

DAFTAR PUSTAKA

- Al-hartomy, O.A., Al-Ghamdi, A.A., Farha, S.A., Dishovsky, N., & Mihaylov, M. (2016) 'Influence of bis (triethoxysilylpropyl) tetrasulfide amount on the properties of silica-filled epoxidized natural rubber-based composites', 23(4), pp. 357–362. doi: 10.1515/secm-2014-0156.
- Al-Hartomy, O.A., Al-Ghamdi, A.A., Farha, S.A., Dishovsky, N., & Mihaylov, M., Ivanov, M. (2016) 'Influence of carbon black/silica ratio on the physical and mechanical properties of composites based on epoxidized natural rubber', *Journal of Composite Materials*, 50(3), pp. 377–386. doi: 10.1177/0021998315575336.
- Alwaan, I. M. (2018). Rheological characterization and modeling of vulcanization kinetics of natural rubber/starch blends. *Journal of Applied Polymer Science*, 135(23), 46347. doi:10.1002/app.46347
- Alencar, A.De., Fernandes, C., Maria, A., Ruissi, C., & Guenter, B. (2019) 'Evaluation of silane effect as a coupling agent for metakaolin', pp. 1–16. doi: 10.1177/0095244319877667.
- Anandhan, M., Kaisare, N.S., Kannan, K., & Varkey, B. (2012) 'Population balance model for vulcanization of natural rubber with delayed-action accelerator and prevulcanization inhibitor', *Rubber Chemistry and Technology*, 85(2), pp. 219–243. doi: 10.5254/rct.12.89971.
- Andriani, F. & Surya, I. (2018) 'Silica dispersion enhancement in natural rubber composites utilising stearyl alcohol', *Journal of Physics: Conference Series*, 1116(4). doi: 10.1088/1742-6596/1116/4/042005.
- Ashraf, M.A., Peng, W., Zare, B., & Rhee, K.Y. (2018) 'Effects of Size and Aggregation/Agglomeration of Nanoparticles on the Interfacial/Interphase Properties and Tensile Strength of Polymer Nanocomposites', *Nanoscale Research Letters*. *Nanoscale Research Letters*, 13. doi: 10.1186/s11671-018-2624-0.
- Bakar, R. A., Yahya, R. & Gan, S. N. (2016) 'Production of High Purity Amorphous Silica from Rice Husk', *Procedia Chemistry*. Elsevier Ltd., 19, pp. 189–195. doi: 10.1016/j.proche.2016.03.092.
- Bayuaji, R. Darmawan, M.S., Husin N.A., Banugraha L., Alfi, M., & Abdullah, M.M.A.B. (2018) 'The Effect of Baggase Ash on Fly Ash-Based Geopolimer Binder', *IOP Conference Series: Materials Science and Engineering*, 374(1). doi: 10.1088/1757-899X/374/1/012085.
- Boontawee, H., Nakason, C., Kaesaman, A., Thittihamawong, A., & Chewchanwuttiwong, S. (2012) 'Application of benzyl ester of modified vegetable oils as rubber processing oils', *Advanced Materials Research*, 415–417, pp. 1164–1167. doi: 10.4028/www.scientific.net/AMR.415-417.1164.
- Campanelli, J. R., Gurer, C., Rose, T.L., & Varner, J.E. (2004) 'Dispersion, temperature and torque models for an internal mixer', *Polymer Engineering and Science*, 44(7), pp. 1247–1257. doi: 10.1002/pen.20120.
- Chandra, C. S. J., Bipinbal, P. K. & Sunil, K. N. (2017) 'Viscoelastic behaviour of silica filled natural rubber composites e Correlation of shear with elongational testing', *Polymer Testing*. Elsevier Ltd, 60, pp. 187–197. doi: 10.1016/j.polymertesting.2017.03.023.
- Chen, K. J., Xu, S. & Xu, D. L. (2013) 'Study on the effect of the temperature rise of rubber compound on tread rubber quality during mixing process', *Advanced Materials Research*, 750–752, pp. 806–810. doi: 10.4028/www.scientific.net/AMR.750-752.806.

- Choi, S. (2001) 'Influence of the silica content on rheological behaviour and cure characteristics of silica- filled styrene – butadiene rubber compounds', 530(August 2000), pp. 524–530. doi: 10.1002/pi.660.
