

References

- [1] Australian Academy of Science, “Health effects of environmental noise pollution,” <https://is.gd/vHPMWK>, 2017, [Online; accessed 19-August-2018].
- [2] E. Franssen, C. Van Wiechen, N. Nagelkerke, and E. Lebet, “Aircraft noise around a large international airport and its impact on general health and medication use,” *Occupational and environmental medicine*, vol. 61, no. 5, pp. 405–413, 2004.
- [3] P. G, “Assessment of traffic noise and its impact on the community,” *Int J Environ Stud*, vol. 60(6), pp. 595–602, 2003.
- [4] V. R. Garg N, Gupta V, “Noise pollution and its impact on urban life,” *J Environ Res Dev*, vol. 2, pp. 290–296, 2007.
- [5] D. R. Raichel, *The science and applications of acoustics*. Springer Science & Business Media, 2006.
- [6] V. Pathak, B. Tripathi, and V. kumar Mishra, “Evaluation of traffic noise pollution and attitudes of exposed individuals in working place,” *Atmospheric Environment*, vol. 42, no. 16, pp. 3892–3898, 2008.
- [7] J. Sorvari, R. Antikainen, and O. Pyy, “Environmental contamination at finnish shooting ranges—the scope of the problem and management options,” *The Science of the total environment*, vol. 366, pp. 21–31, August 2006.
- [8] A. J. Crocker MJ, Li Z, “Measurements of tyre/road noise and of acoustical properties of porous road surfaces,” *Int J Acoust Vib*, vol. 10(2), pp. 52–60, Feb 2005.
- [9] K. Parris and A. Schneider, “Impacts of traffic noise and traffic volume on birds of roadside habitats,” *Ecology and Society*, vol. 14, June 2009.

- [10] R. Padhye and R. Nayak, *Acoustic textiles*. Springer, 2016.
- [11] P. Mondal, “How to Control Noise Pollution? (6 Effective Measures),” <https://is.gd/9zQfz2>, [Online; accessed 19-July-2019].
- [12] “What is sound and how is it produced?” <https://physics.stackexchange.com/questions/13/what-is-sound-and-how-is-it-produced>, [Online; accessed 19-July-2019].
- [13] “Physics — Sounds Too Cool To Be True?” <https://www.dummies.com/education/science/physics-sounds-too-cool-to-be-true/>, [Online; accessed 19-July-2019].
- [14] “The Propagation of sound,” <https://pages.jh.edu/~virtlab/ray/acoustic.htm>, [Online; accessed 19-July-2019].
- [15] “Acoustics,” <http://mh-audio.nl/Acoustic.html>, 2020, [Online; accessed 10-Jan-2020].
- [16] “Octave Bands frequencies,” <https://www.cirrusresearch.co.uk/blog/2011/11/what-are-octave-and-third-octave-band-filters-on-a%20sound%20level-meter/>, [Online; accessed 10-Jan-2020].
- [17] V. V. Kadam and R. Nayak, “Basics of acoustic science,” in *Acoustic Textiles*. Springer, 2016, pp. 33–42.
- [18] L. Wintzell, *Acoustic Textiles - the case of wall panels in home environment*. University of Borås/Swedish School of Textiles, 2014.
- [19] Wikipedia, “Sound Intensity,” https://en.wikipedia.org/wiki/Sound_intensity, 2015, [Online; accessed 22-Feb-2020].
- [20] R. E. Berg, “Infrasound Physics,” <https://www.britannica.com/science/infrasound>, [Online; accessed 22-Feb-2020].
- [21] R. Nave, “Sound Intensity,” <http://hyperphysics.phy-astr.gsu.edu/hbase/Sound/intens.html>, [Online; accessed 20-Jan-2020].
- [22] Acoustima, “How to calculate acoustic value in a building,” <https://acoustima.com/how-to-calculate-acoustic-value-in-a-building/>, 2019, [Online; accessed 17-Aug-2019].

- [23] WikiLectures, “Acoustic pressure,” https://www.wikilectures.eu/w/Acoustic_pressure, 2016, [Online; accessed 17-Aug-2018].
- [24] GPRESSLEY, “Basic Acoustic Concepts Series: Part Two,” <https://is.gd/ggPBhR>, 2017, [Online; accessed 17-Aug-2018].
- [25] E. ToolBox, “Acoustic pressure,” https://www.engineeringtoolbox.com/sound-pressure-d_711.html, 2004, [Online; accessed 17-Aug-2018].
- [26] “Engineering Acoustics/Sound Absorbing Structures and Materials,” https://en.wikibooks.org/wiki/Engineering_Acoustics/Sound_Absorbing_Structures_and_Materials, 2017, [Online; accessed 17-Aug-2018].
- [27] D. B. Wiki, “Sound absorption,” https://www.designingbuildings.co.uk/wiki/Sound_absorption, 2015, [Online; accessed 22-May-2020].
- [28] M. V. Chavhan, “Acoustic Textiles,” <https://www.slideshare.net/wasimchavhan/acoustic-textiles-sound-absorbing-textile>, 2010-2012, [Online; accessed 18-June-2018].
- [29] P. R. Puranik, R. R. Parmar, and P. P. Rana, “Nonwoven acoustic textiles - a review,” *International Journal of Advanced Research in Engineering and Technology (IJARET)*, ISSN 0976 -6499, vol. 5, pp. 81–88, 03 2014.
- [30] K. A. Jayaraman, “Acoustical absorptive properties of nonwovens,” Ph.D. dissertation, North Carolina State University, Raleigh, 2005.
- [31] S. Aso and R. Kinoshita, “Sound absorption characteristics of fiber assemblies,” *Journal of the Textile Machinery Society of Japan*, vol. 10, pp. 209–217, 01 1964.
- [32] P. Soltani and M. Zerrebini, “The analysis of acoustical characteristics and sound absorption coefficient of woven fabrics,” *Textile Research Journal*, vol. 82, no. 9, pp. 875–882, 2012.
- [33] A. Patnaik, “Materials used for acoustic textiles,” in *Acoustic Textiles*. Springer, 10 2016, pp. 73–92.

