REFERENCES

Adams, F., (1981) Nutritional imbalances and constraints to plant growth on acid soils. J. Plant Nutr. 4, 81-87.

Amacher, M.C., Baker, D.E., (1982) DE-AS08- 77DPO4515, Institute for Research on Land and Water Research, Pennsylvania State University, University Park, PA. 200.

Anthony, J. W., (1997) Handbook of Mineralogy, 3, 58.

Apte, A.D., Verma, S., Tare, V., and Bose, P., (2005) Oxidation of Cr(III) in tannery sludge to Cr(VI): Field observations and theoretical assessment. J. Haz. Mat. B121. 215-222.

Apte, A.D., Tare, V., and Bose, P., (2006) Extent of oxidation of Cr(III) to Cr(VI) under various conditions pertaining to natural environment J. Haz. Mat. B128. 164-174.

Backwell, L.R., and d'Errico, F., (2001) Evidence of termite foraging by Swartkrans early hominids. Proc. Natn. Acad. Sci., USA. 98. 4, 1358-1363.

Bartlett, R.J., (1981) Nonmicrobial nitrite to nirate transformation in soils. J.Amer. Soil Sci. Soc. 45, 1054-1058.

Bakore, G.V., and Bararia, M.S., (1965) Z. Phys. Chem., 229, 245-249.

Banerjee, R., Mondal, B., Kundu, S., (1997) Kinetics of oxidation of hydrogen peroxide by dioxo-bridged manganese(III, IV) complexes. J. Chem. Soc., Dalton Trans., 4341–4344.

Berger, L.R., Steininger, C.M., and DeRuiter, D.J., (2002) New fossil hominin and faunal discoveries from the coopers site, Gauteng, South Africa. Proceedings of the 71st Annual Meeting of the American Association of Physical Anthropologists.

Berger, L.R., Steininger, C.M., and DeRuiter, D.J. Hancox, J., (2003) Preliminary results of excavations at the newly investigated Coopers D deposit, Gauteng, South Africa. South African Journal of Science 99. 276-278.

Bertin, E.P., (1975) Principals and practice of X-ray spectrometric analysis. Kluwer Academic Publishers 2nd ed, 1080.

Bigham J. M., Fitzpatrick R. W., and Schulze D. G., (2002) Iron oxides. In Soil Mineralogy with Environmental Applications (eds. J. B. Dixon and D. G. Schulze). Soil Science Society of America, 323–366.

Boardman, R. S., Cheetham, A. H. Rowell, A. J., (1987) Fossil invertebrates. Blackwell Scientific Publications. Palo Alto, California.

Burke, E.A.J., (2001) Raman microspectrometry of fluid inclusions. Lithos. 55, 139-158.

Burns, R.G., Burns, V.M., (1977) in Marine Manganese Nodules, ed. Glasby, G.P. (Elsevier, Amsterdam), 185-248.

Brady, P.V., Krumhansl, J.L., and Papenguth, H.W., (1996) Surface complexation clues to dolomite growth, Geochimica Acta. 60, (4), 727-731.

Brain, C.K., (1993) Swartkrans. A Cave's Chronicle of Early Man, Transvaal Museum Monograph No. 8, Pretoria.

Brown, G.E., Jr, Henrich, V.E., Casey, W.H., Clark, D.L., Eggleston, C., Felmy, A., Goodman, D.W., Gratzel, M., Maciel, G., McCarthy, M.I., Nealson, K.H., Sverjensky, D.A., Toney, M.F., Zachara, J.M., (1999) Chem. Rev., 134. (99), 77-174.

Bricker, O.P., (1965) Some stability relations in the system Mn-O_2-H_2O at 25^oC and one atmosphere total pressure. Am. Mineral. 50, 1296-1354.

Calvert, S.E., and Pedersen, T.F., (1996) Sedimentary Geochemistry of Manganese-Implications for the Environment of Formation of Manganiferous Black Shales, Econ. Geol., 91, 36-47.

Canadian Council of Resource and Environment ministers (CCREM). Canadian water quality guidelines., (1987) Prepared by the task force on water quality guidelines, March.

Chambers, C., and Holliday, A.K., (1975) Modern inorganic chemistry, An intermediate text. Butterworth & Co (Publishers) Ltd, 222-223.