- Choi, S. S. (2002) 'Difference in bound rubber formation of silica and carbon black with styrene-butadiene rubber', *Polymers for Advanced Technologies*, 13(6), pp. 466–474. doi: 10.1002/pat.211.
- Choi, S. S., Kim, I. S. & Woo, C. S. (2007) 'Influence of TESPT content on crosslink types and rheological behaviors of natural rubber compounds reinforced with silica', *Journal of Applied Polymer Science*, 106(4), pp. 2753–2758. doi: 10.1002/app.25744.
- Chokanandsombat, Y. & Sirisinha, C. (2014) 'Influence of Aromatic Content in Rubber Processing Oil on Viscoelastic Behaviour and Mechanical Properties of Styrene-butadiene-rubber For Tyre Thread Application', 22(7), pp. 599–606.
- Corredor, L., Maini, B., & Husein, M. (2018). Improving Polymer Flooding by Addition of Surface Modified Nanoparticles. SPE Asia Pacific Oil and Gas Conference and Exhibition. doi:10.2118/192141-ms.
- Da Costa, H.M., Nunes, R.C.R. Visconte, L.L.Y., & Furtado, C.R.G. (2001) 'Physical properties and swelling of natural rubber compounds containing rice husk ash', *Kgk-kautschuk Gummi Kunststoffe*, 54(5), pp. 242–249.
- Dick, B. J. & Gil, A. (2020) 'Measuring silica dispersion in rubber mixing', pp. 13–17.
- Dierkes, W. K. (2005) *Economic mixing of silica-rubber compounds: Interaction between the chemistry of the silica-silane reaction and the physics of mixing*.
- Dimier, F., Vergnes, B. & Vincent, M. (2004) 'Relationships between mastication conditions and rheological behavior of a natural rubber', *Rheologica Acta*, 43(2), pp. 196–202. doi: 10.1007/s00397-003-0342-7.
- Escócio, V. A., Visconte, L.L.Y., Nunes, R.C.R., & de Oliveira, M.G. (2008) 'Rheology and processability of natural rubber composites with Mica', *International Journal of Polymeric Materials and Polymeric Biomaterials*, 57(4), pp. 374–382. doi: 10.1080/00914030701420202.
- Faria, K. C. P. & Holanda, J. N. F. (2013) 'Incorporation of sugarcane bagasse ash waste as an alternative raw material for red ceramic', *Ceramica*, 59(351), pp. 473–480. doi: 10.1590/S0366-69132013000300019.
- Feng, Q., Chena, K., Maa, D., Lina, H., Liua, Z., Qina, S., & Luoa, Y. (2018) 'Synthesis of high specific surface area silica aerogel from rice husk ash via ambient pressure drying', *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. Elsevier, 539(November 2017), pp. 399–406. doi: 10.1016/j.colsurfa.2017.12.025.
- Freitas, J. V. & Farinas, C. S. (2017) 'Sugarcane Bagasse Fly Ash as a No-Cost Adsorbent for Removal of Phenolic Inhibitors and Improvement of Biomass Saccharification', *ACS Sustainable Chemistry and Engineering*, 5(12), pp. 11727–11736. doi: 10.1021/acssuschemeng.7b03214.
- Gheller, J., Ellwanger, M. V. & Oliveira, V. (2016) 'Polymer-filler interactions in a tire compound reinforced with silica', *Journal of Elastomers and Plastics*, 48(3), pp. 217–226. doi: 10.1177/0095244314568470.
- Ghorbani, F., Sanati, A. M. & Maleki, M. (2015) 'Production of Silica Nanoparticles from Rice Husk as Agricultural Waste by Environmental Friendly Technique', *Environmental Studies of Persian Gulf*, 2(1), pp. 56–65.
- Gonzalez, E.G.C., Costa, D.M.R., Visconte, L.L.Y., & Nunes, R.C.R. (2001) 'Silica and aluminum hydroxide filled compounds. Processing and vulcanization monitoring', *Polymer Testing*, 20(6), pp. 703–706. doi: 10.1016/S0142-9418(01)00006-X.
- Grunert, F. (2018) *Analytical Method Development to Predict the in-Rubber Dispersibility of Silica*.

