

## DAFTAR PUSTAKA

- Agarwal, B., and Mittal, N. 2016. *Prominent Feature Extraction for Sentiment Analysis*. Springer, Berlin.
- Ahlemeyer-stubbe, A. 2014. *A Practical Guide to Data Mining for Business and Industry*. John Wiley and Sons, New York.
- Al-Adhroey, A. H., Nor, Z. M., Al-Mekhlafi, H. M. and Mahmud, R. 2010. Median Lethal Dose, Antimalarial Activity, Phytochemical Screening and Radical Scavenging of Methanolic Languas galanga Rhizome Extract. *Molecules*, 15, 8366-8376.
- Alenus, J., Ethirajan, A., Horemans, F., Weustenraed, A., Csipai, P., Gruber, J., Peeters, M., Cleij, T.J., and Wagner, P. 2013. Molecularly Imprinted Polymers as Synthetic Receptors for The QCM-D-Based Detection Of L-Nicotine In Diluted Saliva And Urine Samples. *Anal. Bioanal. Chem.*, 405, 6479–6487
- Arias, M., Balcázar, J. L., and Tîrn, C. 2015. Learning definite Horn formulas from closure queries, *Theoretical Computer Science*, 1, 1–11.
- Austin, R. H., and Barber, J. 2014. *The Electronic Nose: Artificial Olfaction Technology*. Springer, New Delhi.
- Bagheri, M., Mirbagheri, S. A., Ehteshami, M., and Bagheri, Z. 2014. Modeling of a Sequencing Batch Reactor Treating Municipal Wastewater Using Multi-Layer Perceptron and Radial Basis Function Artificial Neural Networks. *Process Safety and Environmental Protection*, 93, 111–123.
- Batubara, I., Julita, I., Darusman, L. K., and Mahmoud, A. 2015. Flower Bracts of Temulawak *Curcuma xanthorrhiza* for Skin Care/: Anti-Acne and Whitening Agents. *Procedia Chemistry*, 14, 216–224.
- Bhattacharyaa, N., Tudub, B., Janaa, A., Ghosha, D., Bandhopadhyayab, R., Saha, A.B. 2008. Illumination Heating and Physical Raking for Increasing Sensitivity of Electronic Nose Measurements With Black Tea. *Sensors and Actuators B*, 131, 37–42
- Bettelheim, F. A., Brown, W. H., Campbell, M. K., Farrel, S. O., and Torres, O. J. 2013. *Organic, and Biochemistry*, Brooks/Cole, Belmont.
- Bishop, C. M. 2006. *Pattern Recognition and Machine Learning*. Springer Science+ Business Media LLC, Singapore.
- Boers, E. C. W., and Kuiper, H. 1992. *Biological metaphors and the design of*

*modular artificial neural networks*. Leiden University, Leiden.

- Brudzewski, K and Ulaczy, J., 2009. An Effective Method for Analysis of Dynamic Electronic Nose Responses, *Sensors and Actuators B*, 140, 43–50.
- Bruice, P. Y. 2014. *To the Student. A Primer of Ecology*, 7th edition. Pearson, New York.
- Calfapietra, C., Pallozzi, E., Lusini, I., and Velikova, V. 2013. *Biology, Controls and Models of Tree Volatile Organic Compound Emissions*. Springer, Berlin.
- Cao, G., Cai, H., Zhang, J., and Cai, B. 2014. Rapid Determination of the Main Compounds in Crude and Processed *Atractylodes Macrocephala* Using Fourier Transform Infrared Spectroscopy with Attenuated Total Reflectance. *Analytical Letters*, 474, 616–626
- Capone, S., Tufariello, M., and Siciliano, P. 2013. Analytical Characterisation of Negroamaro Red Wines by “Aroma Wheels”. *Food Chemistry*, 141, 2906–2915
- Cardoso, L., Marins, F., Magalhães, R., Marins, N., Oliveira, T., Vicente, H., Neves, J. 2015. Abstract Computation in Schizophrenia Detection through Artificial Neural Network Based Systems. *The Scientific World Journal* 2015, 1-10.
- Celebi, M. E. 2015. *Partitional Clustering Algorithms*. Springer, Berlin.
- Chaudhury, R. R. 2015. Herbal Remedies and Traditional Medicines in Reproductive Health Care Practices and Their Clinical Evaluation. *Journal of Reproductive Health and Medicine*, 1,1, 44–46.
- Cheng, H., Chen, J., Chen, S., Wu, D., Liu, D., and Ye, X. 2015. Characterization of Aroma-Active Volatiles in Three Chinese Bayberry *Myrica Rubra* Cultivars Using GC – MS – Olfactometry And An Electronic Nose Combined with Principal Component Analysis. *Food Research International*, 72, 8–15.
- Cheng, X., Ren, X., Ma, S., and Li, S. 2015. Chemometrics and Intelligent Laboratory Systems a Modeling Method Based on Artificial Neural Network with Monotonicity Knowledge As Constraints. *Chemometrics and Intelligent Laboratory Systems*, 145, 93–102.
- Cho, J. H., Kim, Y. W., Na, K. J., and Jeon, G. J. 2008. Chemical Wireless Electronic Nose System for Real-Time Quantitative Analysis of Gas Mixtures Using Micro-Gas Sensor Array and Neuro-Fuzzy Network, *Sensors and Actuators B*, 134, 104–111.