- [34] Y. Na, J. Lancaster, J. Casali, and G. Cho, "Sound absorption coefficients of micro-fiber fabrics by reverberation room method," *Textile Research Journal*, vol. 77, no. 5, pp. 330–335, 2007.
- [35] M. Tascan and E. A. Vaughn, "Effects of fiber denier, fiber cross-sectional shape and fabric density on acoustical behavior of vertically lapped nonwoven fabrics," *Journal of Engineered Fabrics & Fibers (JEFF)*, vol. 3, no. 2, 2008.
- [36] N. Voronina, "Acoustic properties of fibrous materials," *Applied Acoustics - Appl Acoust*, vol. 42, pp. 165–174, Dec 1994.
- [37] M. Tascan and E. A. Vaughn, "Effects of total surface area and fabric density on the acoustical behavior of needlepunched nonwoven fabrics," *Textile Research Journal*, vol. 78, no. 4, pp. 289–296, 2008.
- [38] M. Mvubu, A. Patnaik, and R. D. Anandjiwala, "Process parameters optimization of needle-punched nonwovens for sound absorption application," *Journal of Engineered Fibers and Fabrics*, vol. 10, no. 4, p. 155892501501000415, 2015.
- [39] X. Liu, X. Yan, L. Li, and H. Zhang, "Sound-absorption properties of kapok fiber nonwoven fabrics at low frequency," *Journal of Natural Fibers*, vol. 12, no. 4, pp. 311–322, 2015. [Online]. Available: <http://dx.doi.org/10.1080/15440478.2014.919891>
- [40] S. Hassanzadeh, H. Hasani, and M. Zarrebini, "Analysis and prediction of the noise reduction coefficient of lightly-needled estabragh/polypropylene nonwovens using simplex lattice design," *The Journal of The Textile Institute*, vol. 105, no. 3, pp. 256–263, 2014.
- [41] H. Xiang, D. Wang, H. Liu, N. Zhao, and J. Xu, "Investigation on sound absorption properties of kapok fibers," *Chinese Journal of Polymer Science (English Edition)*, vol. 31, no. 3, pp. 521–529, 2013.
- [42] D. J. Oldham, C. A. Egan, and R. D. Cookson, "Sustainable acoustic absorbers from the biomass," *Applied Acoustics*, vol. 72, no. 6, pp. 350–363, 2011.

- [43] G. Thilagavathi, E. Pradeep, T. Kannaian, and L. Sasikala, "Development of natural fiber nonwovens for application as car interiors for noise control," *Journal of Industrial Textiles*, vol. 39, no. 3, pp. 267–278, 2010.
- [44] H. S. Seddeq, N. M. Aly, A. Marwa A, and M. Elshakankery, "Investigation on sound absorption properties for recycled fibrous materials," *Journal of Industrial Textiles*, vol. 43, no. 1, pp. 56–73, 2013.
- [45] A. Patnaik, M. Mvubu, S. Muniyasamy, A. Botha, and R. D. Anandjiwala, "Thermal and sound insulation materials from waste wool and recycled polyester fibers and their biodegradation studies," *Energy and Buildings*, vol. 92, April 2015.
- [46] J. Manning and R. Panneton, "Acoustical model for shoddy-based fiber sound absorbers," *Textile Research Journal*, vol. 83, no. 13, pp. 1356–1370, 2013.
- [47] D. Parikh, Y. Chen, and L. Sun, "Reducing automotive interior noise with natural fiber nonwoven floor covering systems," *Textile research journal*, vol. 76, no. 11, pp. 813–820, 2006.
- [48] Y. Lee and C. Joo, "Sound absorption properties of recycled polyester fibrous assembly absorbers," *AUTEX Research Journal*, vol. 3, no. 2, pp. 78–84, 2003.
- [49] L. A. ALRahman, R. I. Raja, and R. A. Rahman, "Experimental study on natural fibers for green acoustic absorption materials," *American Journal of Applied Sciences*, vol. 10, no. 10, pp. 1307–1314, 2013. [Online]. Available: <https://www.thescipub.com/journals/ajas>
- [50] A. Khan, "Vibro-acoustic products from re-cycled raw materials using a cold extrusion process. a continuous cold extrusion process has been developed to tailor a porous structure from polymeric waste, so that the final material possesses particular vibro-acoustic properties." Ph.D. dissertation, School of Engineering, Design and Technology, University of Bradford, 5 2010. [Online]. Available: <http://hdl.handle.net/10454/4289>
- [51] J. P. Arenas and M. J. Crocker, "Recent trends in porous sound-absorbing materials," *Sound & vibration*, vol. 44, no. 7, pp. 12–18, 2010.

