

References Cited ADTI WP2 - Bibliography

- Aines, R.D., H.C. Weed and J.K. Bates, 1986. Hydrogen Speciation in Hydrated Layers on Nuclear Waste Glass. Rep. No. Ucl-95962, Livermore, CA: Lawrence Livermore National Laboratory.
- Alexander, M., 1982. Most probable number method for microbial populations. In: Page, A.L., et al., eds., Methods of soil analysis, Part 2. Chemical and microbiological properties (2nd): Madison, WI, American Society of Agronomy Monograph 9, pp. 815 – 820.
- American Society for Testing and Materials, 1986. Practice for Determination of Precision and Bias of Applicable Test Methods of Committee D-19 on Water; D-2777.
- American Society for Testing and Materials, 2002. Annual Book of ASTM Standards, Vol. 14.02. Standard Practice for Dealing with Outlying Observations, of Committee E11 on Quality and Statistics, ASTM E178-02.
- Ball, J.W. and D.K. Nordstrom, 1991. User's manual for WATEQ4F with revised data base. U.S. Geological Survey Open File Report 91-183, 189 p.
- Barnes, H.L. and S.B. Romberger, 1968. Chemical aspects of acid mine drainage. Journal Water Pollution Control Federation, v. 40, no. 3, pp. 371-384.
- Block, F., J. Tarantino, R. Hornberger, K. B.C. Brady, J. Donovan, G. Sames and W. Chisholm, 2000. Overburden Sampling Considerations; Chapter 6. In: Prediction of Water Quality at Surface Coal Mines; Morgantown: West Virginia University. pp. 140 – 167.
- Bradham, W.S. and F.T. Caruccio, 1990. A comparative study of tailings analysis using acid/base accounting, cells, columns and soxhlets. In: Proceedings of the 1990 Mining & Reclamation Conference and Exhibition, Vol. 1, Morgantown: West Virginia University, pp. 19 – 25.
- Bradham, W.S. and F.T. Caruccio, 1995. Sensitivity Analysis of Laboratory Based Mine Overburden Analytical Techniques for the Prediction of Acidic Mine Drainage. Pittsburgh, PA: U.S. Department of Interior/OSM, 267 p.
- Brady, K.B.C. and M.W. Smith, 1990. Pyritic sulfur analyses for coal overburden: Differences between laboratories. In: 1990 National Symposium on Mining, University of Kentucky, Lexington, KY, pp. 53 – 58.
- Brady, K.B.C., E.F. Perry, R.L. Beam, D.C. Bisko, M.D. Gardner and J.M. Tarantino, 1994. Evaluation of acid-base accounting to predict the quality of drainage at surface coal mines in Pennsylvania, U.S.A. U.S. Bureau of Mines Special Publication SP06A-94, pp. 138 – 147.

- Brady, K.B.C., R.J. Hornberger and G. Fleeger, 1998. Influence of geology on post-mining water quality: Northern Appalachian Basin. In: Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania, Harrisburg: Pennsylvania Department of Environmental Protection, pp. 8 – 1 to 8 – 92.
- Brady, K.B.C., W.B. White, R.J. Hornberger, B.E. Scheetz and C.M. Loop, 2004. Refinement of ADTI-WP2 standard weathering procedures, and evaluation of particle size and surface area effects upon leaching rates. Part 2: Practical and theoretical aspects of leaching kinetics. In: National Meeting American Society of Mining and Reclamation and the 25th West Virginia Surface Mine Drainage Task Force. Lexington, KY: American Society of Mining and Reclamation.
- Brady, N.C., 1974. The Nature and Properties of Soils. 8th Edition, New York: MacMillian Publishers, 639 p.
- Braley, S.A., 1949. Annual Summary Report of Commonwealth of Pennsylvania, Department of Health, Industrial Fellowship No. B-3. Pittsburgh: Mellon Institute of Industrial Research.
- Brantley, S.L. and N.P. Mellott, 2000. Surface area and porosity of primary silicate minerals. American Mineralogist, Vol. 85, pp. 1767 – 1783.
- Brunauer, S., P.H. Emmett and E. Teller, 1938. J. Amer. Chem. Soc. Vol. 60, p. 309.