- Choi, M., Kim, S. H., Chung, W., Hwang, J., and Park, K. 2005. Xanthorrhizol, a Natural Sesquiterpenoid from *Curcuma Xanthorrhiza*, Has an Anti-Metastatic Potential in Experimental Mouse Lung Metastasis Model, *Biochemical and Biophysical Research Communications*, 326, 210–217.
- Cui, S., Wang, J., Yang, L., Wu, J., and Wang, X. 2015. Qualitative and Quantitative Analysis on Aroma Characteristics of Ginseng at Different Ages Using E-Nose and GC – MS Combined with Chemometrics, *Journal of Pharmaceutical and Biomedical Analysis*, 102, 64–77.
- Cui, S., Wu, J., Wang, J., and Wang, X. 2016. Discrimination of American Ginseng and Asian ginseng Using Electronic Nose and Gas Chromatography-Mass Spectrometry Coupled with Chemometrics. *Journal of Ginseng Research*, Article in press.
- Cunha, R. L., Lopes, W. A., and Pereira, P. A. P. 2016. Determination of free Unconjugated Amphetamine-Type Stimulants in Urine Samples by Dispersive Liquid–Liquid Microextraction and Gas Chromatography Coupled To Mass Spectrometry DLLME-GC-MS. *Microchemical Journal*, 125, 230–235.
- Devaraj, S., Ismail, S., Ramanathan, S., and Yam, M. F. 2014. Investigation of Antioxidant and Hepatoprotective Activity of Standardized *Curcuma xanthorrhiza* Rhizome in Carbon Tetrachloride-Induced Hepatic Damaged Rats, *The Scientific World Journal*, 2014, 1-9
- Ding, X., Wu, C., Huang, J., and Zhou, R. 2016. Characterization of Interphase Volatile Compounds in Chinese Luzhou-Flavor Liquor Fermentation Cellar Analyzed by Head Space-Solid Phase Micro Extraction Coupled with Gas Chromatography Mass Spectrometry HS-SPME/GC/MS. *LWT - Food Science and Technology*, 66, 124–133.
- Dutta, R., Hines, E.L., Gardner, J.W., Kashwan, K.R., and Bhuyan, M. 2003. Tea Quality Prediction Using a tin Oxide-Based Electronic Nose: an Artificial Intelligence Approach. *Sensors and Actuators B*, 94, 228–237
- Dwi, C. B., and Hayati, N. 2012. Wireless e-Nose Sensor Node/: State of the Art, *Procedia Engineering*, 41, 1405 – 1411.
- El-Barbri, N., Llobet, E., El Bari, N., Correig, X., and Bouchikhi, B. 2008. Application of a Portable Electronic Nose System to assess The Freshness Of Moroccan Sardines. *Materials Science and Engineering C*, 28, 666–670
- Everitt, B. S., Landau, S., Leese, M., and Stahl, D. 2011. *Cluster Analysis*. John Wiley and Sons, New York.

