

REFERENCES

- Acik, G., Cansoy, C.E., and Kamaci, M., 2019, Effect of flow rate on wetting and optical properties of electrospun poly(vinyl acetate) micro-fibers, *Colloid Polym. Sci.*, 297, 77–83.
- Aflaha, R., Afiyanti, H., Azizah, Z.N., Khoirudin, H., Rianjanu, A., Kusumaatmaja, A., Roto, R., and Triyana, K., 2023, Improving ammonia sensing performance of quartz crystal microbalance (QCM) coated with nanofibers and polyaniline (PANI) overlay, *Biosens Bioelectron. X*, 13(2023), Article 100300.
- Ajeel, K.I. and Kareem, Q.S., 2019, Synthesis and Characteristics of Polyaniline (PANI) Filled by Graphene (PANI/GR) nano-Films, *J. Phys.: Conf. Ser.*, 1234(2019), Article 012020.
- Aliza Aini Ralib, M., Bhattacharjee, S., Ralib, A.A., Vyakaranam, A., Svpk, S.D., Shameem, S.S.S., Sulo, R., and Zainuddin, A.A., 2021, Study of Multichannel QCM Prospects in VOC Detection, *J. Phys.: Conf. Ser.*, 1900(2021), Article 012020.
- Andrade, M.A. and Martins, L.M.D.R.S., 2021, Selective styrene oxidation to benzaldehyde over recently developed heterogeneous catalysts, *Molecules*, 26, 1680.
- Baker, C.O., Huang, X., Nelson, W., and Kaner, R.B., 2017, Polyaniline nanofibers: Broadening applications for conducting polymers, *Chem. Soc. Rev.*, 46, 1510–1525.
- Bearzotti, A., Macagnano, A., Papa, P., Venditti, I., and Zampetti, E., 2017, A study of a QCM sensor based on pentacene for the detection of BTX vapors in air, *Sens. Actuators B Chem.*, 240, 1160–1164.
- Beygisangchin, M., Rashid, S.A., Shafie, S., Sadrolhosseini, A.R., and Lim, H.N., 2021, Preparations, properties, and applications of polyaniline and polyaniline thin films—a review, *Polymers*, 13, 2003.
- Bowler, M.G., Bowler, D.R., and Bowler, M.W., 2017, Raoult's law revisited: Accurately predicting equilibrium relative humidity points for humidity control experiments, *J. Appl. Crystallogr.*, 50, 631–638.
- Chen, G., Qiu, J., Peng, L., Han, P., Luo, K., and Liu, D., 2022, Online Quartz Crystal Microbalance Analyzing Device of Mass Concentration of Formaldehyde Gas Based on FPGA, *J. Phys.: Conf. Ser.*, 2366(2022), Article 012014.
- Dean, J.A. and Lange, N.A., 1999, *Lange's handbook of chemistry*, New York: McGraw-Hill.
- Dong, X., Lu, D., Harris, T.A.L., and Escobar, I.C., 2021, Polymers and solvents used in membrane fabrication: A review focusing on sustainable membrane development, *Membranes*, 11, 309.
- Faisal, A.A.H., Alquzweeni, S.S., Naji, L.A., and Naushad, M., 2020, Predominant mechanisms in the treatment of wastewater due to interaction of benzaldehyde and iron slag byproduct, *Int. J. Environ. Res. Public Health*, 17, 226.
- Feng, Lihui, Feng, Liying, Li, Q., Cui, J., and Guo, J., 2021, Sensitive Formaldehyde Detection with QCM Sensor Based on PAAm/MWCNTs and PVAm/MWCNTs, *ACS Omega*, 6, 14004–14014.
- Geng, S., Shah, F.U., Liu, P., Antzutkin, O.N., and Oksman, K., 2017, Plasticizing and crosslinking effects of borate additives on the structure and properties of poly(vinyl acetate), *RSC Adv.*, 7, 7483–7491.