Chang, H.M., and Allan, G.G., (1971) Oxidation, 433-485. In Sarkanen, K.V. and Ludwig, C.H., (ed) Lignins. Wiley Interscience, New York.

Chng, H.K., Ramli, H.N., Yap, A.U.J., Lim, C.T., (2005) Effect of hydrogen peroxide on intertubular dentine. Journal of Dentistry. 33, 363-369.

Chukhrov, F.V., and Gorshkov, A.I., (1981) Iron and manganese oxide minerals in soils. Transactions of the royal society of Edinburgh: Earth Sciences, 72, 195-200.

Chao, T.T., (1972) Selective dissolution of manganese oxides from soils and sediments with acidified hydroxylamine hydrochloride. Soil Sci. Soc. Am. Proc. 36, 764–768.

Clarkson, E. N. K., (1986) Invertebrate Paleontology and Evolution. Allen & Unwin Ltd. London.

Clayden, J., Greeves, N., Warren, S., Wothers, P., (2001) Organic chemistry. Oxford University Press. New York. Ch3, 65-68.

Clarke R.J., Kuman, K., (2000) Sterkfontein caves guide booklet overview.

Clarke, R.J., (1998) First ever discovery of a well preserved skull and associated skeleton of Australopithecus. South African J. Sci. 94, 460-463.

Cotton, F.A., Wilkinson, G., (1988) Advanced Inorganic Chemistry, 5th ed., John Wiley & Sons Inc., New York, 697-709.

Corbet, A.S., (1935) The formation of hyponitrous acid as an intermediate compound in the biological or photochemical oxidation of ammonia to nitrous acid. ICI. Agricultural Research Station, Jealotts Hill, Bracknell, Berks. CXXXVII

Connolly, J.R., (2005) Introduction to X-Ray Powder Diffraction, EPS400-002.

Cooper, S.R., and Calvin, M., (1977) J. Am. Chem. Soc. 99, 6623.

Cotton, F.A., and Wilkinson, G.M., (1980) Advanced inorganic chemistry. 4th ed. Interscience, New York. 745-746.

Cukrowska, E.M., McCarthy, T.S., Pole, S., Backwell, L., Steininger, C., (2005) The chemical removal of manganese dioxide coatings from fossil bones from the Cradle of Humankind, South Africa. South African J. Sci. 101, 101-103.

Crerar, D.A. and Barnes, H.L., (1974) Geochim. Cosmochim. Acta 38, 279-300.

Cronan, D.S., (1969) Chem. Geol. 5, 99.

Davies, G., (1969) Coord. Chem. Rev. 21, 99.

Darwent, J.R. and Lepre, A., (1986) Interfacial electron transfer in colloidal TiO_2 accelerated by surface adsorption and the electric double layer. J.Chem.Soc., Faraday Trans., Sect. 2, (82), 2323-2335.

D'Errico, F., (1988) The use of resin casts for the study of use-wear. In Scanning Electron Microscopy in Archaeology, ed. S.L. Olsen. British Archaeological Reports, Int. Ser. 452, 155-167.Oxford.

Del Monte M., and Sabbioni, C., (1980) Authigenic dolomite on marble surface. Nat. 288, 350-351.

Deraz, N-A.M., Salim, H.H., Abd El-Aal, A., (2002) The influence of lithium on the hydrogen peroxide decomposition activity of manganese–alumina catalysts. Mat. Letters 537, 102–109.

Duckworth, O., W., Sposito, G., (2004) Siderophore and manganese (III) interactions II. manganite dissolution promoted by desferrioxamine B. (in preparation).

Duckworth, O.W., Martin, S.T., (2004) Role of molecular oxygen in the dissolution of siderite and rhodochrosite. Geochimica et Cosmochimica Acta, 68, No. 3, 607–621.

Eary, L.E., and Rai, D., (1987) Kinetics of chromium(III) oxidation to chromium(VI) by reaction with manganese dioxide. Environ. Sci. Technol. 21, 1187-1193.

Edward, J.B., and Benfer, R.A., (1993) Investigations of ancient human tissue. Chemical analysis in anthropology. Ed Sandford, M.K., Food and nutrition in history and anthropology, Volume 10. Gordon and breach science publishers. SA.