- Falascaonia, M., Pardoia, M., Sberveglia, G., Ricco, I., and Bresciani, A. 2005. The novel EOS835 Electronic Nose and Data Analysis for Evaluating Coffee Ripening. *Sensors and Actuators B*, 110, 73–80.
- Fausset, L. 1994. *Fundamental of Neural Networks Architecture, Algorithms, and Applications*. Prentice-Hall, New York.
- Fernando, H., and Surgenor, B. 2015. Robotics and Computer-Integrated Manufacturing an Unsupervised Artificial Neural Network Versus A Rule-Based Approach for fault detection and Identification in an Automated Assembly Machine. *Robotics and Computer Integrated Manufacturing*, 1–10.
- Friedman, J., Hastie, T., and Tibshirani, R. 2001. *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*. Springer Science+Business Media, New York
- Fu, L. M. 1994. *Neural Network in Computer Intelligence*. Mc Graw Hill, Singapore.
- Fu, L. M. 1999. Knowledge Discovery Based on Neural Networks. *Communication of the ACM*, 42(11), 47–50.
- Fu, J., Guang, L., Qin, Y., and Freeman, W. Y. 2007 . A Pattern Recognition Method for Electronic Noses Based on an Olfactory Neural Network. *Sensors and Actuators B*, 125, 489–497.
- Gardner, J. W., and Bartlett, P. N. 1992. *Sensors and Sensory System for an Electronic Nose*, Springer-Science+Business Media, B.V.
- Gavanji, S., Mohammadi, E., Larki, B., and Bakhtari, A. 2014. Antimicrobial and Cytotoxic Evaluation of Some Herbal Essential Oils in Comparison with Common Antibiotics in Bioassay Condition. *Integrative Medicine Research*, 3, 142–152.
- Goldstein, E.B., 2005. *Sensation and Perception*. 8th Edition, Cengage Learning, New York.
- Guaadaoui, A., Benaicha, S., Elmajdoub, N. Bellaoui, M., and Hamal, A., 2014. What is a Bioactive Compound? A Combined Definition for a Preliminary Consensus. *International Journal of Nutrition and Food Sciences*, 3, 3, 174-179.
- Guney, S., and Atasoy, A. 2015. Study of Fish Species Discrimination Via Electronic Nose. *Computers and Electronics in Agriculture*, 119, 83–91.
- Guo, Y., Lv, B., Wang, J., Liu, Y., Sun, S., Xiao, Y., and Meng, Q. 2016. Analysis of Chuanxiong Rhizoma and its Active Components by Fourier

Transform Infrared Spectroscopy Combined with Two-Dimensional Correlation Infrared Spectroscopy. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 153, 550–559.

- Guyon, I. 2006. *Feature Extraction Foundation and Applications. Pattern Recognition*. Springer, Berlin.
- Han, J., and Kamber, M. 2006. *Data Mining: Concepts and Techniques. Soft Computing* Vol. 54. Morgan Kaufmann, New York
- Han, Y., Wang, H., Xu, W., Cao, B., Han, L., Jia, L., and Yang, G. 2016. Chinese Herbal Medicine as maintenance therapy for improving the quality of Life for Advanced Non-Small Cell Lung Cancer Patients. *Complementary Therapies in Medicine*, 24, 81–89.
- Hardoyono, F., Iswanto, B. H., dan Triyana, K. 2011. Aplikasi Jaringan Syaraf Tiruan Propagasi Balik pada Sistem Olfaktori Elektronik Larik Sensor Gas untuk Deteksi Bahan Herbal. *Prosiding Seminar Nasional Aplikasi Teknologi Informasi (SNATI) Tahun 2012 di Universitas Islam Indonesia*, 17-18 Juni 2011, F74-F80.
- Hardoyono, F., Triyana, K., and Iswanto, B. H. 2015. Rapid Discrimination of Indonesian Herbal Medicines by Using Electronic Nose Based on Array of Commercial Gas Sensors. *Applied Mechanics and Materials*, 771, 209–212.
- Harsha, M. R., Prakash, S. V. C., and Dharmesh, S. M. 2016. Modified Pectic Polysaccharide from Turmeric *Curcuma Longa* : A Potent Dietary Component Against Gastric Ulcer, *Carbohydrate Polymers*, 138, 143–155.
- Heidari, E., Sobati, M.A., and Movahedirad, S. 2016. Accurate Prediction of Nanofluid Viscosity Using Amultilayer Perceptron Artificial Neural Network (MLP-ANN). *Chemometrics and Intelligent Laboratory Systems*, 155, 73–85.
- Hites, R. A. 1998. Gas Chromatography Mass Spectroscopy. *Handbook of Instrumental Techniques for Analytical Chemistry*. John Willey and Sons, New York.
- Hu, Y., Zhang, J., Kong, W., Zhao, G., and Yang, M. 2017. Mechanisms of Antifungal and Anti-Aflatoxigenic Properties of Essential Oil Derived From Turmeric (*Curcuma longa* L.) on *Aspergillus flavus*. *Food Chemistry*, 220, 1–8
- Ilia, N., Azian, N., Iwai, Y., Halim, M., and Ismail, S. 2016. Fluid Phase Equilibria Molecular Dynamics Simulation for Self-Diffusion

