



## DAFTAR PUSTAKA

- Abdel-Salam, O.M.E., Shaffie, N.M., Omara, E.A., and Yassen, N.N., 2018, *Citric Acid an Antioxidant in Liver*. In Patel, V.B., Rajendram, R., and Preedy, V.R., *The Liver: Oxidative Stress and Dietary Antioxidants*, Academic Press.
- Anasthasiya, N.A.A., Kampara, R.K., Rai, P.K., and Jeyaprakash, B.G., 2018, Highly sensitive graphene oxide functionalized ZnO nanowires for ammonia vapour detection at ambient temperature, *Sensors Actuators, B Chem.*, 255, 1064–1071.
- Anwane, R.S., Kondawar, S.B., and Late, D.J., 2018, Bessel's polynomial fitting for electrospun polyacrylonitrile/polyaniline blend nanofibers based ammonia sensor, *Mater. Lett.*, 221, 70–73.
- Bragazzi, N.L., Amicizia, D., Panatto, D., Tramalloni, D., Valle, I., and Gasparini, R., 2015, *Quartz-Crystal Microbalance (QCM) for Public Health: An Overview of Its Applications*. In Donev, R., *Advances in Protein Chemistry and Structural Biology*, Academic Press.
- Cai, M., Liang, Y., Yin, Y., and Nie, J., 2019, Effect of citric acid on the hydration process of colloidal silica-bonded magnesia gunning materials, *Ceram. Int.*, 45, 15514–15519.
- Chen, W., Wang, Z., Gu, S., Wang, J., Wang, Y., and Wei, Z., 2020, Hydrophobic amino-functionalized graphene oxide nanocomposite for aldehydes detection in fish fillets, *Sensors Actuators, B Chem.*, 306, 127579.
- Dincer, I. and Bicer, Y., 2018, *Ammonia*. In Dincer, I., *Comprehensive Energy Systems*. Elsevier.
- Ding, B., Kim, J., Miyazaki, Y., and Shiratori, S., 2004, Electrospun nanofibrous membranes coated quartz crystal microbalance as gas sensor for NH<sub>3</sub> detection, *Sensors Actuators, B Chem.*, 101, 373–380.
- Erbil, Y.H., 2000, *Vinyl Acetate Emulsion Polymerization and Copolymerization with Acrylic Monomers*, CRC Press, Florida.
- Farid, M.M., Goudini, L., Piri, F., Zamani, A., and Saadati, F., 2016, Molecular imprinting method for fabricating novel glucose sensor: Polyvinyl acetate electrode reinforced by MnO<sub>2</sub>/CuO loaded on graphene oxide nanoparticles, *Food Chem.*, 194, 61–67.
- Fu, B., Shen, Q., Qian, W., Zeng, Y., Sun, X., and Hannig, M., 2005, Interfacial interaction of tartaric acid with hydroxyapatite and enamel, *J. Mater. Sci.*, 16, 827–831.



