DAFTAR PUSTAKA

Alassi, A., Benammar, M., & Brett, D. (2017). "Quartz crystal microbalance electronic interfacing systems: A review". *Sensors*, *17*(12), 2799.

Damos, F. S., Mendes, R. K., & Kubota, L. T. (2004). "Applications of QCM, EIS and SPR in the investigation of surfaces and interfaces for the development of (bio) sensors". *Química Nova*, *27*(6), 970-979.

Didik, L. A., Rahmawati, E., Robiandi, F., Rahayu, S., & Santjojo, D. J. D. H. (2014). "Penentuan Ketebalan Lapisan Polistiren dan Zinc Phthalocyanine (ZnPc) dengan Modifikasi Persamaan Sauerbrey dan *Scanning Electron Microscope* (SEM)". *Natural B*, *2*(4), 331-335.

Didik, L. A. (2020). "Characteristics of QCM Coated Polystyrene and ZnPc Morphology Studied by AFM and SEM". In *2nd International Conference on Islam, Science and Technology* (ICONIST 2019) (pp. 134-137). Atlantis Press.

Djoko, D. J. D. H., Rahayu, S., & Sakti, S. P. (2016). "Viscoelastic and morphological behavior of stearic acid layer on top of polystyrene as immobilisation matrix for QCM sensor". *In Materials Science Forum* (Vol. 848, pp. 757-762). Trans Tech Publications Ltd.

Djoko, D. J. D. H., Didik, L. A., Rahmawati, E., Pagaga, M., & Sakti, S. P. (2014). "Solvent effect on morphology of polystyrene coating and their role to improvement for biomolecule Immobilization in application of QCM based biosensor". *In Applied Mechanics and Materials* (Vol. 530, pp. 54-57). Trans Tech Publications Ltd.

Dynatech-int.com. (2019). Mengenal-mikroskop-cahaya. [online] tersedia di : https://www.dynatech-int.com/id/artikel/mengenal-mikroskop-cahaya [diakses pada tanggal 29 Juli 2019]

Esmaeilzadeh, H., Zheng, K., Su, J., Mead, J., Sobkowicz, M. J., & Sun, H. (2017, November). "Experimental study of drag reduction on superhydrophobic surfaces using quartz crystal microbalance (QCM)". In *ASME International*

Mechanical Engineering Congress and Exposition (Vol. 58424, p. V007T09A055). American Society of Mechanical Engineers.

Farka, Z., Kovář, D., & Skládal, P. (2015). "Rapid detection of microorganisms based on active and passive modes of QCM. Sensors", *15*(1), 79-92.

Fitriani, S. W., Masruroh, M., & Sakti, S. P. (2014). *"Pengaruh Ketebalan Lapisan Zinc Phthaloacynine (Znpc) Di Atas Permukaan Polistiren/QCM Terhadap Sifat Viskoelastis Berdasarkan Nilai Impedansi"*. (Doctoral dissertation, Brawijaya University).

Gunawan, B., & Azhari, C. D. (2010). "Karakterisasi spektrofotometri IR dan scanning electron microscopy (SEM) sensor gas dari bahan polimer poly ethelyn glycol (PEG)". *Jurnal sains dan Teknologi*, *3*(2).

Hamid, A. S. S. (2017). "*Investigation of sensing membranes for QCM devices in gas sensing applications".* (Doctoral dissertation, Sheffield Hallam University).

Hudha, L. S., Sakti, S., & Masruroh, M. (2013). "*Rancang Bangun Mini System Spin Coating Untuk Pelapisan Sensor QCM (Quartz Crystal Microbalance".)* (Doctoral dissertation, Brawijaya University).

jeremyjordan.me. (2016). Scanning Electron Microscopy. [online] tersedia di : https://www.jeremyjordan.me/scanning-electron-microscopy/ [diakses pada tangga 29 Juli 2019]

Kandjani, S. A., Mirershadi, S., & Nikniaz, A. (2015). "*Inorganic–organic perovskite solar cells. Solar Cells-New Approaches and Reviews".* 450.

Khusnah, N. F., Sakti, S. P., & Santjojo, D. J. D. H. (2018). "Oxygen Plasma Effect on QCM Sensor Coated Polystyrene Film". *MS&E*, *367*(1), 012030.