Elorza, J., Astibia, H., Murelaga, X., Pereda-Suberbiola, X., (1999) Francolite as a diagenetic mineral in dinosaur and other Upper Cretaceous reptile bones (Lan˜ o, Iberian Peninsula): microstructural, petrological and geochemical features. Cretaceous Research 20**,** 169–187.

Eriksson K.A., Truswell J.F. and McCarthy T.S., (1975) Limestone formation and dolomitization in a lower proterozoic succession from South Africa. J. Sed. Pet. 45, 604-614.

Erts, D., Gatheercole, L.J., Atkins, E.D.T., (1994) Scanning probe microscopy of intrafibrillar crystallites in calcified collagen. J. Mat. Sci-Mat. Med. 5, (4), 200-206.

Evangelou, V.P., (1998) In Environmental soil and water chemistry, Principles and applications, Ch5 and 7. John Wiley, New York.

Farmer, V.C., (1975) Miner. Soc. London, 154.

Feng, Q., Miyai, Y., Kanoh, H., Ooi, K., (1992) Langmuir 8, 1861.

Felbeck, G.T., Jr. (1965) Structural chemistry of soil humic substances. Adv. Argon. 17:327-368.

Fendorf, S.E., and Zasoski, R.J., (1992) Chromium(III) oxidation by &-MnO_2. Environ. Sci. Technol. 26, 79-85.

Franklin, M.L., Morse, J.W., (1983) The interaction of manganese(II) with the surface of calcite in dilute solutions and seawater. Marine Chem. 12, 241-254.

Furrer, G. and Stumm, W., (1986) The coordination chemistry of weathering: I. Dissolution kinetics of δ-Al_2O_3 and BeO, Geochim. Cosmochim. Acta 50, 1847-1860.

Gauglitz. R., Holterdorf, M., (1992) Immobilization of heavy metals by hydroxylapatite. Radiochimica Acta 58, (59), 253-257.

Gallaher, R.N., Perkins, H.F., Tan, K.H., Radcliffe, D. (1973), Soil concretions: II. Mineralogical analysis. Soil Sci Soc. Am Proc 37: 469-472.

Garrels, R.M., and Christ, C.L., (1965) Solutions, minerals, and equilibria. New York: Harper and Row.

Greenwood, P.H., and Howes, G.J., (1975) Neogene fossil fishes from the Lake Albert-Lake Edward rift (Zaire). Bull. Br. Mus. Nat. Hist. (Geol.) 26, (3), 66-127.

Gonzalez-gil, G., Amonette, .J.E., Romine, M.F., Gorby, Y.A., and. Geesey, G.G., (2005) Geochimica et Cosmochimica Acta, 69, (5), 1145–1155.

Goldberg, E.D., (1954) J. Geol., 62, 249.

Goodship, A.E., Draper, E.R.C., Morris, M.D., Matousek, P., Towrie, M., Parker, A.W., (2003) Kerr-gated picosecond Raman spectroscopy and raman photon migration of equine bone tissue. Central Laser Facility Annual Report 2003/2004.

Gupta, K.K.S., Begum, B.A., (1999) Kinetics and mechanism of the oxidation of some aldose, amino sugars and methylated sugars by tris(pyridine-2-carboxylato) manganese(III) in weakly acidic medium. Carbohydrate Research, 315, 70-75.

Hall, G., Pickering, R.,Lacruz, R., Hancox, J., Schmid, P., (2006) An Acheulean handaxe from Gladysvale Cave Site, Gauteng, South Africa. South African J. Sci., 102, 103-105.

Harris, D.C., (1998) Quantitative Chemical Analysis, 5th edition, W.H. Freeman & Company, New York, Ch.18, 21 and 22.

Haas J. R., Dichristina T. J., (2002) Effects of Fe(III) chemical speciation on dissimilatory Fe(III) reduction by Shewanella putrefaciens. Environ. Sci. Technol. 36, 373–380.

Hayes, K.F., Roe, A.L., Brown, Jr., G.E., Hodgson, K.O., Leckie, J.O. and Parks, G.A., (1987) In situ X-ray adsorption study of surface complexes: selenium oxy anions on FeOOH. Sci. 238, 783-786.