- [52] W.-H. Chen, F.-C. Lee, and D.-M. Chiang, "On the acoustic absorption of porous materials with different surface shapes and perforated plates," *Journal of Sound and Vibration*, vol. 237, no. 2, pp. 337 – 355, 2000. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/S0022460X00930293>
- [53] V. S. Moholkar and M. M. Warmoeskerken, "Acoustical characteristics of textile materials," *Textile Research Journal*, vol. 73, no. 9, pp. 827–837, 2003.
- [54] C.-W. Lou, J.-H. Lin, and K.-H. Su, "Recycling polyester and polypropylene nonwoven selvages to produce functional sound absorption composites," *Textile Research Journal*, vol. 75, no. 5, pp. 390–394, 2005.
- [55] Y. Shoshani and M. Wilding, "Effect of pile parameters on the noise absorption capacity of tufted carpets," *Textile research journal*, vol. 61, no. 12, pp. 736–742, 1991.
- [56] Y. Z. Shoshani, "Effect of nonwoven backings on the noise absorption capacity of tufted carpets," *Textile Research Journal*, vol. 60, no. 8, pp. 452–456, 1990.
- [57] W.-D. Y. Shu Yang, "Air permeability and acoustic absorbing behavior of nonwovens," *Journal of Fiber Bioengineering and Informatics*, vol. 3, no. 4, pp. 204–208, 2011.
- [58] Z. Bo and T. Chen, "Calculation of sound absorption characteristics of porous sintered fiber metal," *Applied Acoustics - APPL ACOUST*, vol. 70, pp. 337–346, Feb 2009.
- [59] M. Küçük and Y. Korkmaz, "The effect of physical parameters on sound absorption properties of natural fiber mixed nonwoven composites," *Textile Research Journal*, vol. 82, no. 20, pp. 2043–2053, 2012.
- [60] G. Iannace, "Acoustic properties of nanofibers," *Noise & Vibration Worldwide*, vol. 45, no. 10, pp. 29–33, 2014.
- [61] Elmarco, "Acoustics," <http://www.elmarco.com/application-areas/acoustics/>, online; accessed January 2016.

-
- [62] A. Trematerra, G. Iannace, S. Nesti, E. Fatarella, and F. Peruzzi, “Acoustic properties of nanofibers,” in *7th Forum Acusticum*, 2014.
- [63] S. Akasaka, T. Kato, H. Matsumoto, and S. Asai, “Sound absorption characteristics of silica nanofiber sheet,” in *Abstracts of the 21st International Congress on Sound and Vibration*, 2014.
- [64] O. Jirsak and S. Petrik, “Recent advances in nanofibre technology: Needleless electrospinning,” *International Journal of Nanotechnology*, vol. 9, pp. 836–845, May 2012.
- [65] J. Mohrova and K. Kalinova, “Different structures of pva nanofibrous membrane for sound absorption application,” *Journal of Nanomaterials*, vol. 2012, pp. 1–4, 2012.
- [66] Y. Na, T. Agnhage, and G. Cho, “Sound absorption of multiple layers of nanofiber webs and the comparison of measuring methods for sound absorption coefficients,” *Fibers and Polymers*, vol. 13, no. 10, pp. 1348–1352, Dec 2012.
- [67] M. Ayub, A. C. Zander, C. Q. Howard, B. S. Cazzolato, V. N. Shanov, N. T. Alvarez, and D. M. Huang, “Acoustic absorption behaviour of carbon nanotube arrays,” in *Inter-noise and Noise-Con congress and conference proceedings*, vol. 249, no. 7. Institute of Noise Control Engineering, 2014, pp. 929–938.
- [68] J. Alba, R. Del Rey, L. Berto, and C. Hervás, “Use of textile nanofibers to improve the sound absorption coefficient of drilled panels for acoustic applications,” in *Acoustics 2012*, S. F. d’Acoustique, Ed., Nantes, France, Apr 2012.
- [69] V. R., “Sound absorption, thermal and mechanical behavior of polyurethane foam modified with nano silica, nano clay and crumb rubber fillers,” *International Journal of Scientific and Engineering Research*, vol. 4, pp. 301–308, Jan 2013.
- [70] A. Rabbi, H. Bahrambeygi, A. M. Shoushtari, and K. Nasouri, “Incorporation of nanofiber layers in nonwoven materials for improving their acoustic properties,” *Journal of Engineered Fibers and Fabrics*, vol. 8, no. 4, p. 155892501300800, Dec 2013.
- [71] *Acoustical Properties of Electrospun Nanofibers for Aircraft Interior Noise Reduction*, ser. ASME International Mechanical Engineering Congress and
-