Coefficients of Ginger Bioactive Compounds in Subcritical Water with and without Ethanol. *Fluid Phase Equilibria*, 407, 197-203

- Imani, M., and Ghassemian, H. 2015. ISPRS Journal of Photogrammetry and Remote Sensing Feature Space Discriminant Analysis for Hyperspectral Data Feature Reduction. *ISPRS Journal of Photogrammetry and Remote Sensing*, 102, 1–13.
- Islam, A. K. M. S., Ismail, Z., Saad, B., Othman, A. R., Ahmad, M. N., and Shakaff, A. Y. 2006. Correlation Studies Between Electronic Nose Response and Headspace Volatiles of Eurycoma Longifolia Extracts, *Sensors and Actuators B*, 120, 245–251.
- Iswanto, B.H. 1996. Prototype Hybrid Expert System untuk Analisis Spektrum Infra Merah. *Thesis S2*. ITB, Bandung
- Jana, A., Bhattacharyya, N., Bandyopadhyay, R., Tudu, B., Mukherjee, S., Ghosh, D., and Roy, J.K. 2015. Fragrance Measurement of Scented Rice Using Electronic Nose. *International Journal on Smart Sensing And Intelligent Systems*, 8, 3, 1730-1747
- Jayachandran, M., Chandrasekaran, B., and Namasivayam, N. 2015. Geraniol Attenuates F<sub>2</sub> Isoprostanol and Exerts Anti-inflammatory Effects on Diet Induced Atherogenesis By NF- $\kappa$ B Signaling Pathway. *European Journal of Pharmacology*, 762, 102–111.
- Jeong, J. B., Choi, J., Lou, Z., Jiang, X., and Lee, S. 2013. Patchouli Alcohol, an Essential Oil of Pogostemon Cablin, Exhibits Anti-Tumorigenic Activity in Human Colorectal Cancer Cells. *International Immunopharmacology*, 162, 184–190.
- Jeong, J. B., Shin, Y. K., and Lee, S. 2013. Anti-Inflammatory Activity of Patchouli Alcohol in RAW264.7 and HT-29 cells. *Food and chemical toxicology*, 55, 229–233.
- Jha, S.K. and Hayashi, K. 2014. A Novel Odor Filtering and Sensing System Combined with Regression Analysis for Chemical Vapor Quantification. *Sensors and Actuators B* 200, 269–287
- Jolliffe, I.T. 2010. *Principal Component Analysis*, 2nd Edition, Springer Verlag, New York.
- Karim, R.S.M.A., Samad, S.A. and Mikdad M.A. 2015. Post-harvest Quality Evaluation of Grapes using Non-destructive Electronic Nose. *Journal of Electrical and Electronics Engineering*, 8, 2, 35-38.
- Kiani, S., Minaei, S., and Ghasemi-varnamkhasti, M. 2016. Application of Electronic Nose Systems for Assessing Quality of Medicinal and

Aromatic Plant Products/: A review, *Journal of Applied Research on Medicinal and Aromatic Plants*, 3, 1–9.

