Multilayer Micromechanics Process with Thick Functional Layers (EPyC40)	L. Louriki{1}, P. Staffeld{1}, A. Kaelberer{1}, T. Otto{2}	{1}Robert Bosch GmbH, Germany; {2}Technische Universität Chemnitz, Germany
M-MN-	305-	1139	Electrostatically Actuated Membranes of Cross-Linked Gold Nanoparticles: Novel Concepts for Electromechanical Gas Sensors	H. Schlicke, S. Bittinger, M. Behrens, M. Yesilmen, H. Hartmann, C. Schröter, G. Dahl, T. Vossmeier	Universität Hamburg, Germany
M-MN-	305-	1176	Fabrication of Sharp Tip-Separable Microneedle Device for Trans-Dermal Drug Delivery Systems	Y. Nabekura, H. Fukuyuu, Y. Hasegawa, M. Shikida	Hiroshima City University, Japan
M-MN-	305-	1198	Novel Method for Adhesion Between Pi-PDMS Using Butyl Rubber for Large Area Flexible Body Patches	S. Joshi, R. Bagani, L. Beckers, R. Dekker	Technische Universiteit Delft, Netherlands
M-MN-	305-	1220	Integration by Shadow Mask Process of ZnO:Ga Sputtered Layers Onto Microsensor Platform for Detection of Sub-ppm Acetaldehyde Concentration	L. Presmanes{1}, Y. Thimont{1}, A. Chapelle{2}, F. Blanc{2}, C. Talhi{2}, C. Bonningue{1}, A. Barnabé{1}, P. Menini{2}, P. Tailhades{1}	{1}Institut de Chimie de Toulouse, France; {2}Laboratory for Analysis and Architecture of Systems, France
M-MN-	305-	1240	On the Development of Label-Free DNA Sensor Using Silicon Nanonet Field-Effect Transistors	T. Nguyen{2}, M. Legallais{2}, F. Morisot{4}, T. Cazimajou{3}, M. Mouis{2}, B. Salem{1}, V. Stambouli{4}, C. Ternon{4}	{1}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {2}Grenoble INP - Ecoles d'ingénieurs et formations de docteurs - INPG, France; {3}IMEP-LaHC, France; {4}Université Grenoble Alpes, France
M-MN-	305-	1333	Lipophilic Gold Grating for SERS Detection of Biological Objects	O. Lyutakov{1}, Y. Kalachyova{1}, R. Svorcik{2}	{1}Czech Technical University in Prague / Tomsk Polytechnic University, Czech Rep.; {2}University of Chemistry and Technology, Prague, Czech Rep.
M-MN-	305-	1346	Near Infrared Plasmonic Gas Sensing with Doped Metal Oxide Nanocrystals	M. Sturaro{3}, E. Della Gaspera{1}, C. Cantalini{2}, M. Guglielmi{3}, A. Martucci{3}	{1}RMIT University, Australia; {2}Università de L'Aquila, Italy; {3}Università di Padova, Italy
M-MN-	305-	1372	Eni Carbon Silicates: Innovative Hybrid Sensing Materials for Room-Temperature Humidity Detection	B. Fabbri{2}, L. Bonoldi{1}, V. Guidi{2}, G. Cruciani{2}, D. Casotti{2}, C. Malagù{2}, G. Bellussi{1}, R. Millini{1}, L. Montanari{1}, A. Carati{1}, C. Rizzo{1}, S. Zanardi{1}	{1}Eni S.p.A., Italy; {2}Università degli Studi di Ferrara, Italy

Monday, 4
september,
16:40-18:30

Rooms 301
and 303

Physical sensors
and Actuators

M-MN-	305-	1398	MEMS Sensors Based on Very Thin LTCC	A. Vasiliev{2}, A. Nisan{4}, G. Potapov{1}, N. Samotaev{3}, K. Oblov{3}, A. Ivanova{3}	{1}LLC NIIIT, Ostec, Moscow, Russia; {2}National Research Center Kurchatov Institute, Russia; {3}National Research Nuclear University MEPhI, Russia; {4}Ostec Group, Russia
