



isoen 28 June 2015
-1 July
International Symposium on
Olfaction and Electronic Nose
Dijon France



ISOEN 2015 Conference

ISOCS

Monday, June 29th

08:30 Conference registration & coffee

Conference secretariat

09:00 Opening ceremony

Jean-Christophe Mifsud, first ISOEN chair; Giorgio Sberverglieri, ISOCS President

Patrick Mielle, Sandrine Isz, Anne-Claude Romain and Ricardo Gutierrez-Osuna, Conference & program chairs

09:20 Plenary keynote Lecture

E-nose: Correlation versus causality

Peter Boeker

10:10 Coffee break + Poster session

10:40

Plenary Session: E-sense systems

- Printed smart RFID label with temperature, humidity and gas sensors enabling environmental monitoring

A. Vásquez Quintero, F. Molina-Lopez, D. Briand, N. de Rooij, E. Danesh, K. Persaud, S. Pandule, A. Oprea, N. Barsan, U. Weimar, E. Smits, R. Kusters and J. van den Brand.

- The Optoelectronic Nose

Ken Suslick and Jon Askim.

- An embedded system for the evaluation of ultra-sensitive optical sensor arrays based on photoluminescence quenching

Nico Bolse, Martin Schend, Lisa Bell, Carsten Eschenbaum and Uli Lemmer.

- Grapevine crown gall detection by electronic nose

Enrico Biondi, Sonia Blasioli, Mirco Fantini, Ilaria Braschi and Assunta Bertaccini.

- High-sensitive and high-efficient biochemical analysis method using a developed smartphone-based colorimetric reader system

Kaiqi Su, Quchao Zou, Xianxin Qiu, Jiaru Fang, Ling Zou, Tianxing Wang, Ning Hu, Ping Wang

12:20 Lunch



13:50

Tribute to Wolfgang Göpel
Udo Weimar

Plenary invited Lecture

20 years improvement in gas sensors
Udo Weimar

14:40

Parallel Symposium 1: Wolfgang Göpel [Gas sensors]

- Number of discriminable odor features for optimizing MOX sensor temperatures
Luis Fernandez, Santiago Marco and Agustín Gutierrez-Galvez.
- Magnonic sensor array to detect, discriminate and classify toxic gases
Daniel Matatagui, Oleg Kolokoltsev, Naser Qureshi, Elsi Mejía and José Saniger.
- Odor visualization using fluorescence-dyed molecularly-imprinted-polymer micro-powder
Seiichi Yamashita, Kazuya Iwata, Hirotaka Yoshioka, Chuanjun Liu and Kenshi Hayashi.
- Industrial odor concentration measurement using electronic nose and drift correction methodology
Sharvari Deshmukh, Sanjivani Korde, Arun Jana, Rajib Bandyopadhyay, Nabarun Bhattacharyya and R.A Pandey.

14:40

Parallel Symposium 2a: Industrial applications

- Implementation of Electronic nose as a non destructive test for composite adhesive bonding quality checks in aerospace industry
Maria Salvato, Saverio De Vito, Ernst Rau, Mara Miglietta, Ettore Massera, Antonio Buonanno and Grazia Fattoruso.
- Development of flavor profile of pet food palatants using Electronic Nose and Electronic Tongue
Punyatoya Mohapatra, Nicky Cox, Preetha Banerjee
- Multi-sensory evaluation of olives using electronic sensing instruments
Hervé Lechat, Marion Bonnefille, Valérie Vabre, Fatma Ayouni, Jean-Christophe Mifsud and Sylvain Morel.
- 'MOx sensors versus Analysers' for the environmental monitoring of landfill air
Anne-Claude Romain, Noémie Molitor and Gilles Adam.

16:00 **Coffee break**

16:30

Parallel Symposium 1: Wolfgang Göpel [Gas sensors], cntd

- Using a Polyaniline/Carbon Black Composite Sensor to Detect Ammonia in Humid Conditions
Joanna Paton, Ehsan Danesh and Krishna Persaud.
- Detection of volatile organic compounds by means of liquid crystals and liquid crystalline composites
Petr Shibaev, J. Murray, M. Wenzlick, A. Tantillo,
- High temperature printed micro-hotplates on polyimide foil for gas sensing and sampling
Malick Camara, Mathilde Rieu, Jean-Paul Viricelle, Christophe Pijolat, Danick Briand and Nico F. de Rooij.