- Konduru, T., Rains, G.C., and Li, C. 2015. Detecting Sour Skin Infected Onions Using A Customized Gas Sensor Array. *Journal of Food Engineering* 160, 19-27
- Koonrungsesomboon, N., and Karbwang, J. 2016. Ethical Considerations in Clinical Research on Herbal Medicine for Prevention of Cardiovascular Disease in the Ageing, *Phytomedicine*, in press.
- Kramer, R. 1998. *Chemometric Techniques for Quantitative Analysis*. Marcel Dekker, New York
- Kusch, P., Rieser, C., Knupp, G., and Mang, T. 2014. Characterization of Copolymers of Methacrylic Acid with polyethylene glycol methyl ether methacrylate macromonomers by Analytical Pyrolysis-Gas Chromatography/Mass Spectrometry Py-GC/MS. *Journal of Analytical And Applied Pyrolysis*, 113, 412
- Lakshmanan, D., Werngren, J., Jose, L., Suja, K.P., Nair, M.S., Varma, R.L., Mundayoor, S., Hoffner, S., and Kumar, R.A. 2011. Ethyl p-Methoxycinnamate Isolated from a Traditional Anti-Tuberculosis. *Fitoterapia*, 82, 757–761.
- León-Roque, N., Abderrahim, M., Nuñez-Alejos, L. Arribas, S.M., and Condezo-Hoyos, L., 2016. Prediction of Fermentation Index Of Cocoa Beans (*Theobroma cacao* L.) Based On Color Measurement and Artificial Neural networks. *Talanta*, 161, 31-39.
- Li, B., Zhang, C., Peng, L., Liang, Z., and Yan, X. 2015. Comparison of essential oil composition and Phenolic Acid Content of Selected *Salvia* Species Measured by GC – MS and HPLC methods. *Industrial Crops and Products*, 69, 329–334.
- Li, D., Lei, T., Zhang, S., Shao, X., and Xie, C. 2015. Chemical A Novel Headspace Integrated E-Nose and Its Application in Discrimination Of Chinese Medical Herbs. *Sensors and Actuators: B. Chemical*, 221, 556–563.
- Li, S., Li, X. R., Wang, G. L., Nie, L. X., Yang, Y. J., Wu, H. Z., and Lin, R. C. 2012. Rapid Discrimination of Chinese Red Ginseng and Korean Ginseng Using an Electronic Nose Coupled with Chemometrics. *Journal of Pharmaceutical and Biomedical Analysis*, 70, 605–608.
- Lian, P., Qin\_Zou, H., Baeur, R., Liu, Y., Tao, O., Yan, S., Han, Y., Li, J., Ren, Z., and Yang, Y. 2014. Identification of Chinese Herbal Medicines from

Zingiberaceae Family Using Feature Extraction and Cascade Classifier Based on Response Signals from E-Nose. *Evidence-Based Complementary and Alternative Medicine Table*, 2014, 1-7.

- Liao, P., Yang, T., Chou, J., Chen, J., and Chao, L. K. 2015. Anti-inflammatory Activity of Neral and Geranial Isolated from Fruits of *Litsea cubeba* Lour. *Journal of Functional Foods*, 19, 248–258.
- Llobet, E., Brezmes, J., Vilanova, X., Sueiras, J.E., and Correig, X. 1997. Qualitative and Quantitative Analysis of Volatile Organic Compounds Using Transient and Steady-State Responses of a Thick-Film Tin Oxide Gas Sensor Array. *Sensors and Actuator B*, 41, 13-21.
- Loutfi, A., Coradeschi, S., Mani, G.K., Shankar P., and Rayappan, J.B.B, 2015. Electronic noses for food quality: A review. *Journal of Food Engineering* 144, 103–111
- Manning, C. D., Raghavan, P., and Schutze, H. 2008. *Introduction to Information Retrieval*. Cambridge University Press, Cambridge.
- Marvin, C. 2008. *GC/MS: A Practical User's Guide, Second Edition*, John Wiley and Sons, New York.
- Matsuda, H., Tewtrakul, S., and Morikawa, T. 2004. Anti-Allergic Principles From Thai Zedoary/: Structural Requirements of Curcuminoids for Inhibition of Degranulation and Effect on The Release of TNF- A and IL-4 In RBL-2H3 Cells, *Bioorganic & Medicinal Chemistry*, 12, 5891–5898.
- McNair, H. M., and Miller, J. M. 1998. *Basic Gas Chromatography*. John Wiley and Sons, New York.
- Miller, J. N., and Miller, J. C. 2010. *Statistics and Chemometrics for Analytical Chemistry* 6th edition, Pearson. New York:
- Murugan, R., and Rao, G. 2013.  $\alpha$ -Bisabolol, the Main Constituent of the Essential Oil of *Pogostemon speciosus*. *Industrial Crops and Products*, 49, 237–239.
- Myers, R. L. 2007. *The 100 Most Important Chemical Compounds: A Reference Guide*, Greenwood Press, London.
- Nie, J., Teng, Y., Li, Z., Liu, W., and Lee, M. 2015. Magnetic Nanoparticles Used in Headspace Extraction Coupled with DSI-GC-IT / MS for analysis of VOCs in dry Traditional Chinese Medicine. *Chinese Chemical Letters*, 27, 178–184.