M-MN-	305-	1436	Characterization and Ammonia Sensing Properties of 2D SnS ₂ /SnO ₂ -x Flakes-Based Films	S. Leonardi{4}, W. Wlodarski{2}, S. Ippolito{2}, Y. Li{3}, A. Wisitorsa-at{1}, N. Donato{4}, G. Neri{4}	{1}National Electronics and Computer Technology Center, Thailand; {2}RMIT University, Australia; {3}RMIT University / Chinese Academy of Sciences, China; {4}Università degli Studi di Messina, Italy
M-PS-	301-	1008	A Novell Hall Magnetometer Using Dynamic Offset Cancellation	S. Lozanova, S. Noykov, L. Altunyan, A. Ivanov, C. Roumenin	Bulgarian Academy of Sciences, Bulgaria
M-PS-	301-	1013	A Biopotential Amplifier for Neural Recording on Optogenetics Applications	T. Granado, Y. Assagra, R. Gounella, J. Costa, J. Carmo	Universidade de São Paulo, Brazil
M-PS-	301-	1052	A Monolithic Three-Axis Accelerometer with Wafer-Level Package by CMOS MEMS Process	S. Tseng, C. Yeh, A. Chang, Y. Wang, P. Chen, H. Tsai, Y. Juang	National Applied Research Laboratories, Taiwan
M-PS-	301-	1067	Piezoresistive Pressure Sensors for Resin Flow Monitoring in Carbon Fibre-Reinforced Composite	M. Kahali Moghaddam{2}, A. Breede{1}, A. Dimassi{1}, W. Lang{3}	{1}Faser Institute Bremen, e.v. FIBRE, Germany; {2}Friedrich-Wilhelm-Bessel-Institut Forschungsgesellschaft m.b.H, Germany; {3}Universität Bremen, Germany
M-PS-	301-	1077	Harsh Environmental Surface Acoustic Wave Temperature Sensor Based on Pure and Scandium Doped Aluminum Nitride on Sapphire	M. Gillinger, T. Knobloch, M. Schneider, U. Schmid	Technische Universität Wien, Austria
M-PS-	301-	1080	MEMS Inertial Switch for Military Applications	H. Lee{1}, S. Jang{1}, S. Lee{2}, J. Lee{2}, Y. Hwang{2}	{1}Agency for Defense Development, Korea; {2}Micro-Infinity Co. Ltd., Korea
M-PS-	301-	1486	Magnetic sensors based on AMR effect in LSMO thin films	O. Rousseau, S. Flament, B. Guillet, M. Lam Chok Sing, L. Méchin	Normandie Univ, UNICAEN, ENSICAEN, CNRS, GREYC, 14000 Caen, France
M-PS-	303-	1110	Cricket Inspired High Efficiency MEMS Speakers	M. Garud{2}, V. Godthi{1}, J. Reddy{1}, A. Dangi{1}, R. Pratap{1}	{1}Centre for Nano Science and Engineering, IISc, India; {2}Indian Institute of Science, India
M-PS-	303-	1137	Analysis on Chattering Phenomena by the Tilt of the Proof Mass in MEMS Switch	J. Hwang{1}, J. Hwang{2}, D. Ryu{2}, S. Jang{1}, Y. Kim{2}	{1}Agency for Defense Development, Korea; {2}Seoun National University, Korea
M-PS-	303-	1151	An Electromagnetically-Driven Piezoresistively Sensed CMOS MEMS Scanning Mirror for Projection Display	Z. Li{2}, Y. Lin{2}, M. Lu{1}	{1}National Tsing Hua University, Taiwan; {2}NTHU, Taiwan
M-PS-	303-	1173	Micromachined Tube Type Thermal Flow Sensor for Adult-Sized Tracheal Intubation Tube	S. Watanabe{1}, Y. Hasegawa{1}, M. Matsushima{2}, T. Kawabe{2}, M. Shikida{1}	{1}Hiroshima City University, Japan; {2}Nagoya University, Japan