- Hoffman, J.I.E., 2019, *Basic Biostatic for Medical and Biomedical Practitioners*, 2nd ed., London: Academic Press.
- Huang, X., Bai, Q., Hu, J., and Hou, D., 2017, A practical model of quartz crystal microbalance in actual applications, *Sensors*, 17, 1785.
- Huang, X., Chen, Q., Pan, W., and Yao, Y., 2022, Advances in the mass sensitivity distribution of quartz crystal microbalances: A review, *Sensors*, 22, 5112.
- Larrañaga, M.D., Lewis, R.J., and Lewis, R.A., 2016, *Hawley's Condensed Chemical Dictionary*, 16th ed., New Jersey: John Wiley & Sons, Inc.
- Liu, X., Cheng, S., Liu, H., Hu, S., Zhang, D., and Ning, H., 2012, A survey on gas sensing technology, *Sensors*, 12, 9635–9665.
- Mardiana, L., Ponco Wardoyo, A.Y., Masruroh, and Dharmawan, H.A., 2020, Identification of the relationship of carbon dioxide concentration and the frequency changes of a quartz crystal microbalance (QCM) oscillation sensor as a preliminary study of a carbon dioxide gas sensor., In, *AIP Conf. Proc.*, 2296(2020), Article 020119.
- Mason, A., Chandra, S., Krishanthi, M., and Jayasundera, P., 2015, *Sensing Technology: Current Status and Future Trends III*, New York: Springer International Publishing.
- Mohr, P.J. and Taylor, B.N., 2002, *CRC Handbook of Chemistry and Physics*, 82nd ed., Boca Raton: CRC Press, Inc.
- Mustafa, H.A.M. and Jameel, D.A., 2021, Modeling and the main stages of spin coating process: A review, *J. Appl. Sci. Technol. Trends*, 2, 91–95.
- Osorio-Arrieta, D.L., Muñoz-Mata, J.L., Beltrán-Pérez, G., Castillo-Mixcóatl, J., Mendoza-Barrera, C.O., Altuzar-Aguilar, V., and Muñoz-Aguirre, S., 2018, Reduction of the measurement time by the prediction of the steady-state response for quartz crystal microbalance gas sensors, *Sensors*, 18, 2475.
- Pathak, G., Rastogi, A., Singh, B.P., Srivastava, A., Strzezysz, O., and Manohar, R., 2018, Investigation of several essential display features for the low birefringent nematic liquid crystal dispersed with polymer, *Appl. Phys. A Mater. Sci. Process*, 124(732), 1-9.
- Pérez, R.L., Ayala, C.E., Park, J.Y., Choi, J.W., and Warner, I.M., 2021, Coating-based quartz crystal microbalance detection methods of environmentally relevant volatile organic compounds, *Chemosensors*, 9, 153.
- 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, *Sens. Actuators A Phys.*, 301, Article 111742.
- Rianjanu, A., Aflaha, R., Khamidy, N.I., Djamal, M., Triyana, K., and Wasisto, H.S., 2021, Room-temperature ppb-level trimethylamine gas sensors functionalized with citric acid-doped polyvinyl acetate nanofibrous mats, *Mater. Adv.*, 2, 3705–3714.
- 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.
- Sim, S., Kim, Y.M., Park, Y.J., Siddiqui, M.X., Gang, Y., Lee, J., Lee, C., and Suh, H.J., 2020, Determination of polyvinyl acetate in chewing gum using high performance liquid chromatography-evaporative light scattering detector and pyrolyzer↓gas chromatography-mass spectrometry, *Foods*, 9, 1473.

- Songkhla, S.N. and Nakamoto, T., 2021, Overview of quartz crystal microbalance behavior analysis and measurement, *Chemosensors*, 9, 350.
- Srinives, S., Sarkar, T., and Mulchandani, A., 2014, Primary amine-functionalized polyaniline nanothin film sensor for detecting formaldehyde, *Sens. Actuators B Chem.*, 194, 255–259.
- Tisserand, R. and Young, R., 2014, *Essential Oil Safety: A Guide for Health Care Professionals*, Amsterdam: Elsevier Ltd.
- Triyana, K., Rianjanu, A., Nugroho, D.B., As'ari, A.H., Kusumaatmaja, A., Roto, R., Suryana, R., and Wasisto, H.S., 2019, A highly sensitive safrole sensor based on polyvinyl acetate (PVAc) nanofiber-coated QCM, *Sci. Rep.*, 9(15407), 1-12.
- USEPA, 2015, *Provisional Peer-Reviewed Toxicity Values for Benzaldehyde (CASRN 100-52-7)*, Washington DC: US EPA
- Verma, R.S., Padalia, R.C., Singh, V.R., Goswami, P., Chauhan, A., and Bhukya, B., 2017, Natural benzaldehyde from *Prunus persica* (L.) Batsch, *Int. J. Food Prop.*, 20, 1259–1263.
- Wexler, P., 2014, *Encyclopedia of Toxicology*, 3rd ed., London: Academic Press.
- Xue, J., Wu, T., Dai, Y., and Xia, Y., 2019, Electrospinning and electrospun nanofibers: Methods, materials, and applications, *Chem Rev.*, 119, 5298–5415.
- Yuan, Y., Wu, H., Bu, X., Wu, Q., Wang, Xuming, Han, C., Li, X., Wang, Xiaoli, and Liu, W., 2021, Improving ammonia detecting performance of polyaniline decorated rGo composite membrane with GO doping, *Materials*, 14, 2829.