- Guo, L., Huang, G., Zheng, J., & Li, G. (2014) 'Thermal oxidative degradation of styrene-butadiene rubber (SBR) studied by 2D correlation analysis and kinetic analysis', *Journal of Thermal Analysis and Calorimetry*, 115(1), pp. 647–657. doi: 10.1007/s10973-013-3348-0.
- Harandi, M. H., Alimoradi, F., Rowshan, G., Faghihi, M., Keivani, M., & Abadyan, M. (2017) 'Morphological and mechanical properties of styrene butadiene rubber/nano copper nanocomposites', *Results in Physics*. The Authors, 7, pp. 338–344. doi: 10.1016/j.rinp.2016.11.022.
- Hassan, A. F., Abdelghny, A. M., Elhadidy, H., & Youssef, A. M. (2014) 'Synthesis and characterization of high surface area nanosilica from rice husk ash by surfactant-free sol-gel method', *Journal of Sol-Gel Science and Technology*, 69(3), pp. 465–472. doi: 10.1007/s10971-013-3245-9.
- Hosseini, S. M. & Razzaghi-Kashani, M. (2014) 'Vulcanization kinetics of nano-silica filled styrene butadiene rubber', *Polymer*. Elsevier Ltd, 55(24), pp. 6426–6434. doi: 10.1016/j.polymer.2014.09.073.
- Huabcharoen, P., Wimolmala, E., Markpin, T., Sombatsompop, N. (2017) 'Purification and Characterization of Silica from Sugarcane Bagasse Ash as a Reinforcing Filler in Natural Rubber Composites', *BioResources*, 12(1), pp. 1228–1245. doi: 10.15376/biores.12.1.1228-1245.
- Iler, R. K. (1978) 'The Chemistry of Silica', *Literary Imagination*, 12(3), pp. 289–290. doi: 10.1093/litimag/imq040.
- J. Clarke (1995) 'Reduction viscosity versus mixing time, Polymer technology and materials engineering.
- Jeevanandam, J., Barhoum, A., Chan, Y.S., Dufresne, A., & Danquah, M.K. (2018) 'Review on nanoparticles and nanostructured materials: History, sources, toxicity and regulations', *Beilstein Journal of Nanotechnology*, 9(1), pp. 1050–1074. doi: 10.3762/bjnano.9.98.
- Jin, J., Noordermeer, J.W.M., Dierkes, W.K., & Blume, A. (2020) 'The effect of silanization temperature and time on the marching modulus of silica-filled tire tread compounds', *Polymers*, 12(1). doi: 10.3390/polym12010209.
- Joseph, A., George, B., Madhusoodanan, K.N., & Alex, R. (2015) 'Current status of sulphur vulcanization and devulcanization chemistry: process of vulcanization', *Rubber Sci*, 28(1), pp. 82–121.
- Kaewsakul, W., Sahakaro, K., Dierkes, W.K., & Noordermer, J.W.M. (2012) 'Optimization of mixing conditions for silica-reinforced natural rubber tire tread compounds', *Rubber Chemistry and Technology*, 85(2), pp. 277–294. doi: 10.5254/rct.12.88935.
- Kaewsakul, W., Sahakaro, K., Dierkes, W.K., & Noordermer, J.W.M. (2016) 'Factors influencing the flocculation process in silica-reinforced natural rubber compounds', *Journal of Elastomers and Plastics*, 48(5), pp. 426–441. doi: 10.1177/0095244315580456.
- Kanking, S., Niltui, P., Wimolmala, E., & Sombatsompop, E. (2012) 'Use of bagasse fiber ash as secondary filler in silica or carbon black filled natural rubber compound', *Materials and Design*. Elsevier Ltd, 41, pp. 74–82. doi: 10.1016/j.matdes.2012.04.042.
- Khan, M.I., Azizli, K., Sufian, S., Man, Z., & Khan, A.S. (2012) 'Simultaneous Preparation of Nano Silica and Iron Oxide from Palm Oil Fuel Ash and Thermokinetics of Template Reoval', *RSC Advances*, 00(1–3). doi: 10.1039/x0xx00000x.
- Kim, J. K., & Datta, S. (2013). *Rubber-Thermoset Blends: Micro and Nano Structured*.