M-PS-	303-	1182	Flexible Hydrogel Capacitive Pressure Sensor for Underwater Applications	E. Kanhere{2}, M. Bora{3}, J. Miao{2}, M. Triantafyllou{1}	{1}Massachusetts Institute of Technology (MIT), United States; {2}Nanyang Technological University (NTU), Singapore; {3}Singapore-MIT Alliance for Research and Technology (SMART), Singapore
M-PS-	303-	1210	Single-Element Omnidirectional Piezoelectric Ultrasound Transducer for Under Water Communication	S. Sadeghpour, S. Meyers, J. Kruth, J. Vleugels, R. Puers	Katholieke Universiteit Leuven, Belgium
M-PS-	303-	1249	Multiresonator-Based Printable Chipless RFID for Relative Humidity Sensing	D. Dominic, S. Krafft, N. Safdari, S. Bhadra	McGill University, Canada

			M-PS-	303-	1264 Pulse Wave Monitoring for Arterial Stiffness Detection Using a Simple Portable Tonometer	G. Lissorgues{4}, A. Bongrain{1}, L. Rousseau{3}, N. Madaoui{4}, A. Testi{5}, L. Valbin{4}, S. Moussay{2}, P. Chapon{2}	{1}Bodycap, France; {2}Bodycap / Normandie Université, France; {3}ESIEE, France; {4}ESIEE / Université Paris-Est, France; {5}University Paris Est, ESIEE ESYCOM, France
			M-PS-	303-	1297 Nanomechanical Traceable Metrology of Vertically Aligned Silicon and Germanium Nanowires by Nanoindentation	G. Hamdana{2}, T. Granz{2}, M. Bertke{2}, Z. Li{1}, P. Puranto{1}, U. Brand{1}, H. Wasisto{2}, E. Peiner{2}	{1}Physikalisch-Technische Bundesanstalt, Germany; {2}Technische Universität Braunschweig, Germany
			M-PS-	303-	1313 Neutral Argon Plasma in Minimally Invasive Medical Devices for Therapy	J. Rodrigues, M. Silva, H. Correia	University of Minho, Portugal
			M-PS-	303-	1317 High Accuracy MEMS Pressure Sensor Based on Quartz Crystal Resonator	J. Wang, C. Zhao, D. Han, X. Jin, S. Zhang, J. Zou, M. Wang, W. Li, Y. Guo	Beijing Research Institute of Telemetry, China
			M-PS-	303-	1387 Investigation on the Influence of Solvents on MWCNT-PDMS Nanocomposite Pressure Sensitive Films	R. Ramalingame, P. Chandraker, O. Kanoun	Technische Universität Chemnitz, Germany
			M-PS-	303-	1400 Soft Triboelectric Band for Sensing of and Energy Scavenging from Body Motion	R. Haque, P. Farine, D. Briand	Ecole Polytechnique Fédérale de Lausanne, Switzerland
			M-PS-	303-	1413 Study of Elongation and Temperature Effects on Nanocomposite Based on Elastic Fiber	R. Torres, A. Jalasutram, A. Benchirouf, C. Müller, O. Kanoun	Technische Universität Chemnitz, Germany
			M-PS-	303-	1450 Piezoelectric Actuators for In-Liquid Particle Manipulation in Microfluidic Applications	M. Demori, M. Baù, S. Dalola, M. Ferrari, V. Ferrari	Università degli Studi di Brescia, Italy
Monday, 4 september, 16:40-18:30	Room 303	Theory and modelling	M-TM-	303-	1032 Electromagnetic Characterization and Simulation of a Carbonate Buffer System on a Microwave Biosensor	L. Wagner{2}, F. Strasser{1}, E. Melnik{1}, M. Brandl{2}	{1}Austrian Institute of Technology GmbH, Austria; {2}Danube University Krems, Austria
			M-TM-	303-	1076 Modelling New Techniques for Improving Separation in Miniature Capillary- and Planar-Based Capillary Electrophoresis Systems	A. Lewis, N. Harris	University of Southampton, United Kingdom