- Nixon, M., and Aguado, A. 2008. *Feature Extraction and Image Processing*. Academic Press, Oxford.
- Nobrega, I. C. C., Pereira, G. E., Silva, M., Pereira, E. V. S., Medeiros, M. M., Telles, D. L., ... Lachenmeier, D. W. 2015. Improved Sample Preparation for GC-MS-SIM Analysis of Ethyl Carbamate In Wine. *Food Chemistry*, 177, 23–28.
- Nurjuliana, M., Che Man, Y. B., Mat Hasyim, D., and Mohamed, A. 2011. Rapid Identification of Pork for Halal Authentication Using the Electronic Nose and Gas Chromatography Mass Spectrometer with Headspace Analyzer. *Meat Science*, 88, 638–644.
- Omatu, S., and Yano, M. 2016. E-nose System by Using Neural Networks, *Neurocomputing*, 172, 394–398.
- Osuna, G. R., and Nagle, H. T. 1999. A Method for Evaluating Data Preprocessing Techniques for Odor Classification with an Array of Gas Sensors. *IEEE Transactions on System, Man and Cybernetics Part B*, 29, 35-41.
- Pardo, M., Sberveglieri, G., Gardini, S., and Dalcanale, E., 2000. A Hierarchical Classification Scheme for an Electronic Nose. *Sensors and Actuators B*, 69, 359–365
- Patel, M.S., and Mazumdar, H. S. 2014. Knowledge Base And Neural Network Approach for Protein Secondary Structure Prediction, *Journal of Theoretical Biology*, 361, 182–189.
- Pavon, J. L. P., Sanchez, M. N., Pinto, C. G., Laespada, M. E. F. L., Cordero, B. M. C., Pena, A.G. 2006. Strategies for Qualitative and Quantitative Analyses with Mass Spectrometry-Based Electronic Noses. *Trends in Analytical Chemistry*, 25, 3, 257-266.
- Paxinos, G., and Mai, J. K. 2012. *The Human Nervous System*. Vol. 3. Elsevier Academic Press, New York.
- Pearce, T. C., Schiffman, S. S., Nagle, H. T., and Gardner, J. W. 2003. *Handbook of Machine Olfaction*. John Wiley and Sons, New York.
- Peter, K. V, and Hall, A. 2001. *Handbook of herbs and spices*. CRC Press, New York.
- Pietilä, H., Perämäki, P., Piispanen, J., Starr, M., Nieminen, T., and Kantola, M. 2015. Chemosphere Determination of low methylmercury concentrations in peat soil samples by isotope dilution GC-ICP-MS Using Distillation and Solvent Extraction Methods *Chemosphere*, 124, 47–53.

- Pinillos, S., Fernandez, T., Manzanares, A., and Barrio, C. 2004. Determination of Volatile Compounds in Wine by Automated Solid-Phase Microextraction and Gas Chromatography. *Chromatographia*, 59, 733-738.
- Polat, L., Martinez-ayala, A. L., and Gorinstein, S. 2015. LC – MS / MS analysis , Antioxidant and Anticholinergic Properties of Galanga *Alpinia Officinarum* Hance Rhizomes, *Industrial Crops and Products*, 74, 712–721.
- Radi, Ciptohadijoyo, S., Litananda, W. S., Rivai, M., and Purnomo, H. M., 2016. Electronic Nose Based on Partition Column Integrated With Gas Sensor for Fruit Identification and Classification. *Computers and Electronics in Agriculture*, 12, 429–435.
- Rajin, S. M., Karim, A, Samad, S. A., and Muad, A. M.. 2015. Post-harvest Quality Evaluation of Grapes using Non-destructive Electronic Nose. *Journal of Electrical and Electronics Engineering*, 8, 2, 35-38.
- Rana, V.S. 2010. GC and GC/MS Analysis of the Volatile Constituents of the Oils of *Alpinia galanga* (L.) Willd and *A officinarum* Hance Rhizomes. *Journal of Essential Oil Research*, 22, 521-524
- Russel, S., and Norvig, P. 2010. *Artificial Intelligent A Modern Approach*. Prentice Hall, New York.
- Russo, M, Sanzo, R., Cefaly, V., Carabetta, S., Serra, D., and Fuda, S., 2013. Non-destructive Flavour Evaluation of Red Onion (*Allium cepa* L.) Ecotypes: An electronic-nose-based approach, *Food Chemistry*, 141, 896–899.
- Sahoo, S., Parida, R., Singh, S., Padhy, R. N., and Nayak, S. 2014. Evaluation of Yield, Quality and antioxidant Activity Of Essential Oil of in vitro Propagated *Kaempferia galanga* Linn. *Journal of Acute Disease*, 32, 124–130.
- Santoso, S. 2010. *Statistik Multivariat*. Elek Media Komputindo, Jakarta.
- Sarkar, S. T., Bondekar, A. P., Macas, M., Kumar, R., Kaur, R., Sharma, A., Gulati, A., and Kumar, A. 2015. Towards Biological Plausibility of Electronic Noses: A spiking neural network based approach for Tea Odour Classification. *Neural Networks*, 71, 142-149.
- Sasindharan, M., 2011. Extraction , Isolation and Characterization of Bioactive Compounds From Plants. *Afr. J. Tradit. Complement Altern. Med.*, 8, 1-10.
- Serpen, G., Tekkedil, D. K., & Orra, M. 2008. A Knowledge-Based Artificial Neural Network Classifier for Pulmonary Embolism Diagnosis.