Mariyana, A. (2012). "*Pengaruh Penguasaan Penggunaan Mikroskop terhadap Nilai Praktikum IPA Materi Pokok Organisasi Kehidupan pada Siswa Kelas VII di MTs Negeri Ketanggungan Brebes Tahun Pelajaran 2011/2012".* (Doctoral dissertation, IAIN Walisongo).

Masruroh., Djoko, D. J. D. H., Didik, L. A., Rachmawati, E., Robiandi, F., Padaga, M., & Sakti, S. P. (2015). "Modification of Polystyrene Morphology and Its influence to the Coated Zinc Phthalocyanine Layer and Frequency

Change in QCM sensor". In *Materials Science Forum* (Vol. 827, pp. 257-261). Trans Tech Publications Ltd.

Naba, A., & Sakti, S. P. (2017, August). "Detection of resonant frequency of QCM by using Chirp Z-Transform". In *2017 International Seminar on Sensors, Instrumentation, Measurement and Metrology (ISSIMM)* (pp. 164-168). IEEE.

Novianti, Z. A., Saraswati, D. A., & Astuti, S. D. (2013). "*Implementasi Jaringan Saraf Tiruan Sebagai Alat Bantu Deteksi Infeksi Saluran Kemih Melalui Citra Bakteri Pada Urin".* (Doctoral dissertation, UNIVERSITAS AIRLANGGA).

Novitasari, A., Triandi, R., & Masruroh, M. (2015a). "Study of the Effect of Inter-Electrode Distance on Thin Phytocyane Zinc Thin Layer Resistance (ZnPc) with Exposure to Ozone". *Natural B, Journal of Health and Environmental Sciences*, *3*(2), 130-134.

Novitasari, A., Masruroh, M., & Tjahjanto, R. T. (2015b). "Effect of Thickness on Thin Layer Resistance Value of Zinc Sulfa phthalosianin (ZnPcSn) As Prototype of Ozone Detector". *Natural B, Journal of Health and Environmental Sciences*, *3*(2), 124-129.

Nurramdaniyah, N., Padega, M., Santjojo, D. H., Sakti, S. P., & Masruroh, M. (2017). "Study of Stearic Acid Layer (SA) Microstructure on Surface Quartz Crystal Microbalance (QCM) Sensors". *Natural B, Journal of Health and Environmental Sciences*, *4*(2), 105-110.

Nuha, S. A., Khusnah, N. F., Kamasi, D. D., & Sakti, S. P. (2019). "Polystyrene Micro-pools Distribution on Quartz Crystal Microbalance (QCM) Surface using Ultrasonic Atomization Spray Coating". *In IOP Conference Series: Materials Science and Engineering* (Vol. 546, No. 4, p. 042029). IOP Publishing.

Prisma, A. P., HS, D. D., & Masruroh, M. (2014). "*Pengaruh Konsentrasi Dan Viskositas Larutan Polistiren Terhadap Morfologi Permukaan Dan Ketebalan Lapisan Znpc Pada Permukaan QCM".* (Doctoral dissertation, Brawijaya University).

Putri, N. P., Pravitasari, D. W., Al Aziz, F., Santjojo, D. J. D. H., & Sakti, S. P. (2019). "Solvent Effect on Viscoelastic Behaviour and Morphology of Polyaniline Coating at QCM Sensor". *In Journal of Physics: Conference Series* (Vol. 1417, No. 1, p. 012002). IOP Publishing.

Qiao, X., Zhang, X., Tian, Y., & Meng, Y. (2016). "Progresses on the theory and application of quartz crystal microbalance". *Applied Physics Reviews*, *3*(3), 031106.

Rahmawati, E. (2014). *"Pengaruh Jenis Pelarut Xilen dan Tetrahidrofuran terhadap Morfologi Lapisan Polistiren dan Jumlah Massa ZnPc (Zinc Pthalocyanine) yang Terdeposisi untuk Meningkatkan Immobilisasi BSA (Bovine Serum Alb*". (Doctoral dissertation, Universitas Brawijaya).

Rahayu, S., Masruroh., Santjojo, D.H., Rahmawati,E., dkk. (2014). Pengaruh Perbedaan Pelarut Polistiren Terhadap Morfologi Lapisan Polistiren dan Sifat Viskoelastik QCM Biosensor. *Natural B,* Vol 2, No. 4.

Respati, S. M. B. (2008). Macam-macam Mikroskop dan cara penggunaan. *Majalah Ilmiah Momentum*, *4*(2).

