

DAFTAR PUSTAKA

- Alegantina, S., Isnawati, A., and Raini, M., (2008), Pengembangan Model Proses Filtrasi dan Disinfeksi yang Mempengaruhi Kualitas Air Minum Isi Ulang, *Media Litbang Kesehatan*, XVIII, 144–150.
- Anonim, (2016), *Log and Percent Reduction on Microbiology and Antimicrobial, Microchem Laboratory*, <https://microchemlab.com/>, diakses: 23 Oktober 2020.
- Anonim, (2020), *Material Science and Engineering, iowa state university*, <https://www.mse.iastate.edu/>, diakses: 21 Oktober 2020.
- Assidiq, A. F. and Prasetyo, N., (2020) *Safety Management*, AFA Group.
- Baker, R. W., (2012), *Membrane Technology and Application*, edisi 3, California: A Jhon Wiley & Sons, Ltd., Publication.
- Bhardwaj, N. and Kundu, S. C., (2010), Electrospinning: A fascinating fiber fabrication technique, *Biotechnology Advances*, 28(3), 325–347. doi: 10.1016/j.biotechadv.2010.01.004.
- Cahyono, T., (2017), *Penyehatan Udara*, edisi 1, diedit oleh E. Risanto, Yogyakarta: ANDI.
- Cao, G., (2004), *Nanostuctures and Naomaterials : Synthesis, Properties, and Applications*, London: Imperial College Press.
- Chandra, R. A., Yunita, R., Wahyuni, D. D., and Anggraini, D. R., (2015), *Daya Antibakteri Ekstrak Buah Belimbing Wuluh*, 8–18.
- Chuysinuan, P., Techasakul, S., Suksamrarn, S., Wetprasit, N., Hongmanee, P., and Supaphol, P., (2018), Preparation and characterization of electrospun polyacrylonitrile fiber mats containing *Garcinia mangostana*, *Polymer Bulletin*, Springer Berlin Heidelberg, 75(3), 1311–1327. doi: 10.1007/s00289-017-2087-y.
- Crreswell, J. W., (2014), *Research Design*, edisi 4, SAGE.
- Efendi, I., (2020), *Metode Identifikasi dan Klasifikasi Bakteri*, Riau: Oceanum Press.
- Fardiaz, S., (1992), *Polusi Air dan Udara*, Jakarta: Penerbit Kanisius.
- Fifendy, M., (2017), *Mikrobiologi*, Depok: Kencana.
- Hashmi, M., Ullah, S., and Kim, I. S., (2019), Copper oxide (CuO) loaded polyacrylonitrile (PAN) nanofiber membranes for antimicrobial breath mask applications, *Current Research in Biotechnology*, The Author(s), 1–10. doi: 10.1016/j.crbiot.2019.07.001.

- Huang, J. J., Tian, Y., Wang, R., Tian, M., and Liao, Y., (2020), Fabrication of bead-on-string polyacrylonitrile nanofibrous air filters with superior filtration efficiency and ultralow pressure drop, *Separation and Purification Technology*, 237(November 2019). doi: 10.1016/j.seppur.2019.116377.
- Kee, J. L. and Hayes, E. R., (1996), *Pharmacology*, edisi 1, diedit oleh Y. Asih, Jakarta: EGC.
- Kharaghani, D., Kee Jo, Y., Khan, M. Q., Jeong, Y., Cha, H. J., and Kim, I. S., (2018), Electrospun antibacterial polyacrylonitrile nanofiber membranes functionalized with silver nanoparticles by a facile wetting method, *European Polymer Journal*, Elsevier, 108(August), 69–75. doi: 10.1016/j.eurpolymj.2018.08.021.
- Kusmiyati, K. and Agustini, N. W. S., (2007), Uji Aktivitas Senyawa Antibakteri dari Mikroalga *Porphyridium cruentum*, *Biodiversitas*, 48–53. doi: 10.1067/mic.2001.117119.
- Leung, W., Hung, C.-H., and Yuen, P.-T., (2010), Effect of Face Velocity, Nanofiber Packing Density and Thickness on Filtration Performance of Filters with Nanofibers Coated on a Substrate, *Separation and Purification Technology*, 30–37. doi: 10.1016/j.seppur.2009.10.017.
- Li, J., Zhang, D., Yang, T., Yang, S., Yang, X., and Zhu, H., (2018), Nanofibrous membrane of graphene oxide-in-polyacrylonitrile composite with low filtration resistance for the effective capture of PM_{2.5}, *Journal of Membrane Science*, Elsevier B.V., 551(December 2017), 85–92. doi: 10.1016/j.memsci.2018.01.025.
- Li, J., Zhang, D., Jiang, X., Zhao, X., Hu, R., Zhong, Y., and Zhu, H., (2019), Nest-like multilevel structured graphene oxide-on-polyacrylonitrile membranes for highly efficient filtration of ultrafine particles, *Journal of Materiomics*, 422–427. doi: 10.1016/j.jmat.2019.02.011.
- McKenna, J. D., Turner, J. H., and Jr, J. P. M., (2008), *Fine Particle Emissions : Regulation, Measurement, and Control*, Canada: John Willey & Sons, Inc.
- Menteri Lingkungan Hidup, (2009), *Perlindungan dan Pengelolaan Lingkungan Hidup*, Indonesia.
- Monnier, N. B. and Thomas, D., (2017), Initial Pressure Drop for Fibrous Media, *Aerosol Filtration*, 49–78. doi: 10.1016/B978-1-78548-215-1.50003-2.
- Mukono, H., (2011), *Aspek Kesehatan Pencemaran Udara*, edisi 1, Surabaya: UNAIR.
- Mulder, M., (1996), *Basic Principles of Membrane Technology*, Netherlands: Kluwer Academic Publishers, 576. doi: 10.1016/j.landusepol.2014.07.004.
- Nataraj, S. K., Yang, K. S., and Aminabhavi, T. M., (2012), Polyacrylonitrile-based nanofibers - A state-of-the-art review, *Progress in Polymer Science (Oxford)*,

Elsevier Ltd, 487–513. doi: 10.1016/j.progpolymsci.2011.07.001.