- García-Fernández, A.J., Espín, S., Gómez-Ramírez, P., and Martínez-López, E., 2014, *Oxalates*. In Wexler, P., *Encyclopedia of Toxicology*, 3, Academic Press.
- Ho, C.Y. and Wu, Y.S., 2020, Diamine decorated graphene oxide film on quartz crystal microbalance for humidity-sensing analysis, *Appl. Surf. Sci.*, 510, 145257.
- Hu, X., Liu, S., Zhou, G., Huang, Y., Xie, Z., and Jing, X., 2014, Electrospinning of polymeric nanofibers for drug delivery applications, *J. Control. Release*, 185(1), 12–21.
- Huang, W., Xing, Y., Yu, Y., Shang, S., and Dai, J., 2011, Enhanced washing durability of hydrophobic coating on cellulose fabric using polycarboxylic acids, *Appl. Surf. Sci.*, 257, 4443–4448.
- Ibrahim, H.M. and Klingner, A., 2020, A review on electrospun polymeric nanofibers: Production parameters and potential applications, *Polym. Test.*, 90, 106647.
- Jayababu, N., Poloju, M., Shruthi, J., and Reddy, M.V.R., 2019, Synthesis of ZnO/NiO nanocomposites for the rapid detection of ammonia at room temperature, *Mater. Sci. Semicond. Process.*, 102, 104591.
- Jeong, H.G., Kim, Y.E., and Kim, Y.J., 2013, Fabrication of poly(vinyl acetate)/polysaccharide biocomposite nanofibrous membranes for tissue engineering, *Macromol. Res.*, 21(11), 1233–1240.
- Jia, Y., Chen, L., Yu, H., Zhang, Y., and Dong, F., 2015, Graphene oxide/polystyrene composite nanofibers on quartz crystal microbalance electrode for the ammonia detection, *RSC Adv.*, 5(51), 40620–40627.
- Jia, Y., Yu, H., Cai, J., Li, Z., and Dong, F., 2017, Explore on the quantitative analysis of specific surface area on sensitivity of polyacrylic acid-based QCM ammonia sensor, *Sensors Actuators, B Chem.*, 243, 1042–1045.
- Jia, Y., Yu, H., Zhang, Y., Chen, L., and Dong, F., 2015, Phenylacetic acid-modified nanofibrous polystyrene membranes for use as highly sensitive ammonia sensors, *Sensors Actuators, B Chem.*, 212, 273–277.
- Jia, Y., Yu, H., Zhang, Y., Dong, F., and Li, Z., 2016, Cellulose acetate nanofibers coated layer-by-layer with polyethylenimine and graphene oxide on a quartz crystal microbalance for use as a highly sensitive ammonia sensor, *Colloids Surfaces B Biointerfaces*, 148, 263–269.
- Johannsmann, D., 2015, *The Quartz Crystal Microbalance in Soft Matter Research*, Springer International Publishing, Switzerland.
- Kasim, N.A.M., Abdullah, N., Yasin, F.M., Yaacob, M.H., Jamala, S.H., Syaha, N.A.A., Kasima, N., Latif, F.A., Saidie, N.M., and Janudine, N., 2019, Functionalized Carbon Nanofibers (CNFs) for Ammonia Gas Detection at Room Temperature, *Mater. Today Proc.*, 19, 1459–1466.



- Kim, S. and Kim, H.J., 2005, Effect of addition of polyvinyl acetate to melamine-formaldehyde resin on the adhesion and formaldehyde emission in engineered flooring, *Int. J. Adhes. Adhes.*, 25, 456–461.
- Lee, S.W., Choi, B.I., Kim, J.C., Woo, S.B., and Kim, Y.G., 2020, Reducing individual difference and temperature dependency of QCM humidity sensors based on graphene oxides through normalization of frequency shifts, *Sensors Actuators, B Chem.*, 313, 128043.
- Liao, G., Li, Q., and Xu, Z., 2019, The chemical modification of polyaniline with enhanced properties: A review, *Prog. Org. Coatings*, 126, 35–43.
- Long, G.L. and Winefordner, J.D., 1983, Limit of detection. A closer look at the IUPAC definition, *Anal. Chem.*, 55(7), 712A–724A.
- Lu, H.L., Lu, C.J., Tian, W.C., and Sheen, H.J., 2015, A vapor response mechanism study of surface-modified single-walled carbon nanotubes coated chemiresistors and quartz crystal microbalance sensor arrays, *Talanta*, 131, 467–474.
- Ma, Z., Yuan, T., Fan, Y., Wang, L., Duan, Z., Du, W., Zhang, D., and Xu, J., 2020, A benzene vapor sensor based on a metal-organic framework-modified quartz crystal microbalance, *Sensors Actuators, B Chem.*, 311, 127365.
- Matsuguchi, M. and Tada, A., 2017, Fabrication of poly(N-isopropylacrylamide) nanoparticles using a simple spray-coating method and applications for a QCM-based HCl gas sensor coating, *Sensors Actuators, B Chem.*, 251, 821–827.
- Mirmohseni, A. and Oladegaragoze, A., 2003, Construction of a sensor for determination of ammonia and aliphatic amines using polyvinylpyrrolidone coated quartz crystal microbalance, *Sensors Actuators, B Chem.*, 89, 164–172.
- Moresi, M. and Parente, E., 2014, *Fermentation (Industrial): Production of Some Organic Acids (Citric, Gluconic, Lactic, and Propionic)*. In Batt, C.A., Tortorello, Patel, P., and Robinson, R.K., *Encyclopedia of Food Microbiology*, 2, Academic Press.
- Munawar, A., Schirhagl, R., Rehman, A., Shaheen, A., Taj, A., Bano, K., Bassouse, N.J., Webstere, T.J., Khana, W.S., and Bajwaa, S.Z., 2019, Facile in situ generation of bismuth tungstate nanosheet-multiwalled carbon nanotube composite as unconventional affinity material for quartz crystal microbalance detection of antibiotics, *J. Hazard. Mater.*, 373, 50–59.
- Naderi, H., Hajati, S., Ghaedi, M., Dashtian, K., and Sabzehmeidani, M.M., 2020, Sensitive, selective and rapid ammonia-sensing by gold nanoparticle-sensitized V<sub>2</sub>O<sub>5</sub>/CuWO<sub>4</sub> heterojunctions for exhaled breath analysis, *Appl. Surf. Sci.*, 501, 144270.