- Exposition, vol. Volume 15: Sound, Vibration and Design, 11 2009. [Online]. Available: <https://doi.org/10.1115/IMECE2009-12339>
- [72] H. Lee, L. Y. L. Ang, Y. Koh, and L. Q. N. Tran, "Natural fibre composites for acoustic applications," in *24Th International Congress on Sound and Vibration*. London, United Kingdom: ICSV24, 07 2017.
- [73] H. Mamtaz, M. H. Fouladi, M. Al-Atabi, and S. Narayana Namasivayam, "Acoustic absorption of natural fiber composites," *Journal of Engineering*, vol. 2016, pp. 1–12, 2016.
- [74] S. Joshi, L. Drzal, A. Mohanty, and S. Arora, "Are natural fiber composites environmentally superior to glass fiber reinforced composites? compos a," *Composites Part A: Applied Science and Manufacturing*, vol. 35, pp. 371–376, March 2004.
- [75] C. R. Koenig, D. H. Muller, and K. Thoben, "Acoustical parameters of automotive interiors using hybrid fleeces basing on natural fibres," *Journal of the Acoustical Society of America*, vol. 123, no. 5, p. 3675, 2008.
- [76] R. Zulkifli, M. Mohd Nor, A. Ismail, M. Nuawi, S. Abdullah, M. Mat Tahir, and M. Ab Rahman, "Comparison of acoustic properties between coir fibre and oil palm fibre," *European Journal of Scientific Research*, vol. 33, no. 1, pp. 144–152, 2009.
- [77] S. Huda and Y. Yang, "Feather fiber reinforced light-weight composites with good acoustic properties," *Journal of Polymers and the Environment*, vol. 17, pp. 131–142, June 2009.
- [78] A. Nick, U. Becker, and W. Thoma, "Improved acoustic behavior of interior parts of renewable resources in the automotive industry," *Journal of Polymers and the Environment*, vol. 10, pp. 115–118, 01 2002.
- [79] T. Koizumi, N. Tsujiuchi, and A. Adachi, "The development of sound absorbing materials using natural bamboo fibers," *WIT Transactions on the Built Environment*, vol. 59, pp. 157–166, 2002.
- [80] H. S. Seddeq, "Factors influencing acoustic performance of sound absorptive materials," *Australian Journal of Basic and Applied Sciences*, vol. 3, no. 4, pp. 4610–4617, 2009.

- [81] U. Berardi and G. Iannace, "Acoustic characterization of natural fibers for sound absorption applications," *Building and Environment*, vol. 94, pp. 840–852, 12 2015.
- [82] D. Bies and C. H. Hansen, "Flow resistance information for acoustical design," *Applied Acoustics*, vol. 13, no. 5, pp. 357–391, 1980.
- [83] M. Coates and M. Kierzkowski, "Acoustic textiles - lighter, thinner and more absorbent," in *Technical -Textiles-International*, 2002.
- [84] P. Ganesan and K. Thangavel, "Development of acoustic nonwoven materials from kapok and milkweed fibres," *The Journal of The Textile Institute*, vol. 107, pp. 1–6, 05 2015.
- [85] J. Allard, C. Depollier, and P. Guignouard, "Free field surface impedance measurements of sound-absorbing materials with surface coatings," *Applied Acoustics*, vol. 26, no. 3, pp. 199 – 207, 1989. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/0003682X89900534>
- [86] X. Sagartzazu, L. Hervella-Nieto, and J. Pagalday, "Review in sound absorbing materials," *Archives of Computational Methods in Engineering*, vol. 15, pp. 311–342, 09 2007.
- [87] M. H. Fouladi, M. H. Nassir, M. Ghassem, M. Shamel, S. Y. Peng, S. Y. Wen, P. Z. Xin, and M. J. M. Nor, "Utilizing malaysian natural fibers as sound absorber," in *Modeling and Measurement Methods for Acoustic Waves and for Acoustic Microdevices*, M. G. Beghi, Ed. Rijeka: IntechOpen, 2013, ch. 7. [Online]. Available: <https://doi.org/10.5772/53197>
- [88] N. Yilmaz, P. Banks-Lee, N. Powell, and S. Michielsens, "Effects of porosity, fiber size, and layering sequence on sound absorption performance of needle-punched nonwovens," *Journal of Applied Polymer Science*, vol. 121, pp. 3056 – 3069, 09 2011.
- [89] Y. Shoshani and Y. Yakubov, "Use of nonwovens of variable porosity as noise control elements," *Int Nonwovens J*, vol. 10, pp. 23–28, 12 2001.