Hasan. M., A., Zaki, M.I., Pasupulety, L., Kumari, K., (1999) Promotion of the hydrogen peroxide decomposition activity of manganese oxide catalysts. App. Cat. A: General 181, 171-179.

Hem, J.D., (1978) Redox processes at surfaces of manganese oxide and their effects on aqueous metal ions. Chem. Geol., 21, 199-218.

Hem, J.D., Lind, C.J., (1983) Nonequilibrium models for predicting forms of precipitated manganese oxides. Geochim. Cosmochim. Acta 47, 2037-2046.

Healy, T.W., James, R.O., Cooper, R., (1968) Adv. Chem. Ser. 79, 62-73.

Heinrich, J.L., Sokol, J.J., Hee, A.G., and Long, J.R., (2001) Manganese`Chromium`CyanideClusters: Molecular $MnCr_6(CN)_{18}$ and $Mn_3Cr_6(CN)_{18}$ Species and a Related $MnCr_3(CN)_9$ Chain Compound. Journal of Solid State Chemistry 159, 293, 301.

Holz M., Barberena M.C., (1989) A importancia da Tafonomia para o estudo de vertebados fosseis. Acta Geologica Leopoldensia, 29, 77-92.

Holz M., Barberena M.C., (1994) Taphonomy of the brazilian triassic paleoherpetofauna: pattern of death, transport and burial. Palaeogeographv, Palaeoclimatology, Palaeoecology, 107, 179-197.

Howie, F.M.P., (1974) Introductionof thioglycollic acidin preparation of vertebrate fossils. Department of Palaeontology, British museum (Natural history). 17/2. 159-166.

Horowitz, A.J., (1997) Analyst 122, 1193.

Holz M. & Schultz C.L., (1998) Taphonomy of the south brazilian triassic herpetofauna: Fossilization mode and implications for morphological studies. Lethaia 31, 335-345.

Howie, F.M.P., (1974) Introduction of thioglycollic acid in preparation of vertebrate fossils. Curator 17, 159-166.

Hue, N.V., Vega, S., Silva, J.A., (2001) Manganese toxicity in a Hawaiian oxisol affected by soil pH and organic amendments. Soil Sci. Soc. Am. J. 65, 153-160.

Hue, N.V., (1988) A possible mechanism for manganese toxicity in Hawaii soils amened with a low–Mn sewage sludge. J. Environ. Qual. 17, 473-479.

Huang, P.M., (1991) Kinetics of redox reactions on manganese oxides and its impact on environmental quality. Ed. Sparks, D.L., and Suarez, D.L., Soil Sci. Soc. Am., Inc. Madison, Wisconsin, USA.

Jaurequi, M.A., and Reisenauer, H.M., (1982) Dissolution of oxides of manganese and iron by root exudates components. Soil Sci. Soc. Am. J. 46, 314-317.

Jasinsku, J.P., and Holt, S.L., (1975) Inorg. Chem. 14, 1267.

James, R.O., Healy, T.W., (1972) J. Colloid Interface Sci. 40, 53-65.

Johnson, C.A., and Xyla, A.G., (1991) The oxidation of chromium(III) to chromium(VI) on the surface of manganite (MnOOH). Geochimica et Cosmochimica Acta. 55, 2861-2866.

Johanson, D.C., and Edgar, B., (1996) From Lucy to language. Witwatersrand University Press. A Peter N. Nevraumont Book. Part 1, central issues of paleoanthropology.

Joschek, S., Nies, B, Krotz, R. Gopferich, A., (2000) Chemical and physiochemical characterization of porous hydroxyapatite ceramics made of natural bone. Biomaterials 21, 1645-1658.

Johnson, E. A., and Post, J. E., (2006) Water in the interlayer region of birnessite: Importance in cation exchange and structural stability. American Mineralogist 91, 609-618.

Julien, C., Massot, M., Baddour-Hadjean, R., Franger, S., Bach, S. Pereira-Ramos, J.P., (2003) Raman spectra of birnessite manganese dioxides. Solid State Ionics, 159, 345-356.