- Buckwalter, C.Q., L.R. Pederson and G.L. McVay J., 1982. Non-Crystalline Solids, Vol. 49.
- Cargeid, 1981. An evaluation of the proposed Holly Grove mine to impact the Little Kanawha River with acid water. Unpublished report to U.S. EPA, Columbia, SC.
- Caruccio, F.T. and G. Geidel, 1983. Assessing the Alkaline and Acid Loads of Coal Mine Overburden and the Prediction of Mine Drainage Quality. Charleston: West Virginia Department of Natural Resources, 23 p.
- Caruccio, F.T., W. Bradham and G. Geidel, 1993. Overburden analyses; some important factors. WV Surface Mine Drainage Task Force Symposium, Morgantown, WV.
- Chang, L.L.Y., R.A. Howie and J. Zussman, 1996. Rock-forming Minerals. Deer, Howie and Zussman Vol. 5B, Non-silicates: Sulphates, Carbonates, Phosphates, Halides, 2nd ed., Longman Group, Ltd., Essex, England.
- Cravotta, C.A., 1991. Geochemical evaluation of acidic groundwater at a reclaimed surface coal mine in western Pennsylvania. pp. 43 – 68. In: Proc., Meeting of the American Society of Surface Mining and Reclamation. Vol. 1. Durango, CO.
- Cravotta, C.A., 2008a. Dissolved Metals and Associated Constituents in Abandoned Coal Mine Discharges, Pennsylvania, USA. Part 1: Constituent Quantities and Correlations, Applied Geochemistry 23 (2008) pp. 166 – 202.

- Cravotta, C.A., 2008b. Dissolved Metals and Associated Constituents in Abandoned Coal Mine Discharges, Pennsylvania, USA. Part 2: Geochemical Controls on Constituent Concentrations, *Applied Geochemistry* 23 (2008) pp. 203 – 226.
- Cravotta, C.A., III, K.B.C. Brady, M.W. Smith and R.L. Beam, 1990. Effectiveness of alkaline addition at surface mines in preventing or abating acid mine drainage: Part 1, Geochemical considerations. In: *Proceedings of the 1990 Mining and Reclamation Conference and Exhibition*, West Virginia University, Charleston, WV, Vol. pp. 221 – 226.
- Cravotta, C.A., III, D.L. Dugas, K.B.C. Brady and T.E. Kovalchuk, 1994. Effects of selective handling of pyretic, acid-forming materials on the chemistry of pore gas and groundwater at a reclaimed surface coal mine, Clarion County, Pennsylvania, USA. In: *U.S. Bureau of Mines Special Publication SP06A-94*, pp. 365 – 374.
- Cuddeback and Miller, 2002. Results of the Study for Development of Test Methods for Prediction of Coal Mine Drainage, ADTI-WP1 Humidity Cell Method, ADTI-WP2 Leaching Column Method. Alexandria, VA: CSC Dyncorp. 16 p.
- Cuddeback and Miller, 2003. Development of Test Methods for Prediction of Coal Mine Drainage Water Quality, April – July 2003 Results, ADTI-WP1 and ADTI-WP2. Alexandria, VA: CSC Dyncorp. 21 p.
- Cuddeback, J., K. Miller and W.A. Telliard, 2006. Draft ADTI-Weathering Procedure 2 (WP2): Column Test Method for Prediction of Coal Mine Drainage Water Quality, Results of Interlaboratory Evaluation. Alexandria, VA: CSC Dyncorp. 17 p.
- diPreto, R.S. and H.W. Rauch, 1988. Use of acid-base accounts in premining prediction of acid drainage potential: a new approach from Northern West Virginia. In: *Proceedings: Mine Drainage and Surface Mine Reclamation*, Vol. 1, Mine Water and Mine Waste, U.S. Bureau of Mines, IC 9183, pp. 1 – 10.
- Doolittle, J.J., N. Frisbee and L.R. Hossner, 1992. Evaluation of acid-base accounting techniques used in surface-mine reclamation. pp. 68 – 76. In: *Proc., Meeting of the American Society of Surface Mining and Reclamation*. Duluth, MN.
