

DAFTAR PUSTAKA

- A. Peter, Mihaly-Cozmuta, A., Nicula, C., Mihaly-Cozmuta, L., A. Vulpoi, L.B., 2019. Fabric impregnated with TiO₂ gel with self-cleaning property. *Int. J. Appl. Ceram. Technol.* 16 666–681.
- Acayanka, E., Tarkwa, J.B., Nchimi, K.N., Voufouo, S.A.Y., Tiya-Djowe, A., Kamgang, G.Y., Laminsi, S., 2019. Grafting of N-doped titania nanoparticles synthesized by the plasma-assisted method on textile surface for sunlight photocatalytic self-cleaning applications. *Surfaces and Interfaces* 17, 100361. <https://doi.org/10.1016/j.surfin.2019.100361>
- Ahmad, I., Kan, C.W., Yao, Z., 2019. Photoactive cotton fabric for UV protection and self-cleaning. *RSC Adv.* 9, 18106–18114. <https://doi.org/10.1039/c9ra02023c>
- Ahn, Y.C., Park, S.K., Kim, G.T., Hwang, Y.J., Lee, C.G., Shin, H.S., Lee, J.K., 2006. Development of high efficiency nanofilters made of nanofibers. *Curr. Appl. Phys.* 6, 1030–1035. <https://doi.org/10.1016/j.cap.2005.07.013>
- Ansari, M.A., Albetran, H.M., Alheshibri, M.H., Timoumi, A., Algarou, N.A., Akhtar, S., Slimani, Y., Almessiere, M.A., Alahmari, F.S., Baykal, A., Low, I.M., 2020. Synthesis of electrospun tio₂ nanofibers and characterization of their antibacterial and antibiofilm potential against gram-positive and gram-negative bacteria. *Antibiotics* 9, 1–15. <https://doi.org/10.3390/antibiotics9090572>
- Banerjee, S., Dionysiou, D.D., Pillai, S.C., 2015. Self-cleaning applications of TiO₂ by photo-induced hydrophilicity and photocatalysis. *Appl. Catal. B Environ.* 176–177, 396–428. <https://doi.org/10.1016/j.apcatb.2015.03.058>
- CDC, 2020. NIOSH-Approved N95 Particulate Filtering Facepiece Respiratorso Title [WWW Document]. *Cent. Dis. Control Prev.* URL https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/n95list1-a.html (diakses 10.12.20).
- Chen, X., Mao, Y., 2007. Titanium Dioxide Nanomaterials: Synthesis, Properties, Modifications, and Applications. *Chem. Rev.* 107, 2891–2959.

<https://doi.org/10.1021/cr0500535>

de Dicastillo, C., Correa, M., Martínez, F., Streitt, C., Galotto, M., 2020.

Antimicrobial Effect of Titanium Dioxide Nanoparticles.

<https://doi.org/10.5772/intechopen.90891>

Drelich, J., Chibowski, E., 2010. Superhydrophilic and superwetting surfaces:

definition and mechanism of control. *Langmuir ACS J. f surfaces colloids*

26, 18621–18623. <https://doi.org/10.1021/la1039893>

Ech, L., Rcs, S., K-h, L., Epv, W., Bys, C., 2006. Headaches and the N95 face-mask amongst healthcare providers 199–202. <https://doi.org/10.1111/j.1600-0404.2005.00560.x>

Editor Encyclopaedia Britannica, 2020. Polymer [WWW Document]. *Encycl. Br.*

URL <https://www.britannica.com/science/polymer> (diakses 12.30.20).

Editor Encyclopaedia Britannica, 2010. Polyvinilidene fluride [WWW

Document]. *Encycl. Br.* URL

<https://www.britannica.com/science/polyvinylidene-fluoride> (diakses 1.3.20).

FDA, 2020. N95 Respirators, Surgical Masks, and Face Masks [WWW

Document]. U.S. Food Drug Adm. URL [https://www.fda.gov/medical-](https://www.fda.gov/medical-devices/personal-protective-equipment-infection-control/n95-respirators-surgical-masks-and-face-masks)

[devices/personal-protective-equipment-infection-control/n95-respirators-surgical-masks-and-face-masks](https://www.fda.gov/medical-devices/personal-protective-equipment-infection-control/n95-respirators-surgical-masks-and-face-masks) (diakses 6.21.20).