16:30

Parallel Symposium 2b: Medical

- Foodborne bacteria identification based on continuous evolution patterns generated by electronic tongues
Laurie-Amandine Garçon, Arnaud Buhot, Martial Billon, Roberto Calemczuk, David Eon, David Bonnaffé, Thierry Livache and Yanxia Hou.
- Diagnosis of arthritic diseases by a combined analysis of synovial fluid
Rosamaria Capuano, Francesca Dini, Ana Carolina Domakoski, Roberto Paolesse, Alberto Bergamini, Lavinia Lugari, Eugenio Martinelli and Corrado Di Natale.
- A rapid discrimination of diabetic patients from volunteers using urinary volatile and an Electronic Nose
Siavash Esfahani, Jim R Skinner, Richard S. Savage, Nicola O'connell, Ioannis Kyrou, Chuka U. Nwoko, Karna D. Bardhan, Ramesh P. Arasaradnam, James A. Covington.

17:30

Flash presentations session 1

- Automated detection of trace explosives by Atmospheric Pressure Ionization Mass Spectrometer
Shun Kumano, Yasuaki Takada, Hisashi Nagano, Yohei Kawaguchi, Hideo Kashima, Masakazu Sugaya, Koichi Terada, Yuichiro Hashimoto and Minoru Sakairi.
- Olfactoscan device used to reveal aroma actives compounds in Pinot Noir wines
Noëlle Béno, Aurélie Loison, Angélique Villière, Yves Le Fur and Thierry Thomas-Danguin.
- Fault tolerance and long term stability by an olfactory bulb model: application to a gas sensor array
Gabriele Magna, Eugenio Martinelli, Alexander Vergara, Detlev Schild and Corrado Di Natale.
- Identification of proliferative and molecular features of breast cancer cells by an adaptive temperature modulated gas sensor
Alexandro Catini, Luca Lavra, Alessandra Ulivieri, Rosamaria Capuano, L. Baghernajad Salehi, S. Sciacchitano, F. Magi, R. Paolesse, E. Martinelli and C. Di Natale.

17:30

Flash presentations session 2

- Development of analytical methods based on Laser vaporization Electronic Nose for the detection of transmitters of Chagas disease
Carlos Rinaldi, Juan Vorobioff, Estefanía Videla, Oscar Daniel Salomón and Alberto Lamagna.
- Validation of an electronic nose device for the diagnosis of mastitis in dairy cows
Rona Müller, Sandra Bertulat and Wolfgang Heuwieser.
- Benchmarking algorithms for chemical source location probability mapping
Rudys Magrans, Juan Manuel Jiménez-Soto, Dani Martínez, Marcel Tresanchez, Antonio Pardo, Jordi Palacín and Santiago Marco.
- Development of baker's yeast assisted potentiometric multisensor system for protein purity evaluation
Edita Voitechovic, Dmitry Kirsanov, Anton Korepanov, Igor Jagatspanian and Andrey Legin.

18:00

ISOCS General Assembly



Tuesday, June 30th

08:30 Plenary invited Lecture: **Olfactory displays: Toward digitalization and reproduction of scents**
Hiroshi Ishida

09:10 Plenary Session: Applications

- Use of plastic-based analytical device, smartphone and chemometric tools to discriminate amines in meat
Ligia Bueno, Subrayal Reddy and Thiago Paixão.
- Electronic tongue for pharmaceutical dissolution tests
María Khaydukova, Isabell Iimmohr, Miriam Pein, Dmitry Kirsanov and Andrey Legin.

09:50 Coffee break + Poster session

10:20

- Discrimination of grape juices by an electrochemical quartz crystal microbalance multisensor system
Celia García-Hernández, Cristina Medina-Plaza, Cristina García-Cabezón, Fernando Martín-Pedrosa, José Antonio De Saja-Sáez and María Luz Rodríguez-Méndez.
- Electronic tongue in botrytized wine authentication
János Soós, Evelin Várvölgyi, György Bázár, Ildikó Magyar, József Felföldi and Zoltán Kovács.
- Sol-gel synthesis of titanium dioxide nanoparticle: electrochemical detection of uric acid and guanine
Sudip Biswas, Dipanjan Chakraborty, Panchanan Pramanik and Rajib Bandyopadhyay.
- Electronic tongues to assess wine sensory descriptors
Xavier Cetó, Andreu Gonzalez-Calabuig, Nora Crespo, Sandra Perez, Josefina Capdevila, Anna Puig-Pujol and Manel Del Valle.
- Versatility and potential of electronic nose technology in the anaerobic digestion domain: a practical example
Gilles Adam, Sébastien Lemaigre, Xavier Goux, Philippe Delfosse and Anne-Claude Romain.

