

## DAFTAR PUSTAKA

- (1) Saidi, W.; Hfayedh, N.; Megriche, A.; Girtan, M.; El Maaoui, M. Hydrophilic/Hydrophobic and Optical Properties of  $B_2O_3$  Doped  $TiO_2$  Sol-Gel Thin Films: Effect of  $B_2O_3$  Content, Film Thickness and Surface Roughness. *Mater. Chem. Phys.* **2018**, *215*, 31–39. <https://doi.org/10.1016/j.matchemphys.2018.03.080>.
- (2) Sharifi, N.; Pugh, M.; Moreau, C.; Dolatabadi, A. Developing Hydrophobic and Superhydrophobic  $TiO_2$  Coatings by Plasma Spraying. *Surf. Coatings Technol.* **2016**, *289*, 29–36. <https://doi.org/10.1016/j.surfcoat.2016.01.029>.
- (3) Syafiq, A.; Pandey, A. K.; Balakrishnan, V.; Rahim, N. A. Study on Self-Cleaning Performance and Hydrophobicity of  $TiO_2$ /Silane Coatings. *Pigment Resin Technol.* **2018**. <https://doi.org/10.1108/PRT-02-2018-0010>.
- (4) Wang, Y.; Li, B.; Liu, T.; Xu, C.; Ge, Z. Controllable Fabrication of Superhydrophobic  $TiO_2$  Coating with Improved Transparency and Thermostability. *Colloids Surfaces A Physicochem. Eng. Asp.* **2014**, *441*, 298–305. <https://doi.org/10.1016/j.colsurfa.2013.09.023>.
- (5) Latthe, S. S.; Sutar, R. S.; Kodag, V. S.; Bhosale, A. K.; Kumar, A. M.; Kumar Sadashivuni, K.; Xing, R.; Liu, S. Self – Cleaning Superhydrophobic Coatings: Potential Industrial Applications. *Prog. Org. Coatings* **2019**, *128* (December 2018), 52–58. <https://doi.org/10.1016/j.porgcoat.2018.12.008>.
- (6) Hakki, H. K.; Allahyari, S.; Rahemi, N.; Tasbihi, M. The Role of Thermal Annealing in Controlling Morphology, Crystal Structure and Adherence of Dip Coated  $TiO_2$  Film on Glass and Its Photocatalytic Activity. *Mater. Sci. Semicond. Process.* **2018**, *85* (February), 24–32. <https://doi.org/10.1016/j.mssp.2018.05.031>.
- (7) Zhan, W.; Wang, W.; Xiao, Z.; Yu, X.; Zhang, Y. Water-Free Dedusting on Antireflective Glass with Durable Superhydrophobicity. *Surf. Coatings Technol.* **2018**, *356* (August), 123–131. <https://doi.org/10.1016/j.surfcoat.2018.09.064>.
- (8) Ramli, N. F.; Fahsyar, P. N. A.; Ludin, N. A.; Teridi, M. A. M.; Ibrahim, M. A.; Zaidi, S. H.; Sepeai, S. Compatibility Between Compact and Mesoporous  $TiO_2$  Layers on the Optimization of Photocurrent Density in Photoelectrochemical Cells. *Surfaces and Interfaces* **2019**, *100341*. <https://doi.org/10.1016/j.surfin.2019.100341>.
- (9) Sun, R.; Chen, Z.; Peng, J.; Zheng, T. The Effect Mechanisms of PH, Complexant and Calcination Temperature on the Hydrophilicity of  $TiO_2$  Films Prepared by the Sol-Gel Method. *Appl. Surf. Sci.* **2018**, *462* (August), 480–488. <https://doi.org/10.1016/j.apsusc.2018.08.163>.
- (10) Lee, D. K.; Kwon, S. H.; Ahn, J. H. Growth of Rutile- $TiO_2$  Thin Films via Sn Doping and Insertion of Ultra-Thin  $SnO_2$  Interlayer by Atomic Layer Deposition.