Feiring, A.E., 2001. Fluorine-containing Polymers. <https://doi.org/10.1016/B0-08-043152-6/00571-4>

Fujishima, A., Zhang, X., Tryk, D.A., 2020. *Surface Science Reports TiO₂*

photocatalysis and related surface phenomena 63, 515–582.

<https://doi.org/10.1016/j.surfrep.2008.10.001>

Gad, S.E., 2014. Polymers, in: Wexler, P.B.T.-E. of T. (Third E. (Ed.), .

Academic Press, Oxford, hal. 1045–1050.

<https://doi.org/https://doi.org/10.1016/B978-0-12-386454-3.00912-X>

Gedde, U.W., 1999. A Brief Introduction to Polymer Science BT - Polymer

Physics, in: Gedde, U.W. (Ed.), . Springer Netherlands, Dordrecht, hal. 1–18.

https://doi.org/10.1007/978-94-011-0543-9_1

Hoque, M.E., Nuge, T., Yeow, T.K., Nordin, N., 2019. Chapter 5 - Electrospun

- Matrices from Natural Polymers for Skin Regeneration, in: Swain, S.K., Jawaaid, M. (Ed.), Nanostructured Polymer Composites for Biomedical Applications, Micro and Nano Technologies. Elsevier, hal. 87–104.
<https://doi.org/https://doi.org/10.1016/B978-0-12-816771-7.00005-3>
- International Comodity Intelligence Services, 2010. Titanium Dioxide (TiO₂) Uses and Market Data [WWW Document]. URL
<https://www.icis.com/explore/resources/news/2007/11/07/9076546/titanium-dioxide-tio2-uses-and-market-data/>
- IUPAC, 2021. WHAT ARE POLYMERS? [WWW Document]. IUPAC. URL
<https://iupac.org/polymer-edu/what-are-polymers/> (diakses 12.28.20).
- Jackson, M.J., Ahmed, W., 2007. Titanium Dioxide Coatings in Medical Device Applications, in: Jackson, M.J., Ahmed, W. (Ed.), Surface Engineered Surgical Tools and Medical Devices. Springer US, Boston, MA, hal. 49–63.
https://doi.org/10.1007/978-0-387-27028-9_3
- Jilani, T., Jamil, R., Siddiqui, A., 2020. Influenza H1N1 [WWW Document]. StatPearls. URL <https://www.ncbi.nlm.nih.gov/books/NBK513241/> (diakses 1.17.21).
- Jose Varghese, R., hadji Mamour Sakho, E., Parani, S., Thomas, S., Oluwafemi, O.S., Wu, J., 2019. Chapter 3 - Introduction to nanomaterials: synthesis and applications, in: Thomas, S., Sakho, E.H.M., Kalarikkal, N., Oluwafemi, S.O., Wu, J. (Ed.), Nanomaterials for Solar Cell Applications. Elsevier, hal. 75–95. <https://doi.org/https://doi.org/10.1016/B978-0-12-813337-8.00003-5>
- Krug, R.M., Wagner, R.R., 2020. Virus [WWW Document]. Encycl. Br. inc. URL
<https://www.britannica.com/science/virus> (diakses 6.29.20).
- Krumdieck, S.P., Boichot, R., Gorthy, R., Land, J.G., Lay, S., Gardecka, A.J., Polson, M.I.J., Wasa, A., Aitken, J.E., Heinemann, J.A., Renou, G., Berthomé, G., Charlot, F., Encinas, T., Braccini, M., Bishop, C.M., 2019. Nanostructured TiO₂ anatase- rutile-carbon solid coating with visible light antimicrobial activity 1–11.
- Lhotáková, Y., Plíštil, L., Morávková, A., Kubát, P., Lang, K., Forstová, J., Mosinger, J., 2012. Virucidal nanofiber textiles based on photosensitized

production of singlet oxygen. PLoS One 7.