Julien, C.M., Banov, B., Momchilov, A., Zaghib, K., (2006) Lithiated manganese oxide $Li_{0.33}MnO_2$ as an electrode material for lithium batteries. Journal of Power Sources 159, (1365-1369).

Jun, Y.S., Martin, S.T., (2003) Microscopic observations of reductive manganite dissolution under oxic conditions, Environ. Sci. Technol. 37, 2363-2370.

Kang, L., Zhang, M., Huai Liu, Z., Ooi, K., (2007) IR spectra of manganese oxides with either layered or tunnel structures. Spectrochimica Acta Part A 67, 864–869.

Kaiser, T.M., Katterwe, H., (2001) the application of 3D-microprofilometry as a tool in the surface diagnosis of fossil and sub-fossil vertebrate hard tissue. An example from the Pliocene upper laetolil beds, Tanzania. Int. J. Osteoarchaeol. 11, 350-356.

Koch.C.F., (1978) Bias in the published fossil record palaeobiology, 4, (3), 367-372.

Krauskopf, K.B., (1956) Geochim. Cosmochim. Acta 9, 1.

Kuman, K., Clarke R.J., (2000) Stratigraphy, artefact industries and hominid associations for Sterkfontein, member 5. J-Hum-Evol. 38, (6), 827-47.

Kummel, B., Raup, D. (1965) Handbook of Palaeontological techniques, San Francisco and London: W.H. Freeman and Co. 311.

Kung, K.H., McBride, M.B. (1988) Electron transfer processes between Hydroquinone and hausmannite (Mn_3O_4). Clays Clay Miner. 36, 297-302.

Lambert, J.B., Sipson, V.S., Szpunar, C.B., Buikstra J.E., (1984) Ancient human diet from inorganic analysis of bone. Acc. Chem. Res. 17, 298-305.

Lambert, J.B., Simpson, S.V., Szpunar, C.B., and Buikstra, J.E., (1984) Ancient human diet from inorganic analysis of bone. Acc. Chem. Res., 17, 298-305.

LeGeros, R.Z., (1991) Calcium phosphates in oral biology and medicine. Karger press: Basel Wudneh, A and T. Breese, (1999) Feasibility of using natural fishbone apatite as a substitute for hydroxyapatite in remediating aqueous heavy metals. J. Haz. Mat. B69, 187-196.

Lehmann, R.G., Cheng, H.H., and Harsh, J.B., (1987) Oxidation of phenolic acids by soil iron and manganese oxides. Soil Sci. Soc. Am. J. 51, 352-356.

Liptrot, G.F., (1992) Modern Inorganic Chemistry, 4th ed., Collins Educational, London, 366-370.

Liang, Y., Miranda, C.R., Scandolo, S., (2006) Infrared and raman spectra of silica polymorphs from an ab initio parametrized polarizable force field. Chem. Phys. J. 125.

Lippmann, F., (1973) Sedimentary carbonate minerals. Springer-Verlag.

Liu C., Zachara J. M., Gorby Y. A., Szecsody J. E., and Brown C. F., (2001) Microbial reduction of Fe(III) and sorption/precipitation of Fe (II) on Shewanella putrefaciens strain CN32. Environ. Sci. Tech. 35**,** 1385–1393.

Liu C., Gorby Y. A., Zachara J. M., Fredrickson J. K., Brown C. F., (2002) Reduction kinetics of Fe(III), Co(III), U(VI), Cr(VI) and Tc(VII) in cultures of dissimilatory metal-reducing bacteria. Biotechnol. Bioeng. 80**,** 637–649.

Loganathan, P., (1971) Sorption of heavy metals on a hydrous manganese oxide. Ph.D. Thesis, University of California, Davis.

Luther, G.W., Popp, J.I., (2002) Kinetics of the abiotic reduction of polmeric manganese dioxide by nitrite: An anaerobic nitrification reaction. Aquat. Geochem. 8, 15-36.

Lyman, R.L., (1994) Vertebrate taphonomy. Cambridge University Press.

Machemer, S.D., and wildeman, T.R., (1992) Adsorption compared with sulfide precipitation as metal removal processes from acid mine drainage in a constructed wetland. Contam. Hydro. J., 9, 115-131.