- Ebert, W.L. and J.K. Bates, 1992. A comparison of glass reaction at high and low SA/V: PCT vs. MCC-1. In: *Proceedings, International High Level Radioactive Waste Management (IHLRWM) Conference*, Rep. No. ANL/CP-74206, Argonne, IL: Argonne National Laboratory, 10 p.
- EPA 1974. Method 310.2 Alkalinity, Colorimetric, Automated, Methyl Orange.
- EPA 1982. Method 120.1 Specific Conductance, umhos at 25° C.
- EPA 1982. Method 150.2 pH Continuous Monitoring (Electrometric).

- EPA 1993. Method 300.0 Determination of Inorganic Anions by Ion Chromatography. Revision 2.1.
- EPA 1993. Method 375.2 Determination of Sulfate by Automated Colorimetry. Revision 2.0.
- EPA 1994. Method 200.7 Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma – Atomic Emission Spectrometry, Revision 4.4.
- EPA 2002. Method 1631 Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry (PDF).
- Ethridge, E.C., D.E. Clark and L.L. Hench, 1979. *J. Phys. Chem. Classes* Vol. 25, No. 2, p. 35.
- Feng, X. and J.K. Bates, 1993. Factors influencing chemical durability of nuclear waste glasses. In: *Proceedings, 9th International Conference on Advanced Science and Technology*, Rep. No. ANL/CMT/CP-79163, Argonne, IL: Argonne National Laboratory, 8 p.
- Feng, X., E.C. Buck, J.K. Bates, M. Gong, J.L. Dietz and I.L. Pegg, 1994. Effects of S/V on secondary phase formation on waste glasses. In: *Proceedings 96th Annual Meeting of the American Ceramic Society*, Rep. No. ANL/CMT/CP-81046, Argonne, IL: Argonne National Laboratory, 13 p.
- Freeze, R.A. and J.A. Cherry, 1979. *Groundwater*. Englewood Cliffs, NJ. Prentice-Hall, Inc. 604 p.
- Freyssinet, P. and A.S. Farah, 2000. Geochemical mass balance and weathering rates of ultramafic schists in Amazonia. *Chemical Geology*, v. 170, pp. 133 – 151.
- Frisbee, N.M. and L.R. Hossner, 1989. Weathering of siderite from lignite overburden. In: *Proc., Meeting of the American Society for Surface Mining and Reclamation*, Calgary, CN.
- Garrels, R.M. and C.L. Christ, 1965. *Solutions, Minerals and Equilibria*. San Francisco, CA: Freeman, Cooper and Co., 450 p.
- Geidel, G., F.T. Caruccio, R.J. Hornberger and K.B.C. Brady, 2000. Guidelines and recommendations for use of kinetic tests for coal mining (AMD) prediction in the Eastern U.S. In: *Prediction of Water Quality at Surface Coal Mines*, Morgantown: West Virginia University, National Mine Land Reclamation Center, pp. 99 – 139.
- Glover, H.G. and W.G. Kenyon, 1962. *Mineral Weathering Tests*. National Coal Board, Mine Drainage Investigation Serial No. 85, Manchester, England, 8 p.
- Goldrich, S.S., 1938. A study in rock-weathering. *Journal of Geology* v. 46, pp. 17 – 58.
- Greenberg, A.E., L.S. Clesceri, A.D. Eaton and M.A.H. Franson, eds., 1992. Iron and sulfur bacteria. In: *Standard methods for the examination of water and wastewater (18th)*; Washington, D.C., American Public Health Association, Section 9240.

- Griffiths, J.C., 1967. *Scientific Method in Analysis of Sediments*, New York: McGraw-Hill Book Co. 508 p.
- Griffiths, J.C., R.J. Hornberger, K. Miller and M.W. Smith, 2001. *Statistical Analysis of Abandoned Mine Drainage in the Assessment of Pollution Load*. Washington, D.C.: U.S. Environmental Protection Agency. 257 p. (EPA-821-B-01-014).
- Grubbs, F.E., 1972. Procedures for Detecting Outlying Observations in Samples. *Technometrics* Vol. 14 No. 4. November 1972, pp. 847 – 854.