- Advances in Elastomers I, 229–262. doi:10.1007/978-3-642-20925-3_8
- Kopylov, V. M., Kostyleva, E.I., Kostylev, I.M., & Koviazin, A.V. (2011) ‘Silica fillers for silicone rubber’, *International Polymer Science and Technology*, 38(4), pp. 35–47. doi: 10.1177/0307174x1103800408.
- Kruželák, J., Sýkora, R. and Hudec, I. (2017a) ‘Sulfur and peroxide curing of Rubber Compounds based on NR and NBR. Part II: Thermooxidative Ageing’, *KGK Kautschuk Gummi Kunststoffe*, 70(3), pp. 41–47.
- Kruželák, J., Sýkora, R. & Hudec, I. (2017b) ‘Vulcanization of rubber compounds with peroxide curing systems’, *Rubber Chemistry and Technology*, 90(1), pp. 60–88. doi: 10.5254/rct.16.83758.
- Leblanc, J. L. (2002) ‘Rubber-filler interactions and rheological properties in filled compounds’, *Progress in Polymer Science (Oxford)*, 27(4), pp. 627–687. doi: 10.1016/S0079-6700(01)00040-5.
- Lemessa Jembere, A. (2017) ‘Studies on the Synthesis of Silica Powder from Rice Husk Ash as Reinforcement Filler in Rubber Tire Tread Part: Replacement of Commercial Precipitated Silica’, *International Journal of Materials Science and Applications*, 6(1), p. 37. doi: 10.11648/j.ijmsa.20170601.16.
- Liang, J., Feng, N., Chang, S., Wang, C.X., & Zhang, G. (2013) ‘Effect of polysulfane silanized silica on the morphology and mechanical properties of brombutyl rubber vulcanizates’, *Rubber Chemistry and Technology*, 86(4), pp. 558–571. doi: 10.5254/rct.13.87960.
- Liou, T. H. & Yang, C. C. (2011) ‘Synthesis and surface characteristics of nanosilica produced from alkali-extracted rice husk ash’, *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*. Elsevier B.V., 176(7), pp. 521–529. doi: 10.1016/j.mseb.2011.01.007.
- Lipińska, M. & Soszka, K. (2019) ‘Viscoelastic Behavior, Curing and Reinforcement Mechanism of Various Silica and POSS Filled Methyl-Vinyl Polysiloxane MVQ Rubber’, *Silicon*, 11(5), pp. 2293–2305. doi: 10.1007/s12633-019-0081-8.
- Lolage, M., Parida, P., Chaskar, M., Gupta, A., & Rautaray, D (2020) ‘Green Silica: Industrially scalable & sustainable approach towards achieving improved “nano filler – Elastomer” interaction and reinforcement in tire tread compounds’, *Sustainable Materials and Technologies*.
<https://doi.org/10.1016/j.susmat.2020.e00232>.
- López-Manchado, M.A., Arroyo, M., Herrero, B., & Biagiotti, J. (2003) ‘Vulcanization kinetics of natural rubber-organoclay nanocomposites’, *Journal of Applied Polymer Science*, 89(1), pp. 1–15. doi: 10.1002/app.12082.
- Maciejewska, M. & Siwek, M. (2020) ‘The influence of curing systems on the cure characteristics and physical properties of styrene-butadiene elastomer’, *Materials*, 13(23), pp. 1–20. doi: 10.3390/ma13235329.
- Mahayati (2017) *Laporan Kerja Praktek di PG Madukismo*. Universitas Islam Indonesia. Yogyakarta.
- Maijan, P., Saetung, N. & Kaewsakul, W. (2017) ‘Mixing and comparative properties of NR compounds filled with different types of reinforcing fillers’, *Solid State Phenomena*, 266 SSP, pp. 172–176. doi: 10.4028/www.scientific.net/SSP.266.172.
- Majesté, J. & Vincent, F. (2015) ‘A kinetic model for silica-filled rubber reinforcement’, 405. doi: 10.1122/1.4906621.
- Mangi, S.A., Ashalatha, K., Madhuri, M., Sumalatha, P. (2017) ‘Utilization of sugarcane bagasse ash in concrete as partial replacement of cement’, *IOP Conference Series: Materials Science and Engineering*, 271(1), pp. 12–16. doi: 10.1088/1757-899X/271/1/012001.