- [90] M. Hakamada, T. Kuromura, Y. Chen, H. Kusuda, and M. Mabuchi, “Sound absorption characteristics of porous aluminum fabricated by spacer method,” *Journal of Applied Physics*, vol. 100, pp. 114 908–114 908, 12 2006.
- [91] W. Jin, J. Liu, Z. Wang, Y. Wang, Z. Cao, Y. Liu, and X. Zhu, “Sound absorption characteristics of aluminum foams treated by plasma electrolytic oxidation,” *Materials*, vol. 8, no. 11, pp. 7511–7518, 2015.
- [92] E. Knapen, R. Lanoye, G. Vermeir, W. Lauriks, and D. Van Gemert, “Acoustic properties of sound absorbing, polymer modified porous cement mortars,” in *6th International Conference on Materials Science and Restoration, MSR-VI*. Aedificatio Publishers, 01 2003, pp. 347–358.
- [93] R. Maderuelo-Sanz, M. Castizo, J. Barrigon-Morillas, V. Gómez-Escobar, and G. Rey Gozalo, “Acoustical performance of porous absorber made from recycled rubber and polyurethane resin,” *Latin American Journal of Solids and Structures*, vol. 10, pp. 585–600, 05 2013.
- [94] M. Bilová and E. Lumnitzer, “Acoustical parameters of porous materials and their measurement,” *Acta Technica Corviniensis-Bulletin of Engineering*, vol. 4, no. 4, p. 39, 2011.
- [95] K. Horoshenkov and M. Swift, “The effect of consolidation on the acoustic properties of loose rubber granulates,” *Applied Acoustics - APPL ACOUST*, vol. 62, pp. 665–690, 06 2001.
- [96] L. Egab, X. Wang, and M. Fard, “Acoustical characterisation of porous sound absorbing materials: A review,” *International Journal of Vehicle Noise and Vibration*, vol. 10, pp. 129 – 149, 02 2014.
- [97] M. Ren and F. Jacobsen, “A method of measuring the dynamic flow resistance and reactance of porous materials,” *Applied Acoustics*, vol. 39, no. 4, pp. 265 – 276, 1993. [Online]. Available: <http://www.sciencedirect.com/science/article/pii/0003682X93900104>

- [98] R. Rey, J. Fernandez, J. Arenas, and J. Soriano, “Technical notes: Evaluation of two alternative procedures for measuring airflow resistance of sound absorbing materials,” *Archives of Acoustics*, vol. 38, pp. 547–554, 01 2013.
- [99] F. Simón and J. Pfretzschner, “Guidelines for the acoustic design of absorptive devices,” *Noise & Vibration Worldwide*, vol. 35, no. 1, pp. 12–21, 2004.
- [100] F. M. Kessler, “Engineering Acoustics and Noise Control by Conrad J. Hemond, Jr.” *Acoustical Society of America Journal*, vol. 74, no. 3, pp. 1092–1093, Sep. 1983.
- [101] J. Allard and N. Atalla, *Propagation of sound in porous media: modelling sound absorbing materials, Second Edition*. John Wiley & Sons, 2009.
- [102] K. Pohlmann and F. A. Everest, *Master Handbook of Acoustics*. |country|US|/country|: McGraw-Hill/TAB Electronics, 2009. [Online]. Available: <https://mhebooklibrary.com/doi/book/10.1036/9780071603331>
- [103] R. Dunne, D. Desai, and R. Sadiku, “A review of the factors that influence sound absorption and the available empirical models for fibrous materials,” *Acoustics Australia*, vol. 45, 07 2017.
- [104] N. Kino and T. Ueno, “Comparisons between characteristic lengths and fibre equivalent diameters in glass fibre and melamine foam materials of similar flow resistivity,” *Applied Acoustics*, vol. 69, pp. 325–331, 04 2008.
- [105] J. Soriano, R. Rey, J. Fernandez, L. Godinho, and J. Carbajo, “A model for acoustic absorbent materials derived from coconut fiber,” *Materiales de Construcción*, vol. 64, 03 2014.
- [106] J. Pfretzschner, F. Simón, and C. d. l. Colina, “Acoustic absorbent panels with low perforation coefficient,” *Acustica 2004, Paper ID:048/p.1*, 2004.
- [107] M. A. Kuczmarski and J. C. Johnston, “Acoustic absorption in porous materials,” *National Aeronautics and Space Administration, Cleveland*, p. 20, 2011.
- [108] B. Castagnède, A. Aknine, B. Brouard, and V. Tarnow, “Effects of compression on the sound absorption of fibrous materials,” *Applied Acoustics - APPL ACOUST*, vol. 61, pp. 173–182, 10 2000.