- Mater. Lett.* **2019**, *246*, 1–4. <https://doi.org/10.1016/j.matlet.2019.03.018>.
- (11) Wang, H.; Chi, G.; Wang, Y.; Yu, F.; Wang, Z. Fabrication of Superhydrophobic Metallic Surface on the Electrical Discharge Machining Basement. *Appl. Surf. Sci.* **2019**, *478*, 110–118. <https://doi.org/10.1016/j.apsusc.2019.01.102>.
  - (12) Kaneko, M. Anatase TiO<sub>2</sub> Adsorption on 3-Aminopropyltrimethoxysilane-Modified Al or Glass Surfaces. *Helijon* **2019**, *5* (5). <https://doi.org/10.1016/j.heliyon.2019.e01734>.
  - (13) Bender, C. R.; Salbego, P. R. S.; Wust, K.; Farias, C. A. A.; Beck, T. S.; Machado, G.; Vaucher, R. A.; Martins, M. A. P.; Frizzo, C. P. Interaction of Pharmaceutical Ionic Liquids with TiO<sub>2</sub> in Anatase and Rutile Phase. *J. Mol. Liq.* **2018**, *269*, 912–919. <https://doi.org/10.1016/j.molliq.2018.08.066>.
  - (14) Raghavender, A. T.; Samantilleke, A. P.; Sa, P.; Almeida, B. G.; Vasilevskiy, M. I.; Hong, N. H. Simple Way to Make Anatase TiO<sub>2</sub> Films on FTO Glass for Promising Solar Cells. *Mater. Lett.* **2012**, *69*, 59–62. <https://doi.org/10.1016/j.matlet.2011.11.067>.
  - (15) Esch, T. R.; Gadaczek, I.; Bredow, T. Surface Structures and Thermodynamics of Low-Index of Rutile, Brookite and Anatase - A Comparative DFT Study. *Appl. Surf. Sci.* **2014**, *288*, 275–287. <https://doi.org/10.1016/j.apsusc.2013.10.021>.
  - (16) Huhtamäki, T.; Tian, X.; Korhonen, J. T.; Ras, R. H. A. Surface-Wetting Characterization Using Contact-Angle Measurements. *Nat. Protoc.* **2018**, *13* (7), 1521–1538. <https://doi.org/10.1038/s41596-018-0003-z>.
  - (17) Sharp, O.; Wong, K. Y.; Johnston, P. *Segmental Fracture of the Scaphoid*; Elsevier Inc., 2018; Vol. 2018. <https://doi.org/10.1136/bcr-2017-223556>.
  - (18) Ganesh, V. A.; Raut, H. K.; Nair, A. S.; Ramakrishna, S. A Review on Self-Cleaning Coatings. *J. Mater. Chem.* **2011**, *21* (41), 16304–16322. <https://doi.org/10.1039/c1jm12523k>.
  - (19) Simpson, J. T.; Hunter, S. R.; Aytug, T. Superhydrophobic Materials and Coatings: A Review. *Reports Prog. Phys.* **2015**, *78* (8). <https://doi.org/10.1088/0034-4885/78/8/086501>.
  - (20) Good, R. J. A Thermodynamic Derivation of Wenzel's Modification of Young's Equation for Contact Angles; Together with a Theory of Hysteresis. *J. Am. Chem. Soc.* **1952**, *74* (20), 5041–5042. <https://doi.org/10.1021/ja01140a014>.
  - (21) A, M. Wetting on Hydrophobic Rough Surfaces: To Be Heterogeneous or Not to Be? *Langmuir* **2003**, *19* (2), 8343.
  - (22) Cassie, A. B. D.; Baxter, S. Wettability of Porous Surfaces. *Trans. Faraday Soc.* **1944**, *40* (0), 546–551. <https://doi.org/10.1039/TF9444000546>.
  - (23) Barati, G.; Aliofkhazraei, M.; Khorsand, S.; Sokhanvar, S.; Kaboli, A. Science and

