

## References

- Ball, B. C. 1981. Pore characteristics of soils from two cultivation experiments as shown by gas diffusivities and air permeabilities and air-filled porosities. *J. Soil Sci.* 32:483-498.
- Ball, B. C., and P. Schjønning. 2002. Chapter 4.4. Air Permeability. *In*: J.H. Dane and G. C. Topp (eds.). *Methods of Soil Analysis, Part 4*, SSSA Book Ser. 5, ASA and SSSA, Madison, WI, pp. 1141-1158.
- Blackwell, P. S., A.J. Ringrose-Voase, N.S. Jayawardane, K. A. Olsson, D. C. McKenzie, and W.K. Mason. 1990. The use of air-filled porosity and intrinsic permeability to characterize structure of the macro pore space and saturated hydraulic conductivity of clay soils. *J. Soil Sci.* 41:215-228
- Brady, N.C. (1999). *The Nature and Properties of Soils* (12th ed.). Upper Saddle River, NJ: Prentice-Hall. pp. 183–9.
- Buckingham, E. 1904. Contributions to our knowledge of the aeration of soils. USDA. Bur. Soil Bul. 25. U.S. Gov. Print. Office, Washington, DC.
- Buckingham, E. (1907). "Water retention in soil". *Soil Bulletin* (U.S. Department of Agriculture) (38).
- Call, F. 1957. Soil fumigation: V. Diffusion of ethylene dibromide through soils. *J. Sci. Food Agric.* 8:143–150.
- Charman, PEV & Murphy, BW 1998, 5th edn, *Soils, their properties and management*, Oxford University Press, Melbourne
- Cooper C.D., Reinhart D.R., Seligman D., Keely D., and Rash F., Report # 92-2, Civil and Environmental Engineering Department, University of Central Florida, July 31, 1992, pp 11-14

Currie, J.A. 1960a. Gaseous diffusion in porous media. Part 1.- A non-steady state method. British J. Appl. Phys. 11: 314-317.

Currie, J.A. 1960b. Gaseous diffusion in porous media. Part 2.- Dry granular materials. British J. Appl. Phys. 11: 318-324.

Currie, J.A. 1961. Gaseous diffusion in porous media. Part 3.- Wet granular materials. British J. Appl. Phys. 12: 275-281.

Freijer, J. I. 1994. Calibration of jointed tube model for gas diffusion coefficient in soils. Soil Sci. Soc. Am. J. 58:1067-1076, Field compaction test results , Report no. FCT/01, Sri Lanka land reclamation and development corporation, Engineering material testing laboratory.

Green, R.D., and S.J. Fordham. 1975. A field method for determining air permeability in soil. Soil Physical Conditions and Crop Production. Tech. Bull. 29. Soil Survey of England and Wales

Grover, B.L. 1955. Simplified air permeameters for soil in place. Soil Sci. Soc. Am. Proc.19: 414-418.



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Hamamoto S., Moldrup P., Kawamoto K. and Komatsu T. Effect of Particle Size and Soil Compaction on Gas Transport Parameters in Variably Saturated, Sandy Soils, Published in Vadose Zone J 8:986-995 (2009) Soil Science Society of America 677 S. Segoe Rd., Madison, WI 53711 USA.

Houghton J. T., Ding. Y., Griggs D. J., Noguier M., VandeLinden P. J., Xiaosu D., 2001. Climate change 2001: The scientific basis, contribution of working group I to the third assessment report of the Intergovernmental panal on climate change (IPCC), Cambridge University press, UK, 944 pages.

Iversen, B. V., P. Schjønning, T. G. Poulsen, and P. Moldrup. 2001. In-situ, on-site and laboratory measurements of soil air permeability: Boundary conditions and measurement scale. *Soil Sci.* 166:97-106.

