

DAFTAR PUSTAKA

- Abad, M.S.K., and Yazdanshenas, M.E., 2010, Superhydrophobic Antibacterial Cotton Textiles, *J. Colloid Interface Sci.*, 351, 293-198.
- Arvin, 2008, Studi Eksperimen Pengaruh Sudut Kontak Statis Terhadap Evaporasi Butiran air yang Mengenai Permukaan Padat yang Dipanaskan, *Skripsi*, Jurusan Teknik Mesin dan Industri Fakultas Teknik Universitas Gadjah Mada, Yogyakarta.
- Bartell, F.E., and Shepard, J.W., 1953, The Effect of Surface Roughness on Apparent Contact Angles and on Contact Angle Hysteresis. I. The system Paraffin-Watter-Air, *J. Phys. Chem.*, 57, 211-215.
- Brinker, C.J., and Scherer, G.W., 1990, Sol-Gel Science: *The Physics and Chemistry of Sol-Gel Processing*, Academic Press Inc., Boston.
- Brinker, C.J., Frye, G.C., Hurd, A.J., and Ashley, C.S., 1991, Fundamentals of Sol-Gel Dip Coating, *Thin Solid Films*, 201, 97-108.
- Chen, Z., Li, F., Hao, L., Chen, A., and Kong, Y., 2011, One-step Electrodeposition Process to Fabricate Cathodic Superhydrophobic Surface, *Appl. Surf. Sci.*, 258, 1395-1398.
- Coradin, T., and Lopez, P.J., 2003, Biogenic Silika Paternning: Simple Chemistry or Substle Biology, *Chem. Bio. Chem.*, 3, 1-9.
- Febriyanti, E., 2013, Film Hibrida Nano TiO₂-dodesilamin sebagai Pelapis Kaca Hidrofobik Swabersih, *Skripsi*, Jurusan Kimia Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Gadjah Mada, Yogyakarta.
- Feng, L., Li, S., Li, Y., Zhang, L., Zhai, J., Song, Y., Liu, B., Jiang, L., and Zhu, D., 2002, Superhydrophobic Surface from Natural to Artificial, *Adv. Mater*, 14, 1857-1860.
- Givoni, B., 1998, *Climate Considerations in Building and Urban Design*, Van Nostrand Reinhold, New York.
- Guo, Z., Liu, W., and Su, B., 2011, Superhydrophobic Surface: From Natural to Biomimetic to Functional, *J. Colloid Interface Sci.*, 353, 335-355.
- Hamdiani, S., 2010, Adsorpsi-Desorpsi dan Selektivitas Hibrida Merkaptto Silika Terhadap Ion Emas (III) dalam Sistem Multilogam Au/Cu, Au/Ni dan Au/Cu/Ni, *Tesis*, Jurusan Kimia Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Gadjah Mada, Yogyakarta.