<https://doi.org/10.1371/journal.pone.0049226>

Li, Z., Dong, Y., Li, B., Wang, P., Chen, Z., Bian, L., 2018. Creation of self-cleaning polyester fabric with TiO₂ nanoparticles via a simple exhaustion process : Conditions optimization and stain decomposition pathway 140, 366–375.

Maheswari, P., Harish, S., Navaneethan, M., Muthamizhchelvan, C., Ponnusamy, S., Hayakawa, Y., 2020. Bio-modified TiO₂ nanoparticles with *Withania somnifera*, *Eclipta prostrata* and *Glycyrrhiza glabra* for anticancer and antibacterial applications. Mater. Sci. Eng. C 108.

<https://doi.org/10.1016/j.msec.2019.110457>

Moldoveanu, S.C., David, V., 2017. Chapter 7 - RP-HPLC Analytical Columns, in: Moldoveanu, S.C., David, V.B.T.-S. of the H.M. in C.A. (Ed.), . Elsevier, Boston, hal. 279–328. <https://doi.org/https://doi.org/10.1016/B978-0-12-803684-6.00007-X>

Monmaturapoj, N., Sri-on, A., Klinsukhon, W., Boonnak, K., 2018. Antiviral activity of multifunctional composite based on TiO₂-modified hydroxyapatite 92, 96–102.

Mueller, A. V., Eden, M.J., Oakes, J.M., Bellini, C., Fernandez, L.A., 2020. Quantitative Method for Comparative Assessment of Particle Removal Efficiency of Fabric Mask as Alternatives to Standard Surgical Masks for PPE. Matter 3, 950–962. <https://doi.org/10.1016/j.matt.2020.07.006>

Nasikhudin, Diantoro, M., Kusumaatmaja, A., Triyana, K., 2018. Study on Photocatalytic Properties of TiO₂ Nanoparticle in various pH condition.

Padikkaparambil, S., Binitha, N., Yaakob, Z., Viswanathan, S., Tasirin, S., 2013. Au/TiO₂ Reusable Photocatalysts for Dye Degradation. Int. J. Photoenergy 2013, 1–10. <https://doi.org/10.1155/2013/752605>

Photocatalysis [WWW Document], 2020. URL

[nature.com/subjects/photocatalysis](https://www.nature.com/subjects/photocatalysis) (diakses 12.3.20).

Qian, Y., Willeke, K., Grinshpun, S.A., Donnelly, J., Coffey, C., 1998.

Performance of N95 respirators: filtration efficiency for airborne microbial

and inert particle. Am. Ind. Hyg. Assoc. J. 59(2), 128–132.

<https://doi.org/10.1080/15428119891010389>

Rashid, M.M., 2020. Journal Pre-proof.

<https://doi.org/10.1016/j.surfin.2020.100890>

Ray, S.S., Chen, S.-S., Nguyen, N.C., Nguyen, H.T., 2019. Chapter 9 -

Electrospinning: A Versatile Fabrication Technique for Nanofibrous Membranes for Use in Desalination, in: Thomas, S., Pasquini, D., Leu, S.-Y., Gopakumar, D.A.B.T.-N.M. in W.P. (Ed.), Micro and Nano Technologies. Elsevier, hal. 247–273. <https://doi.org/https://doi.org/10.1016/B978-0-12-813926-4.00014-8>

Rogers, K., Kardner, R.J., 2019. Bacteria [WWW Document]. Encycl. Br. inc.

URL <https://www.britannica.com/science/bacteria> (diakses 6.20.20).

Shi, X., Zhou, W., Ma, D., Ma, Q., Bridges, D., Ma, Y., Hu, A., 2015.

Electrospinning of Nanofibers and Their Applications for Energy Devices. J. Nanomater. 2015, 140716. <https://doi.org/10.1155/2015/140716>

Sievers, N.V., Pollo, L.D., Corção, G., Medeiros Cardozo, N.S., 2020. In situ synthesis of nanosized TiO₂ in polypropylene solution for the production of films with antibacterial activity. Mater. Chem. Phys. 246.