			M-TM-	303-	1107 Analytical Model of Double Barrier THz Rectifier	F. Palma, R. Rao	Sapienza – Università di Roma, Italy
			M-TM-	303-	1112 Geometrical Optimisation of Diode-Based Calorimetric Thermal Flow Sensors Through Multiphysics Finite Element Modelling	E. Gardner, A. De Luca, C. Falco, F. Udrea	University of Cambridge, United Kingdom
			M-TM-	303-	1117 Modelling Cross Axis Sensitivity in MEMS Coriolis Vibratory Gyroscopes	L. Guerinoni, L. Falorni, G. Gattere	STMicroelectronics, Italy
			M-TM-	303-	1189 Analytical Calculation of Falling Droplets from Cylindrical Capillaries	S. Hummel, M. Bogner, M. Haub, J. Sägebarth, H. Sandmaier	Universität Stuttgart, Germany
			M-TM-	303-	1384 Simulating Rain Droplets Influence on Distance Measurement with a Time-of-Flight Camera Sensor	M. Baumgart{1}, M. Dielacher{2}, N. Druml{2}, C. Consani{1}	{1}Carinthian Tech Research AG, Austria; {2}Infineon Technologies Austria AG, Austria
			M-TM-	303-	1412 Investigation of Acoustic Waves Temperature Sensor Based on Surface and Defect Modes in 2D Phononic Crystals	A. Talbi{3}, B. Hafsii{4}, C. Ghouila-Houri{1}, M. Moutaoukriel{4}, A. Mazzamurro{4}, O. El Mazria{2}, P. Pernod{3}, O. Bou Matar{4}	{1}Office National d'Etudes et de Recherches Aéropatiales, France; {2}Université de Lorraine, France; {3}Université Lille 1, France; {4}Université Lille 1 Sciences et Technologies, France
Monday, 4 september, 16:40-18:30	Room 202	Wireless Sensor Networks, RF MEMS	M-WS-	202-	1271 Automatic Wireless Monitoring System for Real-Time Rock Fall Events	G. Barile, G. Ferri, A. Leoni, M. Muttillio, L. Pantoli, V. Stornelli, D. Vettori	Università degli Studi dell'Aquila, Italy
			M-WS-	202-	1338 Low-Power Odor-Sensing Network Based on Wake-Up Nodes	A. Ortiz Perez{1}, B. Bierer{1}, C. Dinc{1}, J. Wöllenstein{2}, S. Palzer{1}	{1}Albert-Ludwigs-Universität Freiburg, Germany; {2}Albert-Ludwigs-Universität Freiburg / Fraunhofer-Institut für Physikalische Messtechnik, Germany

Monday, 4 september, 16:40-18:30	Room 202	Energy harvesting, Micro Power Generation	M-WS-	202-	1404	Fabrication of Planar Copper Microcoils for Telemetric Orthodontic Applications	J. Hafner{1}, M. Kuhl{1}, M. Schwaerzle{1}, T. Hehn{2}, D. Rossbach{2}, O. Paul{1}	{1}Albert-Ludwigs-Universität Freiburg, Germany; {2}Hahn Schickard, Villingen-Schwenningen, Germany
			M-WS-	202-	1406	Magnetomotive and Tension-Based Tuning of a Micromechanical Resonator	M. Bicer{2}, A. Yalcinkaya{1}, B. Alaca{2}	{1}Boğaziçi Üniversitesi, Turkey; {2}Koc University, Turkey
			M-HP-	202-	1020	RF Powered Gas Wireless Sensor Node for Smart Applications	A. Baranov{3}, A. Somov{2}, D. Spirjakin{3}, A. Bragar{1}, A. Karelin{3}	{1}AO Micro WIS, Russia; {2}Skolkovo Institute of Science and Technology, Russia; {3}Smartsens Ltd., Russia
			M-HP-	202-	1092	The Effect of Temperature and Strain on Power Conversion Efficiency of PVDF-Based Thermal Energy Harvesters	F. Bernard{1}, L. Gimeno{2}, B. Viala{1}, O. Cugat{2}	{1}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {2}Institut polytechnique de Grenoble, France