- Gyzl, G. and D. Banks, 2007. Verification of the “First Flush” Phenomenon in Mine Water From Coal Mines in the Upper Silesian Coal Basin, Poland, *Journal of Contaminant Hydrology* 92 (2007) pp. 66 – 86.
- Hammarstrom, J.M., C.A. Cravotta, III, D. Galeone, J.J. Jackson, K.B.C. Brady and F. Dulong, (in press). Characterization of rock samples and mineralogical controls on leachates. U.S. Geological Survey.
- Hanna, G.P., Jr. and R.A. Brant, 1962. Stratigraphic relations to acid mine water production. *Purdue University Engineering Experiment Series* No. 112, pp. 476 – 492.
- Hem, J.D., 1985. Study and interpretation of the chemical characteristics of natural waters (3rd): U.S. Geological Survey Water-Supply Paper 2254, 263 p.
- Hench, L.L., D.E. Clark and E.L. Yen-Bower, 1980. *Nuclear and Chemical Waste Management* 1, 59 p.
- Hornberger, R.J., 1985. Delineation of Acid Mine Drainage Potential of Coal-Bearing Strata of the Pottsville and Allegheny Groups in Western Pennsylvania. Unpublished Masters Thesis, Pennsylvania State University. 559 p.
- Hornberger, R.J. and K.B.C. Brady, 1998. Kinetic (leaching) tests for the prediction of mine drainage quality. In: *Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania*, Harrisburg: Pennsylvania Department of Environmental Protection, pp. 7 – 1 to 7 – 54.
- Hornberger, R.J., K.A. Lapakko, G.E. Krueger, C.H. Bucknam, P.F. Ziemkiewicz, D.J.A. vanZyl and H.H. Posey, 2000. The Acid Drainage Technology Initiative (ADTI). In: *Proceedings from the Fifth International Conference on Acid Rock Drainage*. Littleton, CO: Society for Mining, Metallurgy and Exploration pp. 41 – 50.
- Hornberger, R.J., K.B.C. Brady, J.E. Cuddeback, W.A. Telliard, S.C. Parsons, B.E. Scheetz and T.W. Bergstresser, 2003. Development of the ADTI-WP1 (humidity cell) and ADTI-WP2 (leaching column) standard weathering procedures for coal mine drainage prediction. In: *Proceedings 2003 SME Annual Meeting*, preprint 03-069. Littleton, CO. Society for Mining, Metallurgy and Exploration.

- Hornberger, R.J., K.B.C. Brady, J.E. Cuddeback, W.B. White, B.E. Scheetz, W.A. Telliard, S.C. Parsons, C.M. Loop, T.W. Bergstresser, C.R. McCracken, Jr. and D. Wood, 2004. Refinement of ADTI-WP2 standard weathering procedures, and evaluation of particle size and surface area effects upon leaching rates: Part 1: Laboratory evaluation of method performance. 2004 National Meeting of the American Society of Mining and Reclamation and the 25th West Virginia Surface Mine Drainage Task Force, April 18-24, 2004. Published by ASMR, 3134 Montavesta Road, Lexington, KY 40502. pp. 916 – 945.
- Hornberger, R.J., K.B.C. Brady, B.E. Scheetz, W.B. White and S.C. Parsons, 2005. ADTI-WP2 leaching column method for overburden analysis and prediction of weathering rates. In: Proceedings of 26th West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, West Virginia, pp. 93 – 110.
- Hyman, D.M., J.W. Hawkins, R.L.P. Kleinmann and G.R. Watzlaf, 1995. The Art and Science of Mine Drainage Prediction. 41 p.
- ICDD. 2002. Powder Diffraction File release 2002, PDF-2: International Centre for Diffraction Data, Newton Square, PA.
- Jackson, M.L., 1958. Soil Chemical Analysis. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Jambor, J.L., 2003. Mine-waste mineralogy and mineralogical perspectives of acid-base accounting. In: J.L. Jambor, D.W. Blowes and A.I.M. Ritchie (eds.), Environmental aspects of mine wastes, Mineralogical Association of Canada, Short Course Series, Vol. 31, pp. 117 – 145.