- Engineering of Superhydrophobic Surfaces: Review of Corrosion Resistance , Chemical and Mechanical Stability. *Arab. J. Chem.* **2018**. <https://doi.org/10.1016/j.arabjc.2018.01.013>.
- (24) Zhao, T.; Jiang, L. Contact Angle Measurement of Natural Materials. *Colloids Surfaces B Biointerfaces* **2018**, *161*, 324–330. <https://doi.org/10.1016/j.colsurfb.2017.10.056>.
- (25) Quan, Y. Y.; Zhang, L. Z.; Qi, R. H.; Cai, R. R. Self-Cleaning of Surfaces: The Role of Surface Wettability and Dust Types. *Sci. Rep.* **2016**, *6*. <https://doi.org/10.1038/srep38239>.
- (26) Min, K. S.; Manivannan, R.; Son, Y. A. Porphyrin Dye/TiO<sub>2</sub> Imbedded PET to Improve Visible-Light Photocatalytic Activity and Organosilicon Attachment to Enrich Hydrophobicity to Attain an Efficient Self-Cleaning Material. *Dye. Pigment.* **2019**, *162* (September 2018), 8–17. <https://doi.org/10.1016/j.dyepig.2018.10.014>.
- (27) Syafiq, A.; Vengadaesvaran, B.; Rahim, N. A.; Pandey, A. K.; Bushroa, A. R.; Ramesh, K.; Ramesh, S. Transparent Self-Cleaning Coating of Modified Polydimethylsiloxane (PDMS) for Real Outdoor Application. *Prog. Org. Coatings* **2019**, *131* (December 2018), 232–239. <https://doi.org/10.1016/j.porgcoat.2019.02.020>.
- (28) Paolini, R.; Borroni, D.; Pedeferri, M. P.; Diamanti, M. V. Self-Cleaning Building Materials: The Multifaceted Effects of Titanium Dioxide. *Constr. Build. Mater.* **2018**, *182*, 126–133. <https://doi.org/10.1016/j.conbuildmat.2018.06.047>.
- (29) de Assumpção Pereira-da-Silva, M.; Ferri, F. A. *Scanning Electron Microscopy*; Elsevier Inc., 2017. <https://doi.org/10.1016/B978-0-323-49778-7.00001-1>.
- (30) Girão, A. V.; Caputo, G.; Ferro, M. C. Application of Scanning Electron Microscopy–Energy Dispersive X-Ray Spectroscopy (SEM-EDS). *Compr. Anal. Chem.* **2017**, *75*, 153–168. <https://doi.org/10.1016/bs.coac.2016.10.002>.
- (31) Havrdova, M.; Polakova, K.; Skopalik, J.; Vujtek, M.; Mokdad, A.; Homolkova, M.; Tucek, J.; Nebesarova, J.; Zboril, R. Field Emission Scanning Electron Microscopy (FE-SEM) as an Approach for Nanoparticle Detection inside Cells. *Micron* **2014**, *67*, 149–154. <https://doi.org/10.1016/j.micron.2014.08.001>.
- (32) Petit, T.; Puskar, L. FTIR Spectroscopy of Nanodiamonds: Methods and Interpretation. *Diam. Relat. Mater.* **2018**, *89* (July), 52–66. <https://doi.org/10.1016/j.diamond.2018.08.005>.
- (33) Sedin, D. L.; Rowlen, K. L. Influence of Tip Size on AFM Roughness Measurements. *Appl. Surf. Sci.* **2001**, *182* (1–2), 40–48. [https://doi.org/10.1016/S0169-4332\(01\)00432-9](https://doi.org/10.1016/S0169-4332(01)00432-9).
- (34) Misumi, I.; Sugawara, K.; Kizu, R.; Hirai, A.; Gonda, S. Extension of the Range of Profile Surface Roughness Measurements Using Metrological Atomic Force

- Microscope. *Precis. Eng.* **2019**, *56* (January), 321–329. <https://doi.org/10.1016/j.precisioneng.2019.01.002>.
- (35) Xu, Q. C.; Wellia, D. V.; Yan, S.; Liao, D. W.; Lim, T. M.; Tan, T. T. Y. Enhanced Photocatalytic Activity of C-N-Codoped TiO<sub>2</sub> Films Prepared via an Organic-Free Approach. *J. Hazard. Mater.* **2011**, *188* (1–3), 172–180. <https://doi.org/10.1016/j.jhazmat.2011.01.088>.
- (36) Wellia, D. V.; Xu, Q. C.; Sk, M. A.; Lim, K. H.; Lim, T. M.; Tan, T. T. Y. Experimental and Theoretical Studies of Fe-Doped TiO<sub>2</sub> Films Prepared by Peroxo Sol-Gel Method. *Appl. Catal. A Gen.* **2011**, *401* (1–2), 98–105. <https://doi.org/10.1016/j.apcata.2011.05.003>.
- (37) Zhang, L.; Chen, L.; Wan, H.; Chen, J.; Zhou, H. Synthesis and Tribological Properties of Stearic Acid-Modified Anatase (TiO<sub>2</sub>) Nanoparticles. *Tribol. Lett.* **2011**, *41* (2), 409–416. <https://doi.org/10.1007/s11249-010-9724-z>.
- (38) Simonsen, M. E.; Li, Z.; Søgaard, E. G. Influence of the OH Groups on the Photocatalytic Activity and Photoinduced Hydrophilicity of Microwave Assisted Sol-Gel TiO<sub>2</sub> Film. *Appl. Surf. Sci.* **2009**, *255* (18), 8054–8062. <https://doi.org/10.1016/j.apsusc.2009.05.013>.