Rivai, M. (2009). Implementasi Sensor Quartz Crystal Microbalance pada Sistem Kromatografi Gas. In *Industrial Electronic Seminar*.

Robiandi, F., Didik, L. A., Rahmawati, E., Rahayu, S., Masruroh, M., Sakti, S. P., & Santjojo, D. H. (2014). "Effect of Deposition Rate on Morphology of Zinc Phthalocyanine Layer (ZnPc) on Polystyrene Surface/QCM with Vacuum Evaporation Process". *Natural B, Journal of Health and Environmental Sciences*, *2*(4), 336-342.

Saftics, A., Prósz, G. A., Türk, B., Peter, B., Kurunczi, S., & Horvath, R. (2018). "In situ viscoelastic properties and chain conformations of heavily hydrated carboxymethyl dextran layers: a comparative study using OWLS and QCM-I chips coated with waveguide material". *Scientific Reports*, *8*(1), 1-14.

Sahanaya, V., Ramli, R., & Darvina, Y. (2018). "Pengaruh Fraksi Konsentrasi Nanokomposit Fe3O4/PANi Dengan Metode Sol-Gel Spin Coating Untuk Material Elektroda Baterai Lithium". *PILLAR OF PHYSICS*, *11*(2).

Santjojo, D. J., Widyarti, S., & Robiandi, F. (2015). "Functionality of ZnPc thin film deposited on polystyrene interlayer for immobilization of biomolecules

in QCM based biosensor". *In Materials Science Forum* (Vol. 827, pp. 266-270). Trans Tech Publications Ltd.

Santjojo, D. D. H., Irawan, Y. S., & Robiandi, F. (2016). "Synthesis of ZnPc functional layer on QCM biosensor with polystyrene interlayer by means of evaporation techniques". *In AIP Conference Proceedings* (Vol. 1719, No. 1, p. 030023). AIP Publishing LLC.

Sakti, S. P., Kamasi, D. D., Nuha, S. A., & Setiana, M. (2020). "Uneven Coating Influences on Electrical Impedance of Quartz Crystal Microbalance". *In Journal of Physics: Conference Series* (Vol. 1428, No. 1, p. 012060). IOP Publishing.

Sakti, S. P., & Arinda, P. S. (2019). "Effect of the polystyrene surface hydrophobicity on QCM sensor resonance frequency in contact with water-glycerol mixture". *In Journal of Physics: Conference Series* (Vol. 1153, No. 1, p. 012044). IOP Publishing.

Sujatno, A., Salam, R., Bandriyana, B., & Dimyati, A. (2015). "Studi scanning electron microscopy (SEM) untuk karakterisasi proses oxidasi paduan zirkonium". In *jurnal Forum Nuklir (JFN)* (Vol. 9, No. 1, pp. 44-50).

Sutantri, R. E., Wulansari, I. H., Santjojo, D. D. H., & Masruroh, M. (2014). "*Studi Pengaruh Laju Pemanasan Terhadap Morfologi Pada Penumbuhan Lapisan ZnPc Di Atas Quartz Crystal Microbalance (QCM) Dengan Metode Evaporasi".* (Doctoral dissertation, Brawijaya University).

Ummah, A. R. (2018). *"Karakterisasi sensor Quartz Crystal Microbalance (QCM) dengan pelapisan membran lipid oleyl alkohol terhadap respon HCl dan NaCl*". (Doctoral dissertation, Universitas Islam Negeri Maulana Malik Ibrahim).

Wulansari, I. H., Sutantri, R. E., Santjojo, D. H., & Masruroh, M. (2014). *"Studi Penumbuhan Lapisan Zinc Phthalocyanine (ZnPc) Di Atas Substrat Kaca Dan Substrat Polistiren Dengan Metode Evaporasi*". (Doctoral dissertation, Brawijaya University).

Yao, Y., Chen, X., Li, X., Chen, X., & Li, N. (2014). "Investigation of the stability of QCM humidity sensors using graphene oxide as sensing films". *Sensors and Actuators B: Chemical*, *191*, 779-783. Yao, 2014

Yao, Y., & Xue, Y. (2015). “Impedance analysis of quartz crystal microbalance 0humidity sensors based on nanodiamond/graphene oxide nanocomposite film”. *Sensors and Actuators B: Chemical*, *211*, 52-58.