- Jambor, J.L., J.E. Dutrizac, L.A. Groat and M. Raudesepp, 2002. Static tests of neutralization potentials of silicate and aluminosilicate rocks. Environmental Geology 43: pp. 1 – 17.
- Jambor, J.L., J.E. Dutrizac and M. Raudesepp, 2005. Comparison of measured and mineralogically predicted values of the Sobek neutralization potential for intrusive rocks. In: 7th International Conference on Acid Rock Drainage (ICARD), March 26-30, 2006, St. Louis, MO. R.I. Barnhisel (ed.). Published by the American Society for Mining and Reclamation, Lexington, KY, pp. 820 – 832.
- Kania, T., 1991a. Laboratory Methods for Acid-Base Accounting: An Update, Chapter 6. In: Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania. Harrisburg: Pennsylvania Department of Environmental Protection, pp. 6 – 1 to 6 – 9.
- Kania, T., 1991b. Application of the principles of post-mining water quality prediction. Chapter 18 In: Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania. Harrisburg: Pennsylvania Department of Environmental Protection, pp. 18 -1 to 18 – 12.
- Kleinmann, R.L.P., D.A. Crerar and R.R. Pacelli, 1981. Biogeochemistry of acid mine drainage and a method to control acid formation. Mining Engineering, March 1981, pp. 300 – 305.

- Kleinmann, R.L.P., (ed) 2000. Prediction of Water Quality of Surface Coal Mines, Acid Drainage Technology Initiative (ADTI). Morgantown: West Virginia University, National Mine Land Reclamation Center, 241 p.
- Kowalewski, M. and J.D. Rimstidt, 2003. Average lifetime and age spectra of detrital grains: Toward a unifying theory of sedimentary particles. *Journal of Geology* 111, pp. 427 – 439.
- Krauskopf, K.B., 1967. Introduction to Geochemistry. New York: McGraw Hill Book Company, Inc. 721 p.
- Langmuir, D., 1971. The geochemistry of some carbonate ground waters in central Pennsylvania. *Geochimica et Cosmochimica Acta*, v. 35, pp. 1023 – 1045.
- Langmuir, D., 1997. Aqueous environmental geochemistry: New Jersey, Prentice-Hall, 600 p.
- Lapakko, K., 1988. Prediction of acid mine drainage from Duluth Complex mining wastes in Northeastern Minnesota. In: Mine Drainage and Surface Mine Reclamation Conference. Proc. Vol. 1, Pittsburgh, PA: U.S. Bureau of Mines Information Circular 9183, pp. 180 – 190.
- Lapakko, K., J. Wessels and D. Antonson 1995. Long Term Dissolution Testing of Mine Waste. U.S. E.P.A. Grant No. X-8200322-01-0, St. Paul, MN: Minnesota Department of Natural Resources, 85 p.
- Lasaga, A.C., 1984. Chemical kinetics of water-rock interactions. *Journal of Geophysical Research*. B6: pp. 4009 – 4025.
- Lasaga, A.C., 1998. Kinetic Theory in the Earth Sciences. Princeton, NJ: Princeton University Press. 811 p.
- Leavitt, B., J. Skousen and P. Ziemkiewicz, 1995. Effects of siderite on the neutralization potential in the acid-base account. In: Proc., West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, WV.
- Lovell, H.L., 1983. Coal mine drainage in the United States – an overview. *Wat. Sci. Tech.*, Vol. 15, pp. 1 – 25.
- Lusardi, P.J. and P.M. Erickson, 1985. Assessment and reclamation of an abandoned acid-producing strip mine in northern Clarion County, PA. In: Proceedings, 1985 Symposium on Surface Mining Hydrology, Sedimentology and Reclamation, Lexington: University of Kentucky.
- Machiels, A.J. and C. Pescatore, 1983. The Functional Dependence of Leaching on the Surface Area-to-Solution Volume Ratio. *Mater. Res. Soc. Symposium Proc.*, 15, pp. 209-216.

- McKibben, M.A. and H.L. Barnes, 1986. Oxidation of pyrite in low temperature acidic solutions – rate laws and surface textures. *Geochimica et Cosmochimica Acta*, v. 50, pp. 1509 – 1520.