*Computers in Biology and Medicine*, 38, 2, 204-220.

- Shamsipur, M., Yazdanfar, N., and Ghambarian, M. 2016. Combination of Solid-Phase Extraction with Dispersive Liquid – Liquid Microextraction Followed by GC – MS for Determination of Pesticide Residues from Water , Milk , Honey and Fruit Juice. *Food Chemistry*, 204, 289–29.
- Shepperd, A. 1997. *Second-Order Methods for Neural Networks Fast and Reliable Training Methods for Multi-Layer Perceptrons. Perspectives in Neural Computing*. Springer Verlag, London.
- Si-jun, T. 2014. System optimal design approach. *Journal of Applied Sciences*, 141, 82–88.
- Singh, P., Singh, S., Kapoor, I. P. S., Singh, G., Isidorov, V., and Szczepaniak, L. 2013. Chemical Composition and antioxidant activities of Essential Oil and Oleoresins from *Curcuma zedoaria* Rhizomes. *Food Bioscience*, 3, 42–48.
- Silverstein, R. M., and Webster, F. X. 1998. *Spectrometric Identification of Organic Compound*. 6th edition, Wiley, New York.
- Stefik, M. 1995. *Introduction to Knowledge Systems*. Morgan Kaufmann, San Francisco.
- Tan, P.-N., Steinbach, M., and Kumar, V. 2005. *Introduction to Data Mining*. Pearson, New York.
- Taylor, H. R. 1997. *Data Acquisition for Sensor Systems*. Springer-science+business media, B.V.
- Teresa, A., Ribeiro, M., Sousa, C., Judas, F., Salgueiro, L., Cavaleiro, C., and Ferreira, A. 2015. Evaluation of Anti-inflammatory, Anti-catabolic and Pro-anabolic Effects of e-Caryophyllene, Myrcene and Limonene in a Cell Model of Osteoarthritis, *European Journal of Pharmacology*, 750, 141–150.
- Timóteo, P., Karioti, A., Leitão, S. G., Vincieri, F. F., and Bilia, A. R. 2015. A Validated HPLC method for the Analysis of Herbal Teas from Three Chemotypes of Brazilian *Lippia alba*. *Food Chemistry*, 175, 366–373.
- Toure, A., and Xiaoming, Z. 2007. Gas Chromatographic Analysis of Volatile Component of Guinean and Chinese Ginger Oil *Zingiber Officinale* Extracted by Steam Distillation. *Journal of Agronomy*, 6, 2, 350-355.
- Triyana, K., Subekti, M. T., Aji, P., Hidayat, S. N., and Rohman, A. 2015. Development of Electronic Nose with Low-Cost Dynamic Headspace for Classifying Vegetable Oils and Animal Fats, *Applied Mechanics and*