Naznin, M., Choi, J., Shin, W.S., and Choi, J., 2017, Removal of metal ions from electrochemical decontamination solution using organic acids, *Sep. Sci. Technol.*, 52(18), 2886–2896.

Nugroho, D.B., 2018, Pengembangan sensor safrol berbasis quartz crystal microbalance dilapisi dengan polyvinyl acetate, *Tesis*, Departemen Fisika FMIPA UGM, Yogyakarta.

Palmieri, F., Estoppey, A., House, G.L., Lohberger, A., Bindschedler, S., Chain, P.S.G., and Junier, P., 2019, *Oxalic acid, a molecule at the crossroads of bacterial-fungal interactions*. In Gadd, G.M. and Sariaslani, S., *Advances in Applied Microbiology*, 106, Academic Press.

Papagianni, M., 2011, *Organic Acids*. In Moo-Young, M., *Comprehensive Biotechnology*, 2, Newnes, Amsterdam.

Park, J.Y., Lee, I.H., and Bea, G.N., 2008, Optimization of the electrospinning conditions for preparation of nanofibers from polyvinylacetate (PVAc) in ethanol solvent, *J. Ind. Eng. Chem.*, 14, 707–713.

Parod, R.J., 2005, *Ammonia*. In Anderson, B., de Peyster, A., Gad, S.C., Hakkinen, P.J.B., Kamrin, M., Locey, B., Mehendale, H.M., Pope, C., Shugart, L., *Encyclopedia of Toxicology*, 2, Elsevier.

Poloju, M., Jayababu, N., and Reddy, M.V.R., 2018, Improved gas sensing performance of Al doped ZnO/CuO nanocomposite based ammonia gas sensor, *Mater. Sci. Eng. B Solid-State Mater. Adv. Technol.*, 227, 61–67.

Rajeev, V.R., Paulose, A.K., and Unni, K.N.N., 2018, Ammonia gas detection using field-effect transistor based on a solution-processable organic semiconductor, *Vacuum*, 158, 271–277.

Ramakrishna, S., Fujihara, K., Teo, W.E., Yong, T., Ma, Z., and Ramaseshan, R., 2006, Electrospun nanofibers: Solving global issues, *Mater. Today*, 9, 40–50.

Reyes, P.I., Yang, K., Zheng, A., Li, R., Li, G., Lu, Y., Tsang, C.K., and Zheng, S.X.F., 2017, Dynamic monitoring of antimicrobial resistance using magnesium zinc oxide nanostructure-modified quartz crystal microbalance, *Biosens. Bioelectron.*, 93, 189–197.

Rianjanu, A., 2019, Quartz Crystal Microbalance Termodifikasi Lapisan Nanofiber Polimer sebagai Sensor Senyawa Organik, *Disertasi*, Departemen Fisika FMIPA UGM, Yogyakarta.

Rianjanu, A., Nugroho, D.B., Kusumaatmaja, A., Roto, R., and Triyana, K., 2019, A study of quartz crystal microbalance modified with polyvinyl acetate nanofiber to differentiate short-chain alcohol isomers, *Sens. Bio-Sensing Res.*, 25, 100294.