- [109] M. Fouladi, J. Mohd Nor, M. Ayub, and M. Ghassem, “Enhancement of coir fiber normal incidence sound absorption coefficient,” *Journal of Computational Acoustics*, vol. 20, 03 2012.
- [110] B. Castagnede, A. Aknine, B. Brouard, and V. Tarnow, “Effects of compression on the sound absorption of fibrous materials,” *Applied Acoustics*, vol. 61, no. 2, pp. 173–182, 2000.
- [111] M. Nor, M. Ayub, R. Zulkifli, M. Hosseini Fouladi, and N. Amin, “Effect of compression on the acoustic absorption of coir fiber,” *American Journal of Applied Sciences*, vol. 7, pp. 1285–1290, 09 2010.
- [112] S. Fatima and A. Mohanty, “Acoustical and fire-retardant properties of jute composite materials,” *Applied Acoustics - APPL ACOUST*, vol. 72, pp. 108–114, 02 2011.
- [113] J. António, *Acoustic behaviour of fibrous materials*, 1st ed., ser. 104. Cambridge: Woodhead Publishing Limited, 4 2011, vol. 4, ch. Fibrous and Composite Materials for Civil Engineering Applications, pp. 306–324, ISBN-10: 0081017219.
- [114] Y. Takahashi, T. Otsuru, and R. Tomiku, “In situ measurements of surface impedance and absorption coefficients of porous materials using two microphones and ambient noise,” *Applied Acoustics*, vol. 66, no. 7, pp. 845–865, 2005.
- [115] C. M. Harris, *Handbook of acoustical measurements and noise control*. McGraw-Hill New York, 1991.
- [116] I. 10534-1, “Determination of sound absorption coefficient in impedance tubes - part i: Method using standing wave ratio.” International Standard, 1998.
- [117] I. 10534-2, “Determination of sound absorption coefficient and impedance in impedance tubes —part 2: Transfer-function method.” International Standard, 1998, 11-15.
- [118] A. Farina and P. Fausti, “Standing wave tube techniques for measuring the normal incidence absorption coefficient: comparison of different experimental setups,” in *Proc. of 11th. International FASE Symposium*, 04 1994, pp. 1–5.

- [119] C.-H. Jeong and J.-H. Chang, “Reproducibility of the random incidence absorption coefficient converted from the sabine absorption coefficient,” *Acta Acustica united with Acustica*, vol. 101, no. 1, pp. 99–112, 2015.
- [120] V. Gibiat and F. Laloe, “Acoustical impedance measurements by the two-microphone-three-calibration (tmtc) method,” *Journal of The Acoustical Society of America - J ACOUST SOC AMER*, vol. 88, pp. 2533–2545, 12 1990.
- [121] Y. P. Cho and Nelson, “Least squares estimation of acoustic reflection coefficient,” in *in Institute of Acoustics Spring Conference 2002. Past, Present and Future Acoustics and EPSRC Theme Day in Acoustics.*, 2002, p. 8.
- [122] M. Garai and F. Pompoli, “A simple empirical model of polyester fibre materials for acoustical applications,” *Applied Acoustics*, vol. 66, no. 12, pp. 1383–1398, 2005.
- [123] M. Abom and H. Bodén, “Error analysis of two-microphone measurements in ducts with flow,” *J. ACOUST. SOC. AM.*, vol. 83, pp. 2429–2438, 06 1988.
- [124] R. Franklin, “Noise reduction. l. l. beranek (editor). mcgraw- hill, new york. 1960 752 pp. illustrated. 112s. 6d.” *Journal of the Royal Aeronautical Society*, vol. 65, p. 211, 03 1961.
- [125] Y. Lee and C. W. Joo, “Sound absorption properties of thermally bonded nonwovens based on composing fibers and production parameters,” *Journal of Applied Polymer Science*, vol. 92, pp. 2295 – 2302, 05 2004.
- [126] F. Fahy, *Foundations of Engineering acoustics*, 1st ed. London: Academic Press, 9 2001, an optional note.
- [127] Wikipedia, “Bombax ceiba,” https://en.wikipedia.org/wiki/Bombax_ceiba, 2013, [Online; accessed 18-April-2014].
- [128] T. School, “Kapok or Capok Fibres,” <https://www.textileschool.com/183/kapok-or-capok-fibres/>, 2013, [Online; accessed 18-April-2014].
- [129] S. K. Laga and V. Dhanabalan, “Kapok: A perspective fiber,” *China Textile Science*, vol. 3, June 2014.