Mackay, K.M., and Mackay, R.A., (1981) The transition elements of the first series. Introduction to modern Inorganic Chemistry, 3rd edition, International Textbook Company Limited, 209-213.

Martell, A.E., Smith, R.M., and Motekaitis, R.J., (2004) NIST Standard Reference Database 46 Version 8.0, NIST Critically Selected Stability Constants of Metal Complexes, USA .

Matocha, C.J., Sparks, D.L.,Amonette, J.E., and Kukkadapu, R.K., (2001), Kinetics and mechanism of birnessite reduction by catechol. Soil Sci. Soc. Am. J. 65, 58-66.

Magers, K.D. Smith, C.G. and Sawyer, D.T., (1978) Inorg. Chern. 17, 515.

Martill, D.M., (1988) Preservation of fish in the Cretaceous Santana formation of Brazil. Palaeontol. 31, (1), 1-18.

Mann, S., (1996) Biomimetic materials chemistry. Wiley-VCH, New York. Ch.1, 1-54.

Martin, S.T., (2003) Precipitation and dissolution of iron and manganese oxides, Ch4, Environ. Cat. (Ed. Grassian, V.H.).

Majors, R.E., (2004) Speciation studies of metal ions in environmental and biological media using supported liquid membrane extraction, LCGC North America 22, (2).

McBride, M.B., (1989a) Oxidation of dihydroxybenzene in aerated aqueous suspensions of birnessite. Clays Clay Miner. 37, 341-347.

McBride, M.B., (1989b) Oxidation of 1,2-and 1,4-dihydroxybenzene by birnessite in acidic aqueous suspension. Clays Clay Miner. 37, 479-486.

McRoberts, C., (1998) Laboratory Notes. Invertebrate Paleontology. State University of New York, College at Cortland.

McCarthy, T., Rubidge, B. (2005) The story of life: A southern African perspective on a 4.6 billion year journey. Kumba resources. Struik publishers.

McKenzie, R.M., (1975) An electron microprobe study of the relationships between heavy metals and manganese and iron in soils and ocean floor nodules. Aust. J. Soil Res, 13, 177-188.

Mei, R., Yocum, C.F., (1991) Calcium retards NH_2OH inhibition of O_2 evolution activity by stabilization of Mn^{2+} binding to photosystem II. Biochem. 6; 30, (31), 7836-7842.

Mero, J.L., (1977) in Marine Manganese Nodules, ed. Glasby, G.P., (Elsevier, Amsterdam), 327-355.

Morse, J.W., (1986) The surface chemistry of calcium carbonate minerals in natural waters: An overview. Mar. Chem. 20, 90-112.

Morgan, J.J., (1967) Chemical equilibria and kinetic properties of manganese in natural waters. In: S.D. Faust and J.V. Hunter (editors), Principles and applications of chemistry, Proceedings of the fourth Rudolfs research conference, Rutgers, The State University, J. Wiley, New York, 561-624.

Murray, J.W., (1974) The surface chemistry of hydrous manganese dioxide. J. Colloid Interface Sci. 46, 357-371.

Murray, J.W., Dillard J.G., Giovanoli, R., Moers, H., and Stumm, W., (1985) Oxidation of Mn(II): Initial mineralogy, oxidation state and aging. Geochim. Cosmochim. Acta 49, 463-470.

Neaman, A., Mouele, F., Trolard, F., Bourrie, G., (2004) Improved method for selective dissolution of Manganese oxides: applications for studying trace element associations. Appl. Geochem. 19, (6), 973-979.

Nielsen, J.L., Nielsen, P.H., (1998) Microbial Fe(II)-oxidation by nitrate in activated sludge. Water Science and Technology, 37, (4), 403-406.

Ono, Y., Matsumura, T., and Fukuzumi, S., (1977) Electron spin resonance studies on the mechanism of the formation of p-benzosemiquinone anion over manganese dioxide. J. Chem. Soc. Trans. 2, 1421-1424.

Oscarson, D.W., Huang, P.M., Liaw, W.k., Hammer, U.T., (1983) Kinetics of the oxidation of arsenite by various manganese dioxides. Soil. Sci. Soc. Am J. 47, 644-648.