- Marzokka, A.J. (2007) 'Evaluation of the polymer-solvent interaction parameter X for the system cured styrene butadiene rubber and toluene', *European Polymer Journal*, 43(2682-2689). doi:10.1016/j.eurpolymj.2007.02.034.
- Megawati, Fardhyanti, D.S., Putri, R.D.A., Fianti, O., A.F., & Akhir, A.E. (2018) 'Synthesis of Silica Powder from Sugar Cane Bagasse Ash and Its Application as Adsorbent in Adsorptive-distillation of Ethanol-water Solution', *MATEC Web of Conferences*, 237, pp. 1-6. doi: 10.1051/mateconf/201823702002.
- Meng, X., Zhang, Y., Lu, J., Zhang, Z., Liu, L., Chu, P.K. (2013) 'Effect of bamboo charcoal powder on the curing characteristics, mechanical properties, and thermal properties of styrene-butadiene rubber with bamboo charcoal powder', *Journal of Applied Polymer Science*, 130(6), pp. 4534-4541. doi: 10.1002/app.39522.
- Meunchang, S., Panichsakpatana, S. and Weaver, R. W. (2005) 'Co-composting of filter cake and bagasse; by-products from a sugar mill', *Bioresource Technology*, 96(4), pp. 437-442. doi: 10.1016/j.biortech.2004.05.024.
- Mihara, S. (2009) 'Reactive Processing of Silica-Reinforced Tire Rubber: New Insight into The Time- And Temperature-Dependence of Silica Rubber Interaction', Ph.D thesis, University of Twente, Enschede, Netherlands.
- Mitsoulis, E., Battisti, M., Neunhäuserer, A., Perko, L., Friesenbichler, W., Ansari, M. and Hatzikiriakos, S. G. (2017) 'Flow behaviour of rubber in capillary and injection moulding dies', *Plastics, Rubber and Composites*. Taylor & Francis, 46(3), pp. 110-118. doi: 10.1080/14658011.2017.1298207.
- Mitsoulis, E., Battisti, M., Neunhäuserer, A., Perko, L., Friesenbichler, W., Ansari, M., Hatzikiriakos, S. G., *et al.* (2017) 'Flow behaviour of rubber in capillary and injection moulding dies'. Taylor & Francis, 8011(March). doi: 10.1080/14658011.2017.1298207.
- Modani, P. O. and Vyawahare, M. R. (2013) 'Utilization of bagasse ash as a partial replacement of fine aggregate in concrete', *Procedia Engineering*. Elsevier B.V., 51(NUiCONE 2012), pp. 25-29. doi: 10.1016/j.proeng.2013.01.007.
- Molin Filho, R. G. D. *et al.* (2019) 'Sugarcane bagasse ash micronized using air jet mills for green pozzolan in Brazil', *International Journal of Chemical Engineering*, 2019. doi: 10.1155/2019/5307098.
- Mor, S., Negi, P. and Ravindra, K. (2019) 'Potential of agro-waste sugarcane bagasse ash for the removal of ammoniacal nitrogen from landfill leachate', *Environmental Science and Pollution Research*. Environmental Science and Pollution Research, (2003). doi: 10.1007/s11356-019-05563-7.
- Movahed, S. O., Ansarifar, A. and Song, M. (2009) 'Effect of silanized silica nanofiller on tack and green strength of selected filled rubbers', *Polymer International*, 58(4), pp. 424-429. doi: 10.1002/pi.2554.
- Murti, R.H., Christiana, S. (2016) "Sintesis dan modifikasi silika gel dari abu layang ampas tebu dengan CTAB dan aplikasinya sebagai adsorben Cr (VI)", Tesis, Universitas Gadjah Mada, Yogyakarta.
- Naebpetch, W., Junhasavasdikul, B., Saetung, A., Tulyapitak, T. & Nithi-Uthai, N. (2017) 'Influence of filler type and loading on cure characteristics and vulcanisate properties of SBR compounds with a novel mixed vulcanisation system', *Plastics, Rubber and Composites*. Taylor & Francis, 46(3), pp. 137-145. doi: 10.1080/14658011.2017.1299419.
- Narongthong, J., Sae-Oui, P. & Sirisinha, C. (2018) 'Effects of mixing parameters and their interactions on properties of carbon black filled styrene-butadiene rubber', *Rubber Chemistry and Technology*, 91(3), pp. 521-536. doi: 10.5254/rct.18.82581.