*Materials*, 771, 50–54

- Turjo, S., Bhondekar, A. P., Macaš, M., and Kumar, R. 2015. Towards Biological Plausibility of Electronic Noses/: A Spiking Neural Network Based Approach for Tea Odour Classification. *Neural Network*, 71, 142–149.
- Umar, M. I., Asmawi, M.Z., Sadikun, I. A., Abdul Majid, A. M., Al-Suede, F.S.R., Hassan, L.E.A., Altaf, I. A., Ahamed, M.B.K., 2011. Ethyl-p methoxycinnamate Isolated from *Kaempferia galanga* Inhibits Inflammation by Suppressing Interleukin-1, Tumor Necrosis Factor-A, and Angiogenesis by Blocking Endothelial Functions. *CLINICS*, 69, 2, 134-144
- Verma, Ivek S., Jha, R. K., and Ojha, A. 2015. Digital Watermark Extraction Using Support Vector Machine with Principal Component Analysis Based Feature Reduction. *Journal Of Visual Communication and Image Representation*, 31, 75–85.
- Wei, G. J., Ho, C. T., and Huang, A. S. 2011. Analysis of Volatile Compounds in Noni Fruit (*Morinda citrifolia*) Juice) by Steam Distillation-Extraction and Solid Phase Microextraction Coupled with GC/AED and GC-MS. *Journal of Food and Drug Analysis*, 19, 1, 33-39.
- Weng, C, Huang, T. C., and Hana, R.P. 2016. Disease prediction with different types of neural network classifier. *Telematics and Informatics*, 33, 277–292.
- Wilson, A. D., and Baietto, M. 2009. Applications and Advances in Electronic-Nose Technologies, 5099–5148.
- Wu, J. 2012. *Advances in K-Means Clustering A Data Mining Thinking*. Springer Verlag, Berlin.
- Wypych, G. 2014. *Handbook Of Solvent* 2nd edition., Vol. 1. Chemtec, Toronto.
- Xiao, Z., Yu, D., Niu, Y., Chen, F., Song, S., Zhu, J., and Zhu, G. 2014. Characterization of aroma compounds of Chinese famous liquors by Gas Chromatography – Mass Spectrometry And Flash GC Electronic-Nose, *Journal of Chromatography B*, 946, 92–100.
- Xiong, Y., Xiao, X., Yang, X., Yan, D., Zhang, C., Zou, H., Yan, Y. 2014. Quality control of *Lonicera japonica* stored for different months by electronic nose. *Journal of Pharmaceutical and Biomedical Analysis*, 91, 68–72.
- Yang, Y., Kong, W., Feng, H., Dou, X., and Zhao, L. 2016. Analysis Quantitative and Fingerprinting Analysis of *Pogostemon cablin* Based on GC-FID

Combined with Chemometrics, *Journal of Pharmaceutical and Biomedical*, 121, 84–90.

- Yang, K., Liu, Q. Z., Liu, Z. L., and Du, S. S. 2012. GC-MS Analysis of Insecticidal Essential Oil of Aerial Parts of *Paederia scandens* Lour Merrill Rubiaceae. *Tropical Journal of Pharmaceutical Research*, 13,3 461-467.
- Yasuhara, T., Manse, Y., Morimoto, T., Qilong, W., Matsuda, H., Yoshikawa, M., and Muraoka, O. 2009. Bioorganic and Medicinal Chemistry Letters Acetoxybenzhydrols as Highly Active and Stable Analogues of 10S-10-acetoxychavicol, A Potent Antiallergic Principal from *Alpinia galanga*. *Bioorganic and Medicinal Chemistry Letters*, 1911, 2944–2946.
- Yin, Y. Yu, H., and Zhang, H., 2008. A Feature Extraction Method Based on Wavelet Packet Analysis for Discrimination of Chinese Vinegars Using a Gas Sensors Array. *Sensors and Actuators B*, 134, 1005–1009.
- Yu, J. X., and Goebel, R. 2014. *LNAI 8933 - Advanced Data Mining and Applications*, Springer, New York.
- Zhang, H., Wang, J., and Yea, S. 2008. Predictions of Acidity, Soluble Solids and Firmness of Pear Using Electronic Nose Technique. *Journal of Food Engineering* 86, 370–378.
- Zheng, X. 2011. Knowledge-Based Systems Combining Description Logics and Horn Rules with Uncertainty in Artigence. *Knowledge-Based Systems*, 245, 595–608.
- Zheng, S., Ren, W., and Huang, L. 2015. Journal of Pharmaceutical and Biomedical Analysis Geoherbals Evaluation of *Radix Angelica sinensis* based on electronic nose. *Journal of Pharmaceutical and Biomedical Analysis*, 105, 101–106.
- Zhou, W. 2009. *Human Olfactory Perception and Olfactory Communications of Social Information*. Ann Bohr, ProQuest LLC, MI.
- Zou, H., Li, S., Huang, Y., Liu, Y., Bauer, R., Peng, L., and Yan, Y. 2014. Rapid Identification of Asteraceae Plants with Improved RBF-ANN Classification Models Based on MOS Sensor E-Nose, *Evidence-Based Complementary and Alternative Medicine*, 2014, 1-6.
- Zou, H., Lu, G., Liu, Y., Bauer, R., and Tao, O. 2015. Is It Possible to Rapidly and Noninvasively Identify Different Plants From Asteraceae Using Electronic Nose with Multiple Mathematical Algorithms? *Journal of Food and Drug Analysis*, 3, 3–9.