Ottaway, J.M., Fell, G.S., (1986) Pure Appl. Chem., 58, 1707.

Parker, R.B., & Toots, H., (1970) Geol. Soc. Am. Bull., 81, Fossils in the making, Behrens-Mayer, A.K., Hill, A.P., Eds., University of Chicago Press, Chicago, 1980, 197-207.

Palumbo, B., Bellanca, A., Neri, R., Roe, M.J., (2001) Trace metal partitioning in Fe–Mn nodules from Sicilian soils, Italy. Chem. Geol., 173, (4), 257-269.

Parc, S., Nahon, D., Tardy, Y., and Vieillard, P., (1989) Estimated solubility products and fields of stability for cryptomelane, nsutite, birnessite, and lithiophorite based on natural lateritic weathering sequences. Am. Miner. 74, 466-475.

Pena, J., Duckworth, O.W., and Sposito, G., (2004) Dissolution Kinetics of Hausmannite in the Presence of the Siderophore, DFO-B. AGU 85 (47) Fall meet. Suppl., B53C-1005.

Phillippe, W.R., Blevins, R.L., Barnhisel, R.I., Bailey, H.H., (1972) Distribution of concretions from selected soils of the inner bluegrass region of Kentucky. Soil Sci Soc Am Proc 36,171-173.

Pingatore, N.E., Jr (1978) The behavior of Zn^{2+} and Mn^{2+} during carbonate diagenisis: theory and applications. J. Sediment. Petrol., 48, 799-814.

Plenderleith, A.E., and Werner, A.E.A., (1971) The conservation of antiquities and works of art: Treatment, repair and restoration. 2nd Ed Oxford University Press, New York.

Pluth, J.J., Smith, J.V., Pushcharovsky, D. Y., Semenov, E.I., Bram, A., Riekel, C., Webber, H.P. and Broach, R.W., (1997) Proc. Natl. Acad. Sci. USA 94, 12263-12267.

Potter, R.M., Rossman, G.R., (1979) The tetravalent manganese oxides: Identification, hydration and structural relationships by infrared spectroscopy. American Mineralogist. 64. 1199-1218.

Potter, R. M., Rossman, G.R., (1979a) The manganese and iron oxide mineralogy of desert varnish' Chem. Geol. 2, (5), 79-94.

Potter, R.M., Rossman, G.R., (1979b) A magnesium analogue of chalcophanite in manganese-rich concretions from Baja Califonia- Am. Mineral., 64, 1227 -1229.

Potter, R.M., Rossman, G.R., (1979c) Mineralogy of manganese dendrites and coatings. Am. Mineral., 64' 1219-1226.

Post, J.E., (1999) Proc. Natl. Acad. Sci. USA, 96, 3447-3454.

Prothero, D. R., (1998) Bringing fossils to life, An Introduction to Palaeobiology. WCB/McGraw-Hill. U.S.A. 4-11.

Wilson, K.J.W (OBE), Waugh, A**.,** (1996) Anatomy and physiology in health and illness. 8th ed. 372. Churchill Livingstone. New York.

Radden, J.A., Porter I.C., (1962) Prelimenary note on some soil concretions in the Virginia Piedmont. Mineral Ind. J. 9, 1-4.

Ramesh, S., Tan, C.Y., Peralta, C.L., and Teng, W.D., (2007) The effect of manganese oxide on the sinterability of hydroxyapatite. Science and Technology of Advanced Materials. 8, (4), 257-263.

Rao, T.P., Karthikeyan, S., Vijayalekshmy, B., and Iyer, C.S.P., (1998) Speciative determination of chromium(VI) and chromium(III) using flow–injection on-line preconcentration and flame atomic spectrometric detection ; Analytica Chimica Acta; 369, 69-77.

Reeder, R.J., (1983) Crystal chemistry of the rhombohedral carbonates. In Carbonates: Mineralogy and chemistry (ed. R.J. Reeder); Rev. Mineral. 11, 1-48.

Rhoton, F.E., Bigham, J.M., Schulze, D.G., (1993), Properties of iron-manganese nodules from a sequence of eroded fragipan soils. Soil Sci Soc. Am. J. 57: 1386-1392.