- Houston, D.F., 1972, *Rice Chemistry and Technology*, American Association of Cereal Chemist, Inc., Minnesota.
- Huang, Y.Y., and Chou, K.S., 2003, Studies on The Spin Coating Process of Silica Films, *Ceram. Int.*, 29, 485.
- Hwang S.W., Jung H.H., Hyun S.H., and Ahn Y.S., 2007, Effective preparation of crack-free silica aerogels via ambient drying, *J Sol Gel Sci Technol.*, 41, 139–146.
- Kalapathy, U., Proctor, A., and Shultz, J., 2000, A Simple Method for Production of Pure Silica from Rice Hull Ash, *Bioresour. Technol.*, 73, 257-262.
- Krishnarao, R.V., Subrahmanyam, J., and Kumar, T.J., 2000, Studies on The Formation of Black in Rice Husk Silika Ash, *J. Cer. Soc.*, 21, 99-104.
- Larena, A., Millan, F., Perez G., and Pinto, G., 2002, Effect of Surface Roughness on The Optical Properties of Multilayer Polymer Films, *Appl. Surf. Sci.*, 187, 339–346.
- Lathe, S.S., Imai, H., Ganesan, V., Kappenstein, A., and Rao, A.V., 2010, Optically Transparent Superhydrophobic TEOS-derived Silica Films by Surface Silylation Method, *J. Sol-Gel Sci. Technol.*, 53, 208-215.
- Mahltig, B., and Bottcher, H., 2002, Modified Silica Sol Coatings for Water-Repellent Textiles, *J. Sol-Gel Sci Technol.*, 27, 43-52.
- Mohamed, A.M.A., Abdullah, A.M., and Younan, N.A., 2014, Corrosion behavior of Superhydrophobic Surface: A review, *Arabian J. Chem*, Elsevier.
- Muthadhi, A., and Kothandaraman, S., 2010, Optimum Production Conditions for Reactive Rice Husk Ash, *Mater. Struct.*, 43, 1303-1315.
- Muromachi, T., Tsujino, T., Kamitani, K., and Maeda K., 2006, Application of Functional Coatings by Sol-Gel Method, *J. Sol-Gel Sci Techn*, 40, 267-272.
- Myshkin, N.K, Grigoriev, A.Y., Chizhik, S.A., Choi, K.Y., and Petokovets, M.I., 2003, Surface Roughness and Texture Analysis in Microscale, *Wear*, 254, 1001–1009.
- Nakajima, A., Hashimoto, K., and Watanabe, T., 2001, Invited Review: Recent Studies on Super-Hydrophobic Films, *Monatsh Chem*, 132, 31-41.
- Nuryono, Narsito, dan Astuti, E., 2004, Pengaruh Temperatur Pengabuan Sekam Padi terhadap Karakter Abu dan Silika Gel Sintetik, *Chem. Rev*, 2, 67-80.

- Pilotek, S., and Schmidt, H.K., 2003, Wettability of Microstructured Hydrophobic Sol-Gel Coatings, *J. Sol-Gel Sci Technol.*, 26, 789-792.
- Prasad, C.S., Maiti, K.N., and Venugopal, R., 2001, Effect of Rice Husk Ash in Whiteware Compositions, *J. Ceram. Int.*, 27, 629-635.
- Promnimit, S. and Dutta, J., 2010, Synthesis and Electrical Characterization of Multilayer Thin Films Designed by Layer-by-Layer Self Assembly of Nanoparticles, *J. Nano Res.*, 11, 1-6.
- Prusty, A., Gogoi, N., Jassala, M., and Agrawala A.K., 2009, Synthesis and Characterization of Non-fluorinated Copolymer Emulsion for Hydrophobic Finishing of Cotton Textiles, *Indian J. Fibre Text. Res.*, 35, 264-271.
- Puzenat, E., dan Pichat, P., 2003, Studying TiO₂ Coatings on Silica-Covered Glass by O₂ Photosorption Measurements and FTIR-ATR Spectrometry Correlation with The Self-Cleaning Efficacy, *J. Photochem. Photobio A: Chemistry*, 160, 127-133.
- Radonjic, L., and Nikolic, L., 1998, Effect of The Silica Sol-Gel Coatings on The Properties of Glass Substrate, *Ceram Int*, 24, 547-552.
- Ramezani, M., Vaezi, M.R., and Kazemzadeh, A., 2014, Preparation of Silane-Functionalized Silica Films Via Two-Step Dip Coating Sol-Gel and Evaluation of their Superhydrophobic Properties, *Appl. Surf. Sci.*, 317, 147-153.
- Ramzan, M., Ahmed, E., Niaz, N.A., Rana, A.M., Bhatti, A.S., Khalid, N.R., and Nadeem, M.Y., 2015, AFM Applications to Study The Morphology of HfO₂ Multilayer Thin Films, *Superlattices Microstruct.*, 82, 399-405.
- Rao, A.V., Latthe, S.S., Nadargi, D.Y., Hirashima, H., and Ganesan, V., 2009, Preparation of MTMS based Transparent Superhydrophobic Silica Films by Sol-Gel Method, *J. Colloid Interface Sci.*, 332, 484-490.
- Roig, A., Molins, E., Rodriguez, E., Martinez, S., Manas, M.M., and Vallribera, A., 2004, Superhydrophobic Silica Aerogels by Fluorination at The Gel Stage, *Chem. Commun.*, 20, 2316-2317.
- Rois, M.F., Ardhi, Z., Yuwana, M., dan Setyawan, H., 2010, *Perbandingan Stabilitas Lapisan Hidrofobik pada Substar Kaca dengan Metode Sol-Gel Berbasis Water Glass dan Senyawa Alkoksida*, Jurusan Teknik Kimia FTI ITS, Surabaya.