12:00 Lunch

13:30 Plenary invited Lecture: **Taste sensors: do they really feel taste?**
Andrey Legin

14:10 Parallel Symposium 3a: Electronic tongue

- Electronic tongue for the recognition of cetirizine - based pharmaceutical formulations
Malgorzata Wesoly, Marcin Zabada, Aleksandra Amelian, Katarzyna Winnicka, Wojciech Wróblewski and Patrycja Ciosek.
- Optical chemical sensor for cyanobacterial toxins detection
C. Guanais Branchini, L. Lvova, L. Prodi, M. Sgarzi, N. Zaccheroni, E. Viaggiu, R. Congestri, L. Guzzella, F. Pozzoni, I. Lundström, C. Di Natale and R. Paolesse.
- Potentiometric E-tongue for indirect control of protein production in *E. Coli*
Dmitry Kirsanov, Anton Korepanov, Daniil Dorovenko, Evgeny Legin and Andrey Legin.
- Assessment of theaflavin-digallate in black tea by multi-frequency large amplitude pulse voltammetric electronic tongue
Arunangshu Ghosh, Trisita Nandy Chatterjee, Dilip Sing, Bipan Tudu, Pradip Tamuly, Nabarun Bhattacharyya and Rajib Bandyopadhyay.
- Calibration update strategies for an array of potentiometric chemical sensors
Alisa Rudnitskaya, Ana Maria Simoes Costa and Ivonne Delgadillo.

14:10 Parallel Symposium 4a: Olfaction & sensory

- Hyphenation of gas chromatography and Electronic Nose Detection for off-odour analysis of materials
María Rambla-Alegre, Bart Tienpont, Christophe Devos, Frank David and Pat Sandra.
- Outdoor odor nuisance monitoring by combining advanced sensor systems and a citizens network
Wolfhard Reimringer, Thomas Rachel, Thorsten Conrad and Andreas Schuetze.
- Augmenting human odor assessments of cabin air quality of automobiles by instrumental measurements
H Troy Nagle, Ricardo Gutierrez-Osuna, Kenneth Suslick, Krishna Persaud, Ryan Hodges, James Covington, Gail Luckey, Joel Crowell and Susan Schiffman.
- Electronic nose for evaluating cat food quality
Viktória Éles, György Bázár, György Kövér, Csaba Hancz, Zoltán Kovács, István Hullár and Róbert Romvári.
- Characterization of aged brandies by proton transfer reaction-mass spectrometry according to their origin within a limited production area
Nicolas Malfondet, Pascal Brunerie and Jean-Luc Le Quéré.

15:50 Coffee break



16:20

Parallel Symposium 3b: Biosensors

- A highly specific bioengineered bitter receptor cell-based biosensor with label-free cell-impedance sensing assay
Liang Hu, Liqun Huang and Ping Wang.
- An extracellular recording microfluidic device for functional assay of single taste receptor cell
Chunsheng Wu, Liping Du, Ling Zou and Ping Wang.
- Diamond micro-cantilevers as transducers for olfactory receptors - based biosensors: application to the receptors M71, OR7D4 and OR1740
Emmanuel Scorsone, Raafa Manai, Lionel Rousseau, Maira Possas Abreu, Guenael Sanz, Marie-Annick Persuy, Edith Pajot and Philippe Bergonzo.

16:20

Parallel Symposium 4b: Sniffing robots

- Odor classification in motion: how fast can the E-nose go?
Javier G. Monroy and Javier Gonzalez-Jimenez.
- Active quad nose: gas sensing system that can determine two-dimensional direction of gas source
Takafumi Kusunoki, Haruka Matsukura and Hiroshi Ishida.
- Bringing Artificial Olfaction and mobile robotics closer together - an integrated 3D gas dispersion simulator in ROS
Ali Abdul Khaliq, Sepideh Pashami, Erik Schaffernicht, Achim J. Lilienthal and Victor Hernandez Bennetts.