- Noor-UI-Amin (2016) 'Synthesis and characterization of geopolymer from bagasse

- bottom ash, waste of sugar industries and naturally available China clay', *Journal of Cleaner Production*. Elsevier Ltd, 129, pp. 491–495. doi: 10.1016/j.jclepro.2016.04.024.
- Noushad, M., Ab Rahman, P., Zulkifli, N.S.C., Husein, A., & Mohamad, D. (2014) 'Low surface area nanosilica from an agricultural biomass for fabrication of dental nanocomposites', *Ceramics International*, 40(3), pp. 4163–4171. doi: 10.1016/j.ceramint.2013.08.073.
- Olewi, J. K. & Hamza, M. S. (2015) 'Study the Tensile Characteristics of Elastomer Composites Reinforced with Alumina and Precipitated Silica Particles', *&Tech.Journal*, 33(5).
- Online, V. A. (2016) 'RSC Advances Improvement of mechanical performance of solution styrene butadiene rubber by controlling the concentration and the size of in situ derived', pp. 33643–33655. doi: 10.1039/C5RA25423J.
- Ozório, M. D. S., dos Reis, E.A.P., dos Reis, S.R., Bellucci, F.S., & Job, A.E. (2015) 'Sugarcane bagasse ash as a reinforcing filler in thermoplastic elastomers: Structural and mechanical characterizations', *Journal of Applied Polymer Science*, 132(7). doi: 10.1002/app.41466.
- Pangamol, P., Malee, W., Yujaroen, R., Sae-Oui, P., & Siriwong, C. (2018) 'Utilization of Bagasse Ash as a Filler in Natural Rubber and Styrene–Butadiene Rubber Composites', *Arabian Journal for Science and Engineering*. Springer Berlin Heidelberg, 43(1), pp. 221–227. doi: 10.1007/s13369-017-2859-6.
- Perindustrian. (2019) *Berita Internal Kemenperin, Kementerian Perindustrian*.
- Phattarateera, S. (2019) 'The Viscosity Effect of Masticated Natural vs. Synthetic Isoprene Rubber on Toughening of Polylactic Acid', 2019.
- Pourhossaini, M. R. & Razzaghi-Kashani, M. (2014) 'Effect of silica particle size on chain dynamics and frictional properties of styrene butadiene rubber nano and micro composites', *Polymer*. Elsevier Ltd, 55(9), pp. 2279–2284. doi: 10.1016/j.polymer.2014.03.026.
- Purnawan, C., Martini, T. & Rini, I. P. (2018) 'Sintesis dan Karakterisasi Silika Abu Ampas Tebu Termodifikasi Arginin sebagai Adsorben Ion Logam Cu (II)', *ALCHEMY Jurnal Penelitian Kimia*, 14(2), p. 333. doi: 10.20961/alchemistry.14.2.19512.334-349.
- Rabiei, S. & Shojaei, A. (2016) 'Vulcanization kinetics and reversion behavior of natural rubber/styrene-butadiene rubber blend filled with nanodiamond - The role of sulfur curing system', *European Polymer Journal*. Elsevier Ltd, 81, pp. 98–113. doi: 10.1016/j.eurpolymj.2016.05.021.
- Raharjo, A. S., Kurniawan, I., Maulana, G., Noviari, Y., Purwa, S., Fawzi, M., & Bayuaji, R. (2017) 'The Influence Sugarcane Bagasse Ash and Metakaolin on Mechanical Properties Fly Ash Geopolymer Paste', *Asian Journal of Applied Sciences*, 5(4), pp. 650–655. doi: 10.24203/AJAS.V5I4.4915.
- Ramezani, M. & Ripin, Z. M. (2012) 'Characteristics of elastomer materials', *Rubber-Pad Forming Processes*, pp. 43–64. doi: 10.1533/9780857095497.43.
- Reuvekamp, L. A. E. M. (2004) 'Effect of zinc oxide on the reaction of TESPT silane coupling agent with silica and rubber', *Rubber Chemistry and Technology*, 77(1), pp. 34–49.