<https://doi.org/10.1016/j.matchemphys.2020.122824>

Sujatno, A., Salam, R., Bandriyana, Dimiyati, A., 2015. Studi Scanning Electron Microscopy (SEM) untuk Karakterisasi Proses Oksidasi Paduan Zirkonium. J. Forum Nukl. 9.

Sunada, K., Watanabe, T., Hashimoto, K., 2003. Studies on photokilling of bacteria on TiO₂ thin film. J Photochem Photobiol A 3, 227–233.

[https://doi.org/10.1016/S1010-6030\(02\)00434-3](https://doi.org/10.1016/S1010-6030(02)00434-3)

Sundarrajana, S., Tan, K.L., Lim, S.H., Ramakrishna, S., 2014. Electrospun Nanofibers for Air Filtration Applications. Procedia Eng. 75, 159–163.

<https://doi.org/10.1016/j.proeng.2013.11.034>

U.S. Energy Information Administration, 2020. Ethanol and the environment [WWW Document]. U.S. Energy Inf. Adm. URL

<https://www.eia.gov/energyexplained/biofuels/ethanol-and-the->

environment.php (diakses 1.25.21).

Ullah, S., Ullah, A., Lee, J., Jeong, Y., Hashmi, M., Zhu, C., Joo, K. Il, Cha, H.J., Kim, I.S., 2020. Reusability Comparison of Melt-Blown vs Nano fiber Face Mask Filters for Use in the Coronavirus Pandemic.

<https://doi.org/10.1021/acsanm.0c01562>

Wen, J., Li, Q., Li, H., Chen, M., Hu, S., Cheng, H., 2018. Nano-TiO₂ Imparts Amidoximated Wool Fibers with Good Antibacterial Activity and Adsorption Capacity for Uranium(VI) Recovery. *Ind. Eng. Chem. Res.* 57, 1826–1833. <https://doi.org/10.1021/acs.iecr.7b04380>

Xing, Y., Li, X., Zhang, L., Xu, Q., Che, Z., Li, W., Bai, Y., Li, K., 2012. Effect of TiO₂ nanoparticles on the antibacterial and physical properties of polyethylene-based film. *Prog. Org. Coatings* 73, 219–224.

<https://doi.org/10.1016/j.porgcoat.2011.11.005>

Xu, Q., Zhang, W., Dong, C., 2016. Biomimetic self-cleaning surfaces : synthesis , mechanism and applications.

Zahid, M., Papadopoulou, E.L., Suarato, G., Binas, V.D., Kiriakidis, G., Moira, O., Venieri, D., Bayer, I.S., 2018. Fabrication of Visible Light-Induced Antibacterial and Self-Cleaning Cotton Fabrics Using Manganese Doped TiO₂ Nanoparticles. <https://doi.org/10.1021/acsabm.8b00357>

Zan, L., 2007. Photocatalysis effect of nanometer TiO₂ and TiO₂-coated ceramic plate on Hepatitis B virus 86, 165–169.

<https://doi.org/10.1016/j.jphotobiol.2006.09.002>

Zare, S., Kargari, A., 2018. 4 - Membrane properties in membrane distillation, in: Gude, V.G.B.T.-E.T. for S.D.H. (Ed.), . Butterworth-Heinemann, hal. 107–156. <https://doi.org/https://doi.org/10.1016/B978-0-12-815818-0.00004-7>

Zheng, X., Shen, Z.P., Cheng, C., Shi, L., Cheng, R., Dong, J., 2017.

Electrospinning Cu-TiO₂ nanofibers used for photocatalytic disinfection of bacteriophage f2: Preparation, optimization and characterization. *RSC Adv.* 7, 52172–52179. <https://doi.org/10.1039/c7ra07770j>

Zheng, Y., 2019. 3 - Fabrication on bioinspired surfaces, in: Zheng, Y. (Ed.), *Bioinspired Design of Materials Surfaces, Materials Today*. Elsevier, hal.

99–146. <https://doi.org/https://doi.org/10.1016/B978-0-12-814843-3.00003->

X