17:20

Flash presentations session 3

- European network of new sensing technologies for air pollution control and environmental sustainability – EUNETAir Cost Action TD 1105
- The European sensor systems cluster: a new EC initiative

17:20

Flash presentations session 4

18:00 **Coach departure for the wine riviera**

19:00 **Wine tasting & Social dinner** (upon registration)



Wednesday, July 1st

08:30	Plenary invited Lecture:	Demand for e-tongue in the pharmaceutical industry <i>David Clapham</i>
09:10		Tribute to Alex Vergara <i>Steve Semancik</i>
09:20	Plenary invited Lecture:	Signal processing for chemical sensors: past, present, and future <i>Ricardo Gutierrez-Osuna</i>
10:00	Coffee break + Poster session	
10:30		Plenary Session: Alex Vergara [Data processing] <ul style="list-style-type: none">• How much Partial Least Squares - Discriminant Analysis overfits? <i>Raquel Rodríguez-Pérez and Santiago Marco.</i>• Performance of MOX-sensor based electronic nose in early fire detection: a bio-inspired approach <i>Allan Melvin Andrew, S. M. Saad, A. Y. M. Shakaff, A. H. Adom and A. Zakaria,</i>• Detection of weak chemicals in strong backgrounds with a tunable infrared sensor <i>Javi Jin Huang and Ricardo Gutierrez-Osuna.</i>• Real-time odor classification through sequential Bayesian filtering <i>Javier G. Monroy and Javier Gonzalez-Jimenez.</i>• Olive oil quality determination using multi-capillary column-ion mobility spectrometry and multivariate data processing <i>Sara Rica-Pedruelo, Jordi Fonollosa, Sergio Oller Moreno, Juan Manuel Jiménez-Soto, Rocio Garrido-Delgado, Lourdes Arce and Santiago Marco.</i>
12:10	Plenary invited Lecture:	Smart home appliances <i>Thierry Coutureau</i>
12:50		Closing and award ceremony
13:00	Lunch - farewell	

For updated information: <https://colloque6.inra.fr/isoen2015>



Posters session

[Posters are on display all along conference days]