- Rishi, K., Beaucage G., Narayanan V., Chaunby M., Muldering A., Kuppa V.K., Ilavsky J., Rackaitis Mindaugas. (2019) 'A thermal model to describe kinetic dispersion in rubber nanocomposites: The effect of mixing time on dispersion', *Polymer*. Elsevier, 175(November 2018), pp. 272–282. doi: 10.1016/j.polymer.2019.03.044.
- Roy, K., Alam, M.N., Mandal, S.K., & Debnath, S.C. (2014) 'Surface modification of sol–gel

- derived nano zinc oxide (ZnO) and the study of its effect on the properties of styrene–butadiene rubber (SBR) nanocomposites’, *Journal of Nanostructure in Chemistry*, 4(4), pp. 133–142. doi: 10.1007/s40097-014-0127-9.
- Ryu, C., Kim, S.J., Kim, D.I., & Kaang, S. (2016) ‘The Effect of Surface Area of Silicas on Their Reinforcing Performance to Styrene-butadiene Rubber Compounds’, *Elastomers and Composites*, 51(2), pp. 128–137. doi: 10.7473/ec.2016.51.2.128.
- Jang, F. (2013) ‘Study on Mixing Condition of the Rubber Composite Containing Functionalized S-SBR, Silica and Silane: II. Effect of Mixing Time and Temperature’, *Elastomers and Composites*, 48(2), pp. 103–113.
- Sae-oui, P., Sirisinha, C., Hatthapanit, K., & Thepsuwan, U. (2005) ‘Comparison of reinforcing efficiency between Si-69 and Si-264 in an efficient vulcanization system Comparison of reinforcing efficiency between Si-69 and Si-264 in an efficient vulcanization system’, (June). doi: 10.1016/j.polymeresting.2004.05.008.
- Dos Santos, R.J., da Silva Agostin, D.L., Cabrera, F.C., dos Reis, E.A.P., Ruiz, M.R., Budemberg, E.R., Teixeira, S.R., & Job, A.E. (2014) ‘Sugarcane bagasse ash: New filler to natural rubber composite’, *Polimeros*, 24(6), pp. 646–653. doi: 10.1590/0104-1428.1547.
- Sapkota, J. (2011) ‘Influence of clay modification on curing kinetics of natural rubber nanocomposites’, Thesis, Tampere University of Technology, Finlandia.
- Sholeh, M., Rochmadi, R., Sulisty, H., & Budhijanto, B. (2020) ‘Nanostructured silica from bagasse ash: the effect of synthesis temperature and pH on its properties’, *Journal of Sol-Gel Science and Technology*. Springer US. doi: 10.1007/s10971-020-05416-7.
- Sholeh, M., Rochmadi, R., Sulisty, H., & Budhijanto, B. (2020) ‘Synthesis of precipitated silica from bagasse ash as reinforcing filler in rubber’, *IOP Conference Series: Materials Science and Engineering*, 778(1). doi: 10.1088/1757-899X/778/1/012012.
- Sholeh, M., Rochmadi, R., Sulisty, H., & Budhijanto, B. (2021) ‘Nanostructured Silica from Bagasse Ash: The Importance of Mixing Parameters on its Reinforcing Role in Natural Rubber Composite’, *Arabian Journal for Science and Engineering*. Springer Berlin Heidelberg, (0123456789). doi: 10.1007/s13369-021-05647-y.
- Shridharan, H. (2019) ‘Effect of Silica Loading and Coupling agent on wear and fatigue properties of a tread compound’, *Rubber Chemistry and Technology*. doi: 10.5254/rct.18.81570.
- Sisanth, K. S., Thomas, M. G., Abraham, J., & Thomas, S. (2017). General introduction to rubber compounding. *Progress in Rubber Nanocomposites*, 1–39. doi:10.1016/b978-0-08-100409-8.00001-2.
- Statistik, B. P. (2017) *Statistik Tebu Indonesia (Indonesian Sugar Cane Statistics) 2017*. Jakarta. Available at: <http://www.ghbook.ir/index.php?name>.
- Suhendarwati, L., Bambang, B. & Susanawati, L. D. (2011) ‘Pengaruh Konsentrasi Larutan Kalium Hidroksida pada Abu Dasar Ampas Tebu Teraktivasi’, *Jurnal Sumberdaya Alam dan Lingkungan*, 1, pp. 19–25. Available at: <http://jsal.ub.ac.id/index.php/jsal/article/view/101/97>.