Leeper, GW & Uren, NC 1993, 5th edn, *Soil science, an introduction*, Melbourne University Press, Melbourne

Liang , P., Bowers, Jr, C.G. and Bowen, H.D., 1995. Finite element model to determine the shape factor for soil air permeability measurements, *transaction of the ASAE* 38:997-1003.

Millington, R. J., and J. M. Quirk. 1961. Permeability of porous solids. *Trans. Faraday Soc.* 57:1200-1207.

Mohammed F. M. A, Noor E. A. B., Abdul A. H. K. 2009. Review on Landfill Gas Emission to the Atmosphere: *European Journal of Scientific Research*, pp.427-436

Moldrup, P., Kruse C.W., Rolston D.E., and Yamaguchi T., 1996, Modeling diffusion and reaction in soils : III. Predicting gas diffusivity from the Campbell soil water retention model . *Soil Sci.* 161: 366-375

Moldrup, P.,Olsen T. , Komatsu t., Schjønning, P. and Rolson, D. E., 2001. Tortosity Diffusivity and permeability in the soil liquid and gaseous phases. *Soil Sci. Soc. Am. J* 65:613-623

Moldrup, P.,Olsen T., Yoshikawa S., Komatsu T., and Rolston, 2004. Three porosity model for predicting the gas diffusion coefficient in undisturbed soil. *Soil Sci. Aoc. Am J.* 68: 750- 759.

Mualem, Y. (1976). "A new model for predicting the hydraulic conductivity of unsaturated porous media". *Water Resources Research* 12: 513–522.

Osozawa, S. and S. Hasegawa. 1995. Diel and seasonal changes in carbon dioxide concentration and flux in an Andisol. *Soil Sci.* 160: 117-124.

Penman, H. L. 1940. Gas and vapor movements in soil: The diffusion of vapors through porous solids. *J. Agric. Sci.* 30:437-462.

Petersen, L. W., Y. H. El-Farhan, P. Moldrup, D. E. Rolston, and T. Yamaguchi. 1996. Transient diffusion, adsorption, and emission of volatile organic vapors in soils with fluctuating low water contents. *J. Environ. Qual.* 25:1054-1063.

Poulsen, T. G., P. Moldrup, P. Schjønning, J. W. Massmann and J. A. Hansen. 1999. Gas permeability and diffusivity in undisturbed soil: SVE implications. *J. Environ. Eng. ASCE.* 12: 979-986.

Resurreccion A.C., Kawamoto K., Komatsu T., Molderup P., Ozaki N., and Rolston D. E., 2007, Gas transport parameters along field transects of a volcanic ash soil. *Soil Sci.* vol. 172: 3-15.

Rolston, D.E. 1986. Gas diffusivity. *In* Methods of Soil Analysis, Part 1. Physical and Mineralogical methods. 2nd Edition. A. Klute (ed). Agronomy Monograph no. 9, Wisconsin, Madison, pp.1089-1102.

Sharma H.D., Reddy K.R., 2004. Geoenvironmental engineering, 1<sup>st</sup> edition, pp 791-801

Steinbrenner, E.C. 1959. A portable air permeameter for forest soils. *Soil Sci. Soc. Am. Proc.* 23:478-481.

Spokas K., Bogner J., Chanton J. P., Morcet M., Aran C., Graff C., Moreau-Le Golvan Y., and Hebe , 2005, Methane mass balance at three landfill sites: What is the efficiency of capture by gas collection systems? *Waste management* 26 (2006), 516-525



Van Genuchten, M.Th. (1980). "A closed-form equation for predicting the hydraulic conductivity of unsaturated soils". Soil Science Society of America Journal 44 (5): 892–898. <http://hydro.nevada.edu/courses/gey719/vg.pdf>.

Visvanathan C., Tubtimthai O. Kuruparan P. 2004 Influence of landfill top cover design on Methane Oxidation: pilot scale lysimeter experiments under tropical conditions: APLAS Kitakyushu 2004, Third Asian-Pacific landfill symposium, pp 387-394



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