- [130] S. Meiwu, X. Hong, and Y. Weidong, "The fine structure of the kapok fiber," *Textile Research Journal*, vol. 80, no. 2, pp. 159–165, 2010.
- [131] T. E. of Encyclopaedia Britannica, "Kapok," <https://www.britannica.com/topic/kapok>, February 23, 2017, [Online; accessed 20-June-2018].
- [132] Y. Zheng and A. Wang, "Kapok fiber: Structure and properties," *Biomass and Bioenergy: Processing and Properties*, pp. 101–110, 05 2014.
- [133] T.-T. Lim and X. Huang, "Evaluation of kapok (ceiba pentandra (l.) gaertn.) as a natural hollow hydrophobic–oleophilic fibrous sorbent for oil spill cleanup," *Chemosphere*, vol. 66, no. 5, pp. 955–963, Jan 2007.
- [134] L. Hu, F. Wang, G. Xu, and B. Xu, "Unique microstructure of kapok fibers in longitudinal microscopic images," *Textile Research Journal*, vol. 87, no. 18, pp. 2255–2262, 2017.
- [135] K. Hori, M. E. Flavier, S. Kuga, T. B. T. Lam, and K. Iiyama, "Excellent oil absorbent kapok [ceiba pentandra (l.) gaertn.] fiber: fiber structure, chemical characteristics, and application," *Journal of Wood Science*, vol. 46, no. 5, pp. 401–404, Oct 2000.
- [136] G. Xu, J. Luo, Y. Lou, and F. Wang, "Analysis of the bending property of kapok fiber," *The Journal of The Textile Institute*, vol. 102, no. 2, pp. 120–125, 2011.
- [137] J. Yan, C. Fang, F.-M. Wang, and B. Xu, "Compressibility of the kapok fibrous assembly," *Textile Research Journal*, vol. 83, no. 10, pp. 1020–1029, 2013.
- [138] L. J and F. Wang, "Influence of mercerization on microstructure and properties of kapok blended yarns with different blending ratios," *Journal of Engineered Fibre and Fabrics*, vol. 6, no. 3, pp. 63–68, 2011.
- [139] T. Gurkov and P. A. Kralchevsky, "Surface tension and surface energy of curved interfaces and membranes," *Colloids and Surfaces*, vol. 47, pp. 45–68, July 1990.
- [140] J. Wang, Y. Zheng, and A. Wang, "Effect of kapok fiber treated with various solvents on oil absorbency," *Industrial Crops and Products*, vol. 40, p. 178–184, Nov 2012.

- [141] M. Voumbo, A. Wereme, S. Gaye, M. Adj, and G. Sissoko, "Characterization of the thermophysical properties of kapok," *Research Journal of Applied Sciences, Engineering and Technology*, vol. 2, pp. 143–148, Jan 2010.
- [142] B. Dauda and E. Kolawole, "Processability of nigerian kapok fibre," *Indian Journal of Fibre & Textile Research*, vol. 28, pp. 147–149, June 2003.
- [143] H. J. Yang L, Bi SM, "Effect of blending ratio on kapok fiber cotton blended yarn property (in chinese)," *Cotton Text Technol*, vol. 41, pp. 30–32, 2013.
- [144] Y. Kobayashi, R. Matsuo, and M. Nishiyama, "Japanese patent 52,138,081," *Japanese Patent Office*, vol. 17, November 1977.
- [145] D. Fengel and M. Przyklenk, "Studies on kapok. 2. chemical investigation," *Holz-forschung*, vol. 40, pp. 325–330, Dec 1986.
- [146] Q. Chen, T. Zhao, M. Wang, and J. Wang, "Studies of the fibre structure and dyeing properties of calotropis gigantea, kapok and cotton fibres," *Coloration Technology*, vol. 129, no. 6, pp. 448–453, 2013. [Online]. Available: <https://onlinelibrary.wiley.com/doi/abs/10.1111/cote.12051>
- [147] Q. Cao, Y. Cao, L. Wang, and X. Sun, "Structures and properties of kapok fiber," in *2nd International conference on advanced textile materials & manufacturing technology, Zhejiang Sci-Tech Univ, Hangzhou, Oct*, 2010, pp. 20–24.
- [148] T. Nilsson and C. Björddal, "The use of kapok fibres for enrichment cultures of lignocellulose-degrading bacteria," *International Biodeterioration & Biodegradation*, vol. 61, no. 1, pp. 11–16, 2008.
- [149] H. Ling, "Properties of kapok fiber and its application suggestion in spinning and weaving (in chinese)." *Cotton Text Technol* 38, pp. 469–472, 2010.
- [150] W. Liu, G. Xu, and F. Wang, "The microbiological properties of kapok battings," in *International forum on biomedical textile materials*. Donghua Univ, Songjiang Campus, Shanghai, May 30-June 2 2007, pp. 231–234.
- [151] B. S. Mamatha, A. Nandanwar, D. Sujatha, D. N. Uday, M. C. Kiran, and P. B. No, "Particle board from bagasse for acoustic panel," *International Journal of Fundamental & Applied Sciences*, vol. 3, pp. 42–44, 07 2014.