Poster Nr

- 119** • Olfactoscan device used to reveal aroma actives compounds in Pinot Noir wines
Noëlle Béno, Aurélie Loison, Angélique Villière, Yves Le Fur and Thierry Thomas-Danguin.
- 95** • Stochastic on-field calibration of air quality multisensor devices with dynamic neural networks
Elena Esposito, Saverio De Vito, Maria Salvato, Olalekan Popoola and Vivien Bright.
- 96** • Magnetic beads-based electrochemical immunoassay for rapid detection of okadaic acid in shellfish samples
Jie Zhou, Xianxin Qiu and Ping Wang.
- 30** • Development of analytical methods based on Laser vaporization Electronic Nose for the detection of transmitters of Chagas disease
Carlos Rinaldi, Juan Vorobioff, Estefanía Videla, Oscar Daniel Salomón and Alberto Lamagna.
- 18** • Protocol for the detection and classification of fungi by Electronic Nose
Carlos Rinaldi, Juan Vorobioff, Alberto Lamagna, S Manzoor, Lydia Ugena, Humberto Martín, M Molina, Jesus Tornero and Jorge Caceres.
- 38** • Identification of proliferative and molecular features of breast cancer cells by an adaptive temperature modulated gas sensor
Alexandro Catini, Luca Lavra, Alessandra Ulivieri, Rosamaria Capuano, L. Baghernajad Salehi, Salvatore Sciacchitano, F. Magi, Roberto Paolesse, Eugenio Martinelli and Corrado Di Natale.
- 65** • Sensitive detection of okadaic acid using a Love wave sensor based on immunogold staining enhancement method
Ling Zou, Yulan Tian, Xi Zhang and Ping Wang.
- 69** • Hybrid electronic tongue for biotransformation monitoring in yeast batch culture
Marcin Zabadał, Iwona Ufnalska, Karolina Chreptowicz, Jolanta Mierzejewska, Wojciech Wróblewski and Patrycja Ciosek.
- 54** • Selective dopamine detection by an electrochemical sensor modified with carbon-based nanomaterials
Luiza Mercante, Adriana Pavinatto, Leonardo Iwaki, Vanessa Scagion, Valtencir Zucolotto, Osvaldo Novaes, Luiz Mattoso and Daniel Correa.
- 110** • A 0.7 V Capacitance-to-digital converter for capacitive type gas sensors
Chih-Hong Li, Shih-Wen Chiu, Li-Chun Wang, Han-Wen Kuo and Kea-Tiong Tang.
- 122** • MOX NanoWire gas sensors array to detect the authenticity of grated Parmigiano-Reggiano cheese
Veronica Sberveglieri, Estefania Nunez Carmona, Dario Zappa, Marco Nocetti and Andrea Pulvirenti.
- 124** • Classification of olive oils according to their geographical origin by voltammetric electronic tongue coupled to pattern recognition methods
Khalid Tahri, Andreia Duarte, Tarik Saidi, Madiha Bougrini, Driss Sabbouri, Paulo Ribeiro, Nezha El Bari, Maria Raposo and Benachir Bouchikhi.
- 152** • Effects of copper functionalization on SnO₂ nanowires in H₂S detection
Cristina Cerqui, Andrea Ponzoni, Dario Zappa, Elisabetta Comini, Matteo Ferroni and Giorgio Sberveglieri.
- 154** • ISFET biosensor for screening Alzheimer's disease using human saliva
Jeong Ok Lim, Jeung Soo Huh and Hui Chong Lau.
- 55** • A novel Love Wave biosensor for rapid and sensitive detection of marine toxins
Xi Zhang, Ling Zou, Yingchang Zou, Ning Hu and Ping Wang.
- 147** • Electronic tongue as an objective evaluation method for taste profile of pomegranate juice in comparison with sensory panel and chemical analysis
Ofir Benjamin and Dani Gamrasni.
- 120** • Design of a portable electronic tongue for heavy metal and pH detection in water based on an integrated sensor
Hao Wan, Qiyong Sun, Ning Hu and Ping Wang.
- 73** • Identification of volatile compounds of fruit juices by head space (HSSE) and immersions Stir bar sorptive extraction (SBSE) and thermal desorption-cryo
Carmen Barba, Thierry Thomas-Danguin, Karine Gourrat and Elisabeth Guichard.
- 86** • Improved high specific in vivo bioelectronic nose for odor detection with defined odorant receptor
Liuqing Zhuang, Tiantian Guo and Ping Wang.
- 89** • Odor recognition with nonlinear energy operator by bio-inspired olfactory sensing
Tiantian Guo, Liuqing Zhuang and Ping Wang.
- 98** • Development of mutant odorant binding proteins (OBPs) biosensor for security applications: detection of explosives
Khasim Cali, Mara Bernabei, Carla Mucignat and Krishna Persaud.
- 153** • Automated detection of trace explosives by Atmospheric Pressure Ionization Mass Spectrometer
Shun Kumano, Yasuaki Takada, Hisashi Nagano, Yohei Kawaguchi, Hideo Kashima, Masakazu Sugaya, Koichi Terada, Yuichiro Hashimoto and Minoru Sakairi.
- 10** • Molecular semiconductors – doped insulator (MSDI) heterojunctions as new conductometric devices for chemosensing
Wanneboucq Amélie, Suisse Jean-Moïse and Bouvet Marcel.
- 101** • Wireless electronic nose network for air quality detection
Jesus Lozano, Patricia Arroyo, José Ignacio Suarez, José Luis Herrero and Pablo Carmona.
- 63** • Chemical sensor based on conducting electrospun nanofibers for evaluating antibiotic contamination in milk
Vanessa Scagion, Luiza Mercante, Juliano Oliveira, Luiz Mattoso, Marcos David Ferreira and Daniel Correa.
- 114** • Validation of an electronic nose device for the diagnosis of mastitis in dairy cows
Rona Müller, Sandra Bertulat and Wolfgang Heuwieser.
- 85** • An intelligent Electronic Nose to detect freshness and identify different kinds of refrigerator stored food
Fan Gao, Chenxing Chen, Yingchang Zou, Xi Zhang, An Chao and Ping Wang.
- 117** • Electronic nose for continuous emission monitoring and odour concentration measurement: case study at a waste water treatment plant
Lidia Eusebio, Selena Sironi and Laura Capelli.



isoen
International Symposium on
Olfaction and Electronic Nose

28 June
-1 July 2015
Dijon France



Posters session

(continued)