- Schottner, G., 2001, Hybrid Sol–Gel Derived Polymers: Applications of Multifunctional Materials, *Chem. Mater.*, 13, 3422–3435.
- Setyawan, H., Samsiadi, V., and Ambarwati, 2010, Hydrophobic Glass Coated with Surface Modified-Silica Film Prepared from Sodium Silicate, *The 1st Int. Seminar on Fundamental and Application of Chemical Engineering*, 3-4 November 2010, Surabaya.
- Shang, Q., Gao, L., Liu, H., and Xiao, G., 2011, Fabrication of Superhydrophobic Silica Film by Removing Polystyrene Spheres, *J. Sol-Gel Sci Techn*, 59, 334-337.
- Shiddique, R., 2008, Rice Husk Ash, Waste Materials and By-Products in Concrete, *Review*, Springer Berlin Heidelberg.
- Sriyanti, Taslimah, Nuryono and Narsito, 2004, Sintesis Silika Gel Terenkapsulasi Senyawa Organik Aktif dari Abu Sekam Padi untuk Adsorpsi Selektif Ion Logam Berat, *Laporan Kegiatan Hibah Pekerti*, Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Diponegoro, Semarang.
- Stalder, A.F., Kulik, G., Sage, D., Barbieri, L., and Hoffman, P., 2006, A Snake-Based Approach to Accurate Determination of Both Contact Point and Contact Angles, *Colloid Surface A.*, 286, 92–103.
- Steven, M.P., 1990, *Polymer Chemistry an Introduction*, 2nd edition 490-491, Oxford University Press, Inc., New York.
- Tadanaga, K., Katata, N., and Minami, T., 1997, Formation Process of Super-Water-Repellent Al₂O₃ coating films with High Transparency by Sol-Gel Method, *J. Am. Ceram. Soc.*, 80, 3213-3216.
- Teng, G, Wegner, J.R., Hurtt, G.J., and Soucek, M.D., 2001, Novel Inorganic/Organic Hybrid Materials Based On Blown Soybean Oil with Sol–Gel Precursors, *Prog. Org. Coat.*, 42, 29–37.
- Vinogradov, V.V., Agavonov, A.V., and Vinogradov, A.V., 2010, Superhydrophobic Effect of Hybrid Organo-Inorganik Materials, *J. Sol-Gel Sci. Technol.*, 53, 312-315.
- Wu, L. Y. L., Tan, G. H., Qian, M., and Li, T.H., 2005, Formulation of Transparent Hydrophobic Sol-Gel Hard Coatings, *SIMTech technical reports*, 6, 1-4.
- Yan, F., Gang, S., TongQing, W., Qian, C., LuQuan, R., 2007, Hidrophobicity Mechanism of Non-Smooth Pattern on Surface of Butterfly Wing, *Chinese Science Bulletin*, 52, 711–716.

- Yeong, Y.H., Steele, A., Loth, E., Bayer, I., and De Combarieu, G., 2012, Temperature and Humidity Effects on Superhydrophobicity of Nanocomposite Coatings, *Appl. Phys. Lett.*, 100, 053112.
- Yoshimitsu, Z., Nakajima, A., Watanabe, T., and Hashimoto, K., 2002, Effects of Structure on the Hydrophobicity and Sliding Behavior of Water Droplets, *Langmuir*, 18, 5818-5822.
- Zhang, Q., Wang, J., Wu, G., Shen, J., and Buddhudu, S., 2001, Interference Coating by Hydrophobic Aerogel-like SiO₂ Thin Films, *Mater. Chem. Phys.*, 72, 56-59.
- Zhang, X., Kono, H., Liu, Z., Nishimoto S., Tryk, D.A., Murakami, T., Sakai, H., Abe, M., and Fujishima, A., 2007, A Transparent and Photo-Patternable Superhydrophobic Film, *Chem. Commun.*, 46, 4949-4951.
- Zhang, Y., Wu, D., Sun, Y., and Peng, S., 2005, Sol-Gel Synthesis of Ethyl Modified Optical Silica Coatings and Gels from DDS and TEOS, *J. Sol-Gel Sci. Techn.*, 33, 19-24.