- [152] L. Ismail, M. I. Ghazali, S. Mahzan, and A. M. A. Zaidi, “Sound absorption of arenga pinnata natural fiber,” *World Academy of Science, Engineering and Technology*, vol. 67, pp. 804–806, 2010.
- [153] S. Ersoy and H. Kucuk, “Investigation of industrial tea-leaf-fibre waste material for its sound absorption properties,” *Applied Acoustics*, vol. 70, pp. 215–220, 01 2009.
- [154] J. A. Parrotta, *Healing plants of peninsular India*. Wallingford, UK: CABI Publishing, 2001.
- [155] J. Sakthivel and A. Ghosh, “Extraction, properties and spinability of mudar fibres (calotropis gigantea),” *Industria textilă*, vol. 60, pp. 11–14, 01 2009.
- [156] P. K. R.A. Nasser, H.A. Al-Mefarrej and K. Alhaftaa, “Technological properties of calotropis procera (ait) wool and its relation to utilizations,” *Am Eurasian J Agric Environ Sci*, vol. 12, pp. 5–16, 1 2012.
- [157] T. G., “An investigation into the feasibility of using calotropis gigantea (flower of love) as a source of fiber for textile production,” Master’s thesis, Faculty of Environment and Resource Studies, Mahidol University in Bangkok, Thailand, 1983, an optional note.
- [158] V. Vadlapudi, M. Behara, D. Kaladhar, S. Kumar, B. Seshagiri, and M. Paul, “Antimicrobial profile of crude extracts calotropis procera and centella asiatica against some important pathogens,” *Indian Journal of Science and Technology*, vol. 5, pp. 3132–3136, 08 2012.
- [159] N. Tuntawiroon, P. Samootsakorn, and G. Theeraraj, “The environmental implications of the use of calotropis gigantea as a textile fabric,” *Agriculture, ecosystems & environment*, vol. 11, no. 3, pp. 203–212, 1984.
- [160] S. Shaikhzadeh Najar and M. Haghighat-Kish, “Structure and properties of a natural celulosic hollow fiber,” *International Journal of Engineering*, vol. 11, no. 2, pp. 101–108, 1998.
- [161] J.-Y. F. Dréan, J. J. Patry, G. F. Lombard, and M. Weltrowski, “Mechanical characterization and behavior in spinning processing of milkweed fibers,” *Textile Research Journal*, vol. 63, no. 8, pp. 443–450, 1993.

- [162] K. Thangavel and R. Murugan, "Influence of spinning parameters on milkweed/cotton dref-3 yarn properties," *Journal of the Textile Institute*, vol. 104, 09 2013.
- [163] A. Ashori and Z. Bahreini, "Evaluation of calotropis gigantea as a promising raw material for fiber-reinforced composite," *Journal of Composite Materials - J COM-POS MATER*, vol. 43, pp. 1297–1304, 05 2009.
- [164] H. D. Knudsen, "Milkweed floss fiber for improving nonwoven products," in *TAPPI Nonwovens Conf., TAPPI Press, Atlanta*. Peachtree Corners, GA: TAPPI., 1990, pp. 209–212.
- [165] J. C. Sakthivel, S. Mukhopadhyay, and N. K. Palanisamy, "Some studies on mudar fibers," *Journal of Industrial Textiles*, vol. 35, no. 1, pp. 63–76, 2005. [Online]. Available: <https://doi.org/10.1177/1528083705053390>
- [166] N. Reddy and Y. Yang, "Extraction and characterization of natural cellulose fibers from common milkweed stems," *Polymer Engineering & Science*, vol. 49, no. 11, pp. 2212–2217, 2009.
- [167] G. L. Louis and B. K. Andrews, "Cotton/milkweed blends: A novel textile product," *Textile Research Journal*, vol. 57, no. 6, pp. 339–345, 1987. [Online]. Available: <https://doi.org/10.1177/004051758705700604>
- [168] K. Thangavel and R. Murugan, "Analysis of comfort properties of cotton/milkweed blended rotor yam fabrics," *Melliand International*, vol. 19, pp. 203–204, 11 2013.
- [169] T. Campbell, "Chemical and agronomic evaluation of common milkweed, asclepias syriaca," *Economic Botany*, vol. 37, no. 2, pp. 174–180, 1983.
- [170] R. Bodîrlău, C.-A. Teacă, and I. Spiridon, "Green composites comprising thermoplastic corn starch and various cellulose-based fillers," *BioResources*, vol. 9, no. 1, pp. 39–53, 2014.
- [171] T. Timell and J. Snyder, "Molecular properties of milkweed cellulose," *Textile Research Journal*, vol. 25, no. 10, pp. 870–874, 1955. [Online]. Available: <https://doi.org/10.1177/004051755502501006>

- [172] P. Gu, R. Hessley, and w.-p. Pan, “Thermal characterization analysis of milkweed flos,” *Journal of Analytical and Applied Pyrolysis*, vol. 24, p. 147–161, 12 1992.
- [173] R. Srivastava, R. Dhabal, B. Suman, A. Saini, and P. Panchal, “An estimation of correlation on thermo-acoustic properties of mineral wool,” *Journal of Scientific and Industrial Research*, vol. 64, pp. 232–236, 3 2006.
- [174] Minitab®18 Support, “What are response surface designs, central composite designs, and Box-Behnken designs?” <https://is.gd/MtKIvO>, 2018, [Online; accessed 23-Sept-2018].
- [175] S. P. Deshpande, “Development of a low cost impedance tube to measure the acoustic absorption and transmission loss of materials,” Master’s thesis, Master’s Thesis, Michigan Technological University, 2013.
- [176] P. Narang, “Material parameter selection in polyester fibre insulation for sound transmission and absorption,” *Applied Acoustics*, vol. 45, no. 4, pp. 335–358, 1995.
- [177] K. Ghorbani, H. Hasani, M. Zarrebini, and R. Saghafi, “An investigation into sound transmission loss by polypropylene needle-punched nonwovens,” *Alexandria Engineering Journal*, vol. 55, no. 2, pp. 907–914, 2016.