- Rianjanu, A., Roto, R., Julian, T., Hidayat, S.N., Kusumaatmaja, A., Suyono, E.A., and Triyana, K., 2018, Polyacrylonitrile Nanofiber-Based Quartz Crystal Microbalance for Sensitive Detection of Safrole, *Sensors*, 18, 1150.
- Rianjanu, A., Triyana, K., Nugroho, D.B., Kusumaatmaja, A., and Roto, R., 2020, Electrospun polyvinyl acetate nanofiber modified quartz crystal microbalance for detection of primary alcohol vapor, *Sensors Actuators, A Phys.*, 301, 111742.
- Rohimtualeka, A., Hasyim, H.N., Puspita, S.P., and Nurcahyono, N., 2018, Safe Limits Concentration of Ammonia at Work Environments through CDS Expression in Rats, *Indian J. Public Heal. Res. Dev.*, 9(1), 31–36.
- Roto, R., Rianjanu, A., Fatyadi, I.A., Kusumaatmaja, A., and Triyana, K., 2020, Enhanced sensitivity and selectivity of ammonia sensing by QCM modified with boric acid-doped PVAc nanofiber, *Sensors Actuators, A Phys.*, 304, 111902.
- Roto, R., Rianjanu, A., Rahmawati, A., Fatyadi, I.A., Yulianto, N., Majid, N., Syamsu, I., Wasisto, H.S., and Triyana, K., 2020, Quartz Crystal Microbalances Functionalized with Citric Acid-Doped Polyvinyl Acetate Nanofibers for Ammonia Sensing, *ACS Appl. Nano Mater.*, 3, 5687–5697.
- Sauerbrey, G., 1959, Verwendung von Schwingquarzen zur Wägung dünner Schichten und zur Mikrowägung, *Zeitschrift für Phys.*, 155, 206–222.
- Sazhin, S.G., Soborover, E.I., and Tokarev, S. V., 2003, Sensor methods of ammonia inspection, *Russ. J. Nondestruct. Test.*, 10(39), 791–806.
- Sharma, S., Kumar, A., Singh, N., and Kaur, D., 2018, Excellent room temperature ammonia gas sensing properties of n-MoS<sub>2</sub>/p-CuO heterojunction nanoworms, *Sensors Actuators, B Chem.*, 275, 499–507.
- Simões, B.M., Cagnin, C., Yamashita, F., Olivato, J.B., Garcia, P.S., de Oliveira, S.M., and Grossmann, M.V.E., 2020, Citric acid as crosslinking agent in starch/xanthan gum hydrogels produced by extrusion and thermopressing, *LWT*, 125, 108950.
- Stepanyan, R., Subbotin, A. V., Cuperus, L., Boonen, P., Dorschu, M., Oosterlinck, F., and Bulters, M.J.H., 2016, Nanofiber diameter in electrospinning of polymer solutions: Model and experiment, *Polymer*, 97, 428–439.
- Strobel, B.W., 2001, Influence of vegetation on low-molecular-weight carboxylic acids in soil solution - A review, *Geoderma*, 99, 169–198.
- Truong, Y.B., Choi, J., Mardel, J., Gao, Y., Maisch, S., Musameh, M., and Kyriatzis, I.L., 2017, Functional Cross-Linked Electrospun Polyvinyl Alcohol Membranes and Their Potential Applications, *Macromol. Mater. Eng.*, 302, 1700024.



Veerabhadraiah, A., Ramakrishna, S., Angadi, G., Venkatram, M., Ananthapadmanabha, V.K., NarayanaRao, N.M.H., and Munishamaiah, K., 2017, Development of polyvinyl acetate thin films by electrospinning for sensor applications, *Appl. Nanosci.*, 7, 355–363.

Vojta, D., Vrankić, M., Bertmer, M., and Schaumann, G.E., 2016, Dehydration of  $\alpha$ -oxalic acid dihydrate: Structural, spectroscopic and thermal study with implications on the disruption of water molecular bridges in soil organic matter, *Thermochim. Acta*, 643, 73–82.

Wang, L., Gao, J., and Xu, J., 2019, QCM formaldehyde sensing materials: Design and sensing mechanism, *Sensors Actuators, B Chem.*, 293, 71–82.

Wang, L., Yu, Y., Xiang, Q., Xu, J., Cheng, Z., and Xu, J., 2018, PODS-covered PDA film based formaldehyde sensor for avoiding humidity false response, *Sensors Actuators, B Chem.*, 255, 2704–2712.

Wang, X., Ding, B., Sun, M., Yu, J., and Sun, G., 2010, Nanofibrous polyethyleneimine membranes as sensitive coatings for quartz crystal microbalance-based formaldehyde sensors, *Sensors Actuators, B Chem.*, 144, 11–17.

Zhang, S., He, Y., Lin, Z., Li, J., and Jiang, G., 2019, Effects of tartaric acid contents on phase homogeneity, morphology and properties of poly (butyleneadipate-co-terephthalate)/thermoplastic starch bio-composites, *Polym. Test.*, 76, 385–395.

Zhang, W., He, Z., Han, Y., Jiang, Q., Zhan, C., Zhang, K., Li, Z., and Zhang, R., 2020, Structural Design and Environmental Applications of Electrospun Nanofibers, *Compos. Part A Appl. Sci. Manuf.*, 137, 106009.

Zhu, Y., Cheng, Z., Xiang, Q., Zhu, Y., and Xu, J., 2018, Rational design and synthesis of aldehyde-functionalized mesoporous SBA-15 for high-performance ammonia sensor, *Sensors Actuators, B Chem.*, 256, 888–895.