- Meek, F.A., 1981. Development of a procedure to accurately account for the presence of siderite during mining overburden analysis. In: Proc., West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, WV.
- Mitchell, R.S. and H.J. Gluskoter, 1976. Mineralogy of ash of some American coals: variations with temperature and source. *Fuel Lond.* 55, pp. 90 – 96.
- Morrison, J.L., S.D. Atkinson, A. Davis and B.E. Scheetz, 1990. The use of CO₂ coulometry in differentiating and quantifying the carbonate phases in the coal-bearing strata of Western Pennsylvania. Its applicability in interpreting and modifying neutralization potential (NP) measurements. In: Proceedings of the 1990 Mining & Reclamation Conference and Exhibition, Vol. 1 Morgantown: West Virginia University, pp. 243 – 248.
- Noll, D.A., T.W. Bergstresser and J. Woodcock, 1988. Overburden Sampling and Testing Manual. Harrisburg: Pennsylvania Department of Environmental Resources, 78 p.
- Nordstrom, D.K. and C.N. Alpers, 1999. Geochemistry of Acid Mine Waters, Chapter 6. In: The Environmental Geochemistry of Mineral Deposits. Littleton, CO: Society of Economic Geologists, pp. 133 – 160.
- O'Neill, B.J., Jr., 1964. Atlas of Pennsylvania's Mineral Resources, Part 1. Limestones and Dolomites of Pennsylvania. Bulletin M50, Part 1, Harrisburg: PA Geologic Survey.
- Oversby, V.M., 1982. PNL-4382, Pacific Northwest Laboratory, Richland, Washington, 99352, 97 p.
- Palandri, J.L. and Y.K. Kharaka, 2004. A compilation of rate parameters of water-mineral interaction kinetics for application to geochemical modeling. U.S. Geological Survey Open File Report 2004-1068, 64 p.
- Parkhurst, D.L. and C.A. J. Appelo, 1999. User's Guide to PHREEQC (Version 2) A Computer Program for Speciation, Batch-Reaction, One-Dimensional Transport, and Inverse Geochemical Calculations. U.S. Geological Survey Water Resources Investigation Report 99-4259.
- Pearson, D.E. and J. Kwong, 1979. Mineral matter as a measure of oxidation of a coking coal. *Fuel, London*, 58: pp. 63 – 66.
- Pederson, L.R., C.Q. Buckwalter, G.L. McVay and B.L. Riddle, 1983. Glass surface area to solution volume ratio and its implications to accelerated leach testing. In: Materials Research Society Symposium Proceedings, Vol. 15. New York: Elsevier Science Publishing Co., pp. 47 – 54.

- Pedro, G., 1961. An experimental study on the geochemical weathering of crystalline rocks by water. *Clay Mineral Bulletin*, Vol. 4, pp. 266- 281.
- Perry, E.F., 1998. Interpretation of acid-base accounting. Chapter 11. In: *Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania*, Harrisburg: Pennsylvania Department of Environmental Protection pp. 11.1 – 11.18.
- Perry, E., 2000. Mine Drainage Prediction, A summary of concepts and processes. In: *Prediction of Water Quality at Surface Coal Mines*, Morgantown: West Virginia University, National Mine Land Reclamation Center, pp. 168 – 194.
- Perry E.F. and K.B. Brady, 1995. Influence of neutralization potential on surface mine drainage quality in Pennsylvania. In: *Proc., West Virginia Surface Mine Drainage Task Force Symposium*, Morgantown, WV.
- Perry, E. and H. Rauch, 2006. Water Quality Evolution in Flooded and Unflooded Coal Mine Pools, 2006. In: *Proceedings International Conference on Acid Rock Drainage*, ASMR, 3134 Montavesta Road, Lexington, KY 40502.
- Perry, E.F., J. Cuddeback, K.B.C. Brady and R.J. Hornberger, 2008. Standard Weathering Procedure for Coal Overburden, Interlaboratory Study of Leachate Composition. In: *Proceedings of 2008 Conference of American Society for Mining and Reclamation*, pp. 807 – 836.