			M-HP-	202-	1096	Energy Harvesting for Sensors of Structural Integrity in Wind Power Stations	C. Behnke, W. Schomburg	Rheinisch-Westfälische Technische Hochschule Aachen, Germany
			M-HP-	202-	1165	Fabrication Methods for High-Performance Miniature Disks of Terfenol-D for Energy Harvesting	V. Issindou{1}, B. Viala{1}, L. Gimeno{3}, O. Cugat{3}, C. Rado{1}, S. Bouat{2}	{1}Commissariat à l'Energie Atomique et aux Energies Alternatives, France; {2}Enerbee, France; {3}Institut polytechnique de Grenoble, France
			M-HP-	202-	1332	A Nonlinear Energy Harvesting with Asymmetry Compensation	B. Andò{2}, S. Baglio{2}, V. Marletta{2}, A. Pistorio{2}, A. Bulsara{1}	{1}Space and Naval Warfare Systems Center Pacific, San Diego, United States; {2}Università degli Studi di Catania, Italy
			M-HP-	202-	1389	RF Harvesting Circuit for Batteryless Connected Sensor	A. Safradou{2}, P. Bacot{3}, S. Dudret{1}, E. Bourdel{5}, B. Granado{4}	{1}Air Liquide R&D, France; {2}Air Liquide S.A., France; {3}Paris-la Défense, France; {4}Sorbonne Universités, UPMC Univ Paris 06, France; {5}Université Paris Seine, France
			M-HP-	202-	1408	Energy Estimation for Electret Harvester with Nonlinear Spring	K. Yamamoto{1}, T. Fujita{2}, A. Badel{1}, F. Formosa{1}, K. Kanda{2}, K. Maenaka{2}	{1}Universite Savoie Mont Blanc, France; {2}University of Hyogo, Japan
			M-HP-	202-	1433	Design and Optimization of Wideband Multimode Piezoelectric MEMS Vibration Energy Harvesters	S. Nabavi, L. Zhang	Memorial University of Newfoundland, Canada
Monday, 4 september, 16:40-18:30	Room 202	Packaging and Assembly Technology	M-HP-	202-	1444	High Sensitivity Piezogenerator Based on GaN Nanowires	L. Lu{1}, N. Jamond{1}, E. Lefeuvre{1}, P. Chrétien{2}, F. Houzé{2}, L. Travers{1}, J. Harmand{1}, F. Glas{1}, N. Gogneau{1}, F. Julien{1}, M. Tchernycheva{1}	{1}University Paris-Saclay, France; {2}University Paris-Sud et UPMC, France
			M-HP-	202-	1485	Development of a compact low-frequency vibration piezoelectric MEMS energy harvester	F. Costache, B. Pawlik, A. Rieck	Fraunhofer Institute for Photonic Microsystems, Dresden, Germany
			M-PA-	202-	1201	Laser-Microstructured Double-Sided Adhesive Tapes for Integration of a Disposable Biochip	V. Zamora{1}, S. Marx{2}, N. Arndt-Staufenbiel{1}, C. Janeczka{1}, G. Havlik{1}, M. Queisser{2}, H. Schröder{1}	{1}Fraunhofer-Institut für Zuverlässigkeit und Mikrointegration, Germany; {2}Technische Universität Berlin, Germany
			M-PA-	202-	1254	Hermetic Cavities Using Gold Wafer Level Thermocompression Bonding	S. Charlot{3}, P. Pons{3}, M. Dilhan{2}, I. Vallet{1}, S. Brida{1}	{1}Esterline Technologies Corporation, France; {2}LAAS-CNRS / Université de Toulouse, France; {3}Laboratory for Analysis and Architecture of Systems, France
			M-PA-	202-	1459	Printed Sensors for Material Integrated Sensing: Functionalization of Semi-Finished Parts	G. Dumstorff, W. Lang	Universität Bremen, Germany