- 146** • Carbon Nanotube Sensors to enable commercialization of novel E-Nose systems
Prashanth Makaram, Claudio Truzzi and Steve Lerner.
- 92** • Benchmarking algorithms for chemical source location probability mapping
Rudys Magrans, Juan Manuel Jiménez-Soto, Dani Martínez, Marcel Tresanchez, Antonio Pardo, Jordi Palacin and Santiago Marco.
- 106** • Molecularly imprinted sensor for sucrose based on multilayered thin films of sucrose-imprinted TiO₂ nanoparticles
Guilherme De Souza Braga, Leonardo Giordano Paterno and Fernando Josepetti Fonseca.
- 28** • Design and modelling of a handheld side-stream breath sampling system for metabolic rate analysis
Timothy Vincent, Julian Gardner, Adrian Wilson, John Hattersley and Michael Chappell.
- 37** • Fault tolerance and long term stability by an olfactory bulb model: application to a gas sensor array
Eugenio Martinelli, Gabriele Magna, Detlev Schild and Corrado Di Natale.
- 56** • Development of baker's yeast assisted potentiometric multisensor system for protein purity evaluation
Edita Voitechovic, Dmitry Kirsanov, Anton Korepanov, Igor Jagatspanian and Andrey Legin.
- 17** • Impedance spectroscopy of molecular material – based heterojunctions for a better discrimination between ammonia and water
Marcel Bouvet, Tilman Sauerwald, Marco Schueler, Pierre Gaudillat, Jean-Moise Suisse and Andreas Schuetze.
- 46** • Instrumental taste evaluation methods for analysis of traditional chinese medicine samples
Irina Yaroshenko, Dmitry Kirsanov, Lyudmila Kartsova, Alla Sidorova, Qiyong Sun, Haitong Wan, Yu He, Ping Wang and Andrey Legin.
- 50** • Feature level fusion of Electronic Nose and Tongue responses for improved black tea quality estimation
Runu Banerjee, Sourav Mondal, Bipan Tudu, Rajib Bandopadhyay and Nabarun Bhattacharya.
- 59** • A portable smelling system for odor recording
Ettore Massera, Brigida Alfano, Antonio Buonanno, Saverio De Vito, Paola Delli Veneri, Girolamo Di Francia, Fabrizio Formisano, Francesca Dini and Alberto Nisti.
- 61** • Voltammetric Electronic tongue employing GCE/MWCNT/Metals oxy-hydroxides modified electrodes for resolution of monosaccharides
Acelino Cardoso de Sá, Andreu Gonzalez-Calabuig, Andrea Cipri, Nelson Ramos Stradiotto and Manel Del Valle.
- 79** • Improved quantification of naphthalene using non-linear Partial Least Squares Regression
Manuel Bastuck, Martin Leidinger, Tilman Sauerwald and Andreas Schütze.
- 80** • In vitro approaches to model in-mouth salt release
Adiansyah Syarifuddin, Chantal Septier, Patrick Mielle, Christian Salles and Thierry Thomas-Danguin.
- 136** • E-nose for cow feeding traceability by cheeses
Ambra Di Rosa.
- 144** • Identification of a large pool of pathogenic micro-organisms with an Electronic Nose
Nicola Zetola, Keikantse Mathlagela, Enoch Sepaco, Ogopotse Matsiri Matsiri, Chawangwa Modongo Modongo, Bontle Mbongwe, Eugenio Martinelli, Giorgio Sirugo and Corrado Di Natale.
- 145** • Non-invasive method for fast analysis of volatile metabolites of pneumonia in ventilated-patients
Han-Wen Kuo, Li-Chun Wang, Shang-Ren Yang, Shih-Wen Chiu, Kea-Tiong Tang, Wang-Hsien Ding and Chung-Hung Shih.
- 151** • On-field chemical profiling of volatile and odorous compounds in water pollution cases: toward a forensic in situ approach
William Lacour, Céline Weyerermann and Felipe de Alencastro.
- 9** • A multisensor system combining E-Tongue with cell sensor for the evaluation of traditional chinese medicine
Qiyong Sun, Qin Wang, Hao Wan, Ning Hu, Irina Yaroshenko, Andrey Legin and Ping Wang.
- 35** • Groundwater pollution: electronic nose as diagnostic tool for chlorinated compound detection
Giulia Zambotti, Matteo Falasconi, Andrea Ponzoni, Cristina Cerqui, Dario Zappa, Elisabetta Comini, Veronica Sberveglieri and Giorgio Sberveglieri.
- 66** • Malolactic fermentation monitoring with a portable electronic nose
José Pedro Santos, Juan Mariano Cabellos, Teresa Arroyo, Manuel Aleixandre and Maria Carmen Horrillo.
- 70** • Sensory characterization of coconut oil using a sensory panel and an electronic nose
Marie-Laure Vicenty, Cécile Didier, Sylvain Morel, Sandrine Isz, Jean-Christophe Mifsud and Marion Bonnefille.
- 111** • Sensor's drift analysis and compensation using internal normalization for DADSS
Hyung-Gi Byun, Jin-Young Jeon and Jang-Sik Choi.
- 27** • Detection of bitterness using a bioelectronic tongue in vivo combining with brain-machine interface
Zhen Qin, Bin Zhang, Liang Hu, Liuqing Zhuang and Ping Wang.
- 21** • Portable breath acetone monitoring system for wellness applications
Ha Duong Ngo and Prashanth Makaram.
- 88** • Investigation of glassy carbon and carbon paste electrode in honey floral identification using electronic tongue
Kamalika Tiwari, Sudip Biswas, Bipan Tudu, Rajib Bandopadhyay, Nabarun Bhattacharya, Anutosh Chatterjee and Panchanan Pramanik.
- 121** • Region segmentation of odor source using multispectral fluorescence imaging
Hiro-Taka Yoshioka, Chuanjun Liu and Kenshi Hayashi.
- 159** • Exhaled breath sensor for screening of Alzheimer's disease
Jeung Soo Huh, Jeong Ok Lim, Jun Boo Yu and Hui Chong Lau.
- 47** • A machine vision technique for appearance based rice quality measurement
Tamal Dey, Abhra Pal, Amitava Akuli and Nabarun Bhattacharyya.
- 133** • Three-nanosensor array microsystem development to monitor infections
Jiahao Huang, Perena Gouma, Milutin Stanačević and Yingkan Lin.