- Plummer, L.N., T.M.L. Wigley and D.L. Parkhurst, 1978. The kinetics of calcite dissolution in CO₂-water systems at 5° to 60° and 0.0 to 1.0 atmospheres CO₂. *American Journal of Science*, Vol. 278, pp. 179 – 216.
- Pontolillo, J. and R.W. Stanton, 1994. *Coal Petrographic Laboratory Procedures and Safety Manual II*. U.S. Geological Survey Open-File Report 94-631.
- Rao, C.P. and H.J. Gluskoter, 1973. *Occurrence and Distribution of Minerals in Illinois Coals*, Circular 476, Illinois State Geological Survey, Urbana, 56 p.
- Raudsepp, M. and E. Pani, 2003. Application of Rietveld analysis to environmental mineralogy. In: Jambor, J.L., D.W. Blowes and A.I.M. Ritchie (eds.), *Environmental aspects of mine wastes*, Mineralogical Association of Canada, Short Course Series, Vol. 31, pp. 165 – 180.
- Rose, A.W., 1997. Personal Communication.
- Rose, A.W. and C.A. Cravotta, III, 1998. *Geochemistry of Coal Mine Drainage*, Chapter 1. In: *Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania*. Harrisburg: Pennsylvania Department of Environmental Protection, pp. 1 -1 to 1 – 22.
- Scheetz, B.E., W.P. Freeborn, S. Komarneni, S.D. Atkinson and W.B. White, 1981. Comparative study of hydrothermal stability experiments: Application to Simulated Nuclear Waste Forms. *Nuclear and Chemical Waste Management*, Vol. 2, pp. 229 – 236.

- Shelton, P.A., J.T. Ammons and J.R. Freeman, 1984. NPs; a closer look. *Green Lands* 13(4):35-37.
- Shuster, E.T., 1970. Seasonal Variations in Carbonate Spring Water Chemistry Related to Ground Water Flow. M.S. Thesis, University Park: Pennsylvania State University.
- Shuster, E.T. and W.B. White, 1971. Seasonal fluctuations in the chemistry of limestone springs: A possible means for characterizing carbonate aquifers. *Journal of Hydrology*. Vol. 14, pp. 93 – 128.
- Singer, P.C. and W. Stumm, 1970. Acidic mine drainage – The rate-determining step. *Science*, Vol. 167, pp. 1121 – 1123.
- Skema, V.W., 1995. New exposures of conemaugh coals, marine zones and paleosols along new toll road 66 near Greensburg. In: Pittsburgh Geological Society Golden Anniversary (1945-1995) Field Guidebook. Edited by P.J. Hutchinson, pp. 1 – 6 to 1 – 13.
- Skousen, J., J. Renton, H. Brown, P. Evans, B. Leavitt, K. Brady, L. Cohen and P. Ziemkiewicz, 1997. Neutralization potential of overburden samples containing siderite. *J. Environmental Quality* 26, pp. 673 – 681.
- Skousen, J., A. Rose, G. Geidel, J. Foreman, R. Evans and W. Hellier, 1998. A Handbook of Technologies for Avoidance and Remediation of Acid Mine Drainage. Morgantown: West Virginia University, National Mine Land Reclamation Center, ADTI. 131 p.
- Skousen, J., E. Perry, B. Leavitt, G. Sames, W. Chisolm, C.B. Cecil and R. Hammack, 2000. Static tests for coal mining acid mine drainage prediction in the Eastern U.S. In: Prediction of Water Quality at Surface Coal Mines, Morgantown: West Virginia University, National Mine Land Reclamation Center, pp. 73 – 98.
- Smith, M.W., K.B.C. Brady, E.F. Perry and J.M. Tarantino, 2000. Evaluation of Mining Permits Resulting in Acid Mine Drainage in Pennsylvania 1987-1996; A Post Mortem Study. In: Proceedings from the Fifth International Conference on Acid Rock Drainage. Littleton, CO: Society for Mining, Metallurgy and Exploration, pp. 713 – 719.
- Smith, R.M., W.E. Grube, Jr., T. Arkle, Jr. and A. Sobek, 1974. Mine Spoil Potentials for Soil and Water Quality. Cincinnati, Ohio: U.S. Environmental Protection Agency, 303 p.