- Surya, I. (2019) ‘The degree of filler dispersion, rheometric and mechanical properties of carbon black-filled styrene-butadiene rubber composites in the presence of alkanolamide the degree of filler dispersion, rheometric and mechanical properties of carbon black-filled’, pp. 6–11. doi: 10.1088/1757-899X/523/1/012063.
- Suzuki, N., Ito, M. & Yatsuyanagi, F. (2005) ‘Effects of rubber/filler interactions on deformation behavior of silica filled SBR systems’, *Polymer*, 46(1), pp. 193–201. doi: 10.1016/j.polymer.2004.10.066.

- Thapong, P., Sae-Oui, P. & Sirisinha, C. (2016) 'Effects of silanization temperature and silica type on properties of silica-filled solution styrene butadiene rubber (SSBR) for passenger car tire tread compounds', *Journal of Applied Polymer Science*, 133(17), pp. 3–10. doi: 10.1002/app.43342.
- Torres Agredo, J., de Gutiérrez, R.M., Giraldo, C.E.E., & Salcedo, L.O.G. (2014) 'Characterization of sugar cane bagasse ash as supplementary material for Portland cement', *Ingenieria e Investigacion*, 34(1), pp. 5–10. doi: 10.15446/ing.investig.v34n1.42787.
- Ulkarni, A. K. K., Pugh, C., Jana, S.C., Wims, D.T., & Gawad, A.A. (2019) 'Crosslink of SBR compounds for tire thread using benzocyclobutene chemistry', *Rubber Chemistry and Technology*, 92(1), pp. 25–42. doi: 10.5254/rct.18.81512.
- Waddell, B. W., Lee, S., Lin, T., & Yang, E. (2019) 'Factors influencing silica' s effectiveness in PCR tires', pp. 16–19.
- Wang, H., Apostolidis, P., Zhu, J., Liu, X., Skarpas, A., & Erkens, S. (2020). The role of thermodynamics and kinetics in rubber-bitumen systems: a theoretical overview. *International Journal of Pavement Engineering*, 1–16. doi:10.1080/10298436.2020.1724289.
- Ward, A. A. & Khalf, A. I. (2009) 'Influence of TESPT on the physico-mechanical and dielectric properties of silica filled SBR composites', *KGK Kautschuk Gummi Kunststoffe*, 62(12), pp. 650–656.
- Xu, Q., Ji, T, Gao, S.J., Zang, Z., & Wu, N. (2018) 'Characteristics and applications of sugar cane bagasse ash waste in cementitious materials', *Materials*, 12(1), pp. 1–19. doi: 10.3390/ma12010039.
- Yantaboot, K. & Amornsakchai, T. (2016) 'Effect of mastication time on the low strain properties of short pineapple leaf fiber reinforced natural rubber composites', *Polymer Testing*. Elsevier Ltd. doi: 10.1016/j.polymertesting.2016.11.006.
- Yantaboot, K. & Amornsakchai, T. (2017) 'Effect of mastication time on the low strain properties of short pineapple leaf fiber reinforced natural rubber composites', *Polymer Testing*. Elsevier Ltd, 57(May 2018), pp. 31–37. doi: 10.1016/j.polymertesting.2016.11.006.
- Yin, C., & Zhang, Q. (2019). Effects of octamethylcyclotetrasiloxane grafting and in situ silica particle generation on the curing and mechanical properties of a styrene butadiene rubber composite. *RSC Advances*, 9(59), 34330–34341. doi:10.1039/c9ra05475h.
- Zhang, C., Tang, Z., Guo, B, & Zhang, L. (2018) 'Significantly improved rubber-silica interface via subtly controlling surface chemistry of silica', *Composites Science and Technology*. Elsevier Ltd, 156, pp. 70–77. doi: 10.1016/j.compscitech.2017.12.020.
- Zhong, B., Jia, Z., Hu, D., Luo, Y, & Jia, D. (2015) 'Reinforcement and reinforcing mechanism of styrene-butadiene rubber by antioxidant-modified silica', *Composites Part A: Applied Science and Manufacturing*. Elsevier Ltd, 78, pp. 303–310. doi: 10.1016/j.compositesa.2015.08.030.