Posters session

(continued)

- 12** • Assessing coffee beans quality with E-Sensing system
Motohiko Sugiura.
- 104** • Monitoring beacon to detect early or hidden fungal development in indoor environments
Rukshala Anton, Stephane Moularat and Enric Robine.
- 22** • A user-friendly and portable home healthcare equipment for detection of lung cancer at early stage
Yingchang Zou, Ping Wang and Xi Zhang.
- 93** • Selective and sensitive detection of fruit aroma using a molecularly imprinted polymer based piezoelectric quartz sensor
Barnali Ghatak, Amrita Prasad, Sk Babar Ali, Prolay Sharma and Rajib Bandyopadhyay.
- 108** • Development of real-time water odor monitoring system using metal oxide sensors
Yuns. Kim, Jeongyup Lee, Jaewon Choi and Ilhwan Choi.
- 8** • Impact of biomethane on odourisation in gas distribution networks
Amelie Louvat, Erik Polman, Eugenio Salati, Pascal Favre, Diane Broomhall, Brian Strugnell, Kevin Sleuyter, Torben Kvist and Betina Jorgensen.
- 71** • A nanosensor based portable artificial nose to detect lung cancer
Sergi Udina, A'Laa Gaara, Elwin Vrouwe, Carsten Jaeschke, Jan Mitrovics and Hossam Haick.
- 127** • Electronic nose and electronic tongue for rapid red meat screening
Zouhair Haddi, Noureddine El Barbri, Khalid Tahri, Madiha Bougrini, Nezha El Bari, Eduard Llobet and Benachir Bouchikhi.
- 42** • Fragrance measurement of scented rice using developed electronic nose
Arun Jana, Nabarun Bhattacharyya, Rajib Bandyopadhyay, Jayanta Roy, Subhankar Mukherjee, Devdulal Ghosh and Bipan Tudu.
- 149** • Estimating Shelf Life of Green Tea using e-Tongue
Masaaki Habara and Hidekazu Ikezaki.
- 24** • Quantitative characterizations of the traditional Chinese medicine tastes based on Electronic Tongue
Youjie Wang, Ruichao Du, Kefeng Ruan Yi Feng and Fei Wu.
- 141** • Optimal neural network design for single analyte concentration detection
Aleksander Kubiak, Mara Bernabei, Simone Pantalei and Krishna Persaud.
- 116** • Environmental odour monitoring at receptors by means of electronic noses: definition of instrumental minimum performance requirements
Laura Capelli, Lidia Eusebio and Selena Sironi.
- 109** • Study of pharmaceutical assessment platform based on electromechanical integration detection of cardiomyocytes using microelectrodes array
Ning Hu and Ping Wang.