- Smith, R.M., A.A. Sobek, T. Arkle, Jr., J.C. Sencindiver and J.R. Freeman, 1976. Extensive Overburden Potentials for Soil and Water Quality. Cincinnati, Ohio: U.S. Environmental Protection Agency, 311 p.
- Snoeyink, V.L. and D. Jenkins, 1980. Water chemistry. New York: John-Wiley & Sons, pp. 289 – 292.

- Sobek, A.A., W.A. Schuller, J.R. Freeman and R.M. Smith, 1978. Field and Laboratory Methods Applicable to Overburdens and Minesoils. EPA-600/2-78-054, Cincinnati, Ohio: U.S. Environmental Protection Agency, 203 p.
- Sorini, S., 1997. A Summary of Leaching Methods. Alexandria, VA: American Coal Ash Assoc. Inc.
- Stumm, W. and J.J. Morgan, 1970. Aquatic Chemistry. New York: John Wiley & Sons, 583 p.
- Sverdrup, H.U., 1990. The kinetics of base cation release due to chemical weathering. Lund University Press, Lund, Sweden, 246 p.
- Tarantino J.M. and D.J. Shaffer, 1998. Planning the overburden analysis. In: K.B.C. Brady, M.W. Smith and J. Schueck (eds.). Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania. PA DEP, Harrisburg, PA pp. 5.1 – 5.9.
- Taylor, J.C. and R.A. Clapp, 1992. New features and advanced applications of Siroquant: A personal computer XRD full profile quantitative analysis software package: Advances in X-ray Analysis, Vol. 35, pp. 49 – 55.
- Tukey, J.W., 1977. Exploratory Data Analysis. Reading, MA: Addison Wesley Publishing Company.
- vanZyl, D.J.A., S. Parsons, V. McLemore and R.J. Hornberger, 2006. Acid Drainage Technology Initiative: Ten Years of Mining Industry. Government Agencies and Academia Collaboration in the Metal and Coal Mining Sectors in the U.S.A. In: Proceedings of the 7th International Conference on Acidic Rock Drainage. 12 p.
- Vesper, D.J., M. Roy and C.J. Rhoads, 2008. Selenium distribution and mode of occurrence in the Kanawha Formation, southern West Virginia, U.S.A., International Journal of Coal Geology 73 (2008) pp. 237 – 249.
- White, W.B., 1986. Dissolution mechanisms of nuclear waste glasses: A critical review. In: Advances in Ceramics, Vol. 20 Nuclear Waste Management II, the American Ceramic Society, pp. 431 – 442.
- White, W.B., 1988. Geomorphology and Hydrology of Karst Terrains. Oxford University Press, Inc. 464 p.
- White, W.B., 1992. Theory of corrosion of glass and ceramics. pp. 2 – 28. In: Corrosion of Glass, Ceramics and Ceramic Superconductors, D.E. Clark and B.K. Zaitos, (eds.) Noyes Publications, Park Ridge, NJ.

- White, W.W., III, E.M. Trujillo and C.K. Lin, 1994. Chemical predictive modeling of acid mine drainage from waste rock: Model development and comparison of modeled output to experimental data. In: Proceedings, International Land Reclamation and Mine Drainage Conference and Third International Conference on the Abatement of Acidic Drainage, Pittsburgh: U.S. Bureau of Mines Special Publication SP 06A-94, pp. 157 – 166.
- Williams, D., 2003. The Acid Drainage Technology Initiative: an Evolving Partnership. In: Proceedings of the 6th International Conference on Acid Rock Drainage, Cairns, Australia.
- Wiram, V.P., 1992. Siderite masking: A factor to consider in overburden acid-base balancing. In: Proc. West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, WV.
- Yates, D.J.C., 1992. Physical and chemical adsorption – measurement of solid surface areas. In: Encyclopedia of Materials Characterization: Surfaces, Interfaces, Thin films. Edited by C.R. Brundle, C.A. Evans, Jr. and S. Wilson, Boston MA: Butterworth-Heinemann, pp. 736 – 744.
- Younger, P.L., 1997. The Longevity of Minewater Pollution: A Basis for Decision Making, *The Science of the Total Environment*, 194, 195, pp. 457 – 466.