Nayak, R., Padhye, R., Kyratzis, I. L., Truong, Y. B., and Arnold, L., (2011), Recent advances in nanofibre fabrication techniques, *Textile Research Journal*, 129–147. doi: 10.1177/0040517511424524.

Notodarmojo, S. and Deniva, A., (2004), Penurunan Zat Organik dan Kekeruhan Menggunakan Teknologi Membran Ultrafiltrasi dengan Sistem Aliran Dead-End (Studi Kasus : Waduk Saguling, Padalarang), *ITB Journal of Sciences*, 63–82. doi: 10.5614/itbj.sci.2004.36.1.5.

Pelipenko, J., Kristl, J., Janković, B., Baumgartner, S., and Kocbek, P., (2013), The impact of relative humidity during electrospinning on the morphology and mechanical properties of nanofibers, *International journal of pharmaceutics*, 125–134. doi: 10.1016/j.ijpharm.2013.07.078.

Rahman, M. and Asiri, A. M., (2016), *Nanofiber Research: Reaching New Heights*. edisi 1, diedit oleh Sp. Global, Croatia: InTech. doi: 10.5772/61952.

Ramakrishna, S., Fujihara, K., Teo, W.-E., Lim, T.-C., and Ma, Z., (2005), *An Introduction to Electrospinning and Nanofibers*, Singapore: World Scientific Publishing Co. Pte. Ltd.

Rochmadi, A. P., (2018), *Mengenal Polimer dan Polimerasisasi*, Yogyakarta: UGM PRESS, UGM.

Roossinck, M. J., (2016), *Virus*, diedit oleh T. Kitch, Brighton, UK: Susan Kelly.

Ruan, D., Qin, L., Chen, R., Xu, G., Su, Z., Cheng, J., Xie, S., Cheng, F., and Ko, F., (2020), Transparent PAN:TiO₂ and PAN-co-PMA:TiO₂ Nanofiber Composite Membranes with High Efficiency in Particulate Matter Pollutants Filtration, *Nanoscale Research Letters*, *Nanoscale Research Letters*. doi: 10.1186/s11671-019-3225-2.

Sari, N. H., (2018), *Material Teknik*, edisi 1, Yogyakarta: Deepublish.

Selvam, A. K. and Nallathambi, G., (2015), Polyacrylonitrile/silver nanoparticle electrospun nanocomposite matrix for bacterial filtration, *Fibers and Polymers*, 1327–1335. doi: 10.1007/s12221-015-1327-8.

Sriyono, (2011), Analisis dan Pemodelan Filter HEPA Pada Sistem Pemurnian Helium RGTT200K, *Prosiding Pertemuan dan Presentasi Ilmiah – Penelitian Dasar Ilmu Pengetahuan dan Teknologi Nuklir 2011*, 216–222.

Sumardjo, D., (2009), *Pengantar Kimia*. edisis 1, diedit oleh A. Hanif, J. Manurung, dan J. Simanjuntak, Penerbit Buku Kedokteran EGC.

Tennant, P., Fermin, G., and Foster, J. E., (2018), *Viruses: Molecular Biology, Host Interactions, and Applications to Biotchnology* diedit oleh P. Gonzalez. Chennai, India: Jhon Fedor.

Wang, Na, Si, Y., Wang, Ni, Sun, G., El-Newehy, M., Al-Deyab, S. S., and Ding,

- B., (2014), Multilevel structured polyacrylonitrile/silica nanofibrous membranes for high-performance air filtration, *Separation and Purification Technology*, Elsevier B.V., 44–51. doi: 10.1016/j.seppur.2014.02.017.
- WHO, (2018), *Ambient (outdoor) air pollution*, World Health Organization, [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health), diakses: 7 Juni 2020.
- WHO, (2020a), *Air pollution*, World Health Organization., https://www.who.int/health-topics/air-pollution#tab=tab_1, diakses: 7 Juni 2020.
- WHO, (2020b), *Coronavirus disease (COVID-19)*, World Health Organization, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>, diakses: 7 Juni 2020.
- Yang, C., (2012), Aerosol filtration application using fibrous media - An industrial perspective, *Chinese Journal of Chemical Engineering*, Chemical Industry and Engineering Society of China (CIESC) and Chemical Industry Press (CIP), 1–9. doi: 10.1016/S1004-9541(12)60356-5.
- Yang, Z., Peng, H., Wang, W., and Liu, T., (2010), Preparation of Poly(ether sulfone) Nanofibers by Gas-Jet/Electrospinning, *Journal of Applied Polymer Science*, 2658–2667. doi: 10.1002/app.
- Zhang, L., Luo, J., Menkhaus, T. J., Varadaraju, H., Sun, Y., and Fong, H., (2011) Antimicrobial nano-fibrous membranes developed from electrospun polyacrylonitrile nanofibers, *Journal of Membrane Science*, Elsevier B.V., 499–505. doi: 10.1016/j.memsci.2010.12.032.