Riley, J.P., Robertson, D.E., Dutton, J.W.R., Mitchell, N.T., Williams, P.J.L., (1975) In Chemical Oceanography; Riley, J.P., Skirrow, G., Eds; Academic Press: London; Vol. 3, Ch19.

Richards, R.G. Owen, G.Rh., Gwynn, I.Ap., (1999) Scanning microscopy 13, (1), 55-60.

Robbins, J.A., and Callender, E., (1975) Diagenisis of manganese in Lake Michigan sediments. Am. J. Sci., 275, 512-533.

Royer, R.A., Unz, R.F., (2006) Manganese oxide reduction in laboratory microcosms. Mine water and the environment, International mine water association. Department of Civil and Environmental Engineering, The Pennsylvania State University.

Ross, S.J., Franzmeier, D.P., Roth, C.B., (1976) Mineralogy and chemistry of manganese oxides in some Indiana soils. Soil Sci. Soc. Am. J., 40, 137-142.

Rudner, I., (1972) Preparing fossils with acid – a step by step account. Curator, xv, (2), 1972, 121-130.

Schwertmann, U., Fanning, D.S., (1976) Iron-manganese concretions in hydrosequences of soils in loess in Bavaria. Soil Sci. Soc Am J. 40, 731-738.

Schnitzer M., (1982) Organic matter characterization methods of soil analysis part 2. ASA-SSSA Madison, USA.

Shen, X.M., Clearfield, A., (1986) J. Solid State Chem. 64, 270.

Schroeder, D.C., Lee, G.F., (1975) Water, Air, Soil Pollut. 4, 355-365.

Schultz C.L., Gamermann N., Holz M., (1991) Tafonomia de vertebrados: a diagenese como fator de altera?ao morfologica. In: I Encontro De Pesquisadores Do Gonduana No Rio Grande Do Sul, Santa Maria, (1990) Ciencia e Natura, 12, 77-81

29, (4), 561–575.

Schmidt, T., (1999) Mechanisms and regulation of reduction-based iron uptake in plants, New Phytol. 141, 1-26.

Scheffer, F., Ulrich, B., (1960) Humus and humusdungung. Ferdinand Enke verlag, Stuttgart.

Scheffer, F., Meyer, B., and Niederbudde, E.A., (1959) Huminstoffbildung unter katalyischer Einwirkung naturlich vorkommender eisenverbindungen im modellversuch. Pflanzenernaehr, Z., Dueng. Bodenkd. 87, 26-44.

Selim, M.M., El-Aiashi, M.K. Mazhar, H.S., and Kamal, S.M., (1996) Decomposition of H_2O_2 over manganese-chromium oxide catalyst in aqueous and alkaline solutions. Materials Letters 28, 417-421.

Seilacher, A., Reif, W.E., Westphal, F., (1985) Sedimentalogical, ecological and temporal patterns of fossil largerstatten. Philosophical Transactions of the Royal Society of London. B 311, 5-23.

Shriver, D.F., Atkins, P.W., (1998) Inorganic Chemistry, 6th edition, Oxford University Press, Oxford, Ch.4.

Skinner. H.C.W., (2004) Mineralogy of bone. Essentials of Medical Geology. Yale University. Academic Press. 667-693.

Small, R.J., (1999) Post clean treatment composition comprising an organic acid and hydroxylamine. United States Patent, 5981454, E.K.C. Technology Inc.

Souto-Ribeiro A.W. & Holz M., (1998) The Early Triassic Sanga do Cabral (Parana Basin, Brazil) and Katberg Sandstone (Karoo Basin, South Africa) formations - a possible "taphocorrelation". J. Afric. Earth Sc., 27(1A), 189.

Spencer, L.M., Van Valkenburgh, B., Harris, J.M., (2003) Taphonomic analysis of large mammals recovered from the Pleistocene Rancho La Brea tar seeps. Paleobiology:

Spencer, D.W., Brewer, P.G., and Sachs, P.L., (1972) Geochim. Cosmochim. Acta. 36, 71.

Sparks, D.L., (1989) Kinetics of soil chemical processes; Academic Press: New York, 47.

Sparrow, L.A., Uren, N.C., (1987) Oxidation and reduction of Mn in acidic soils: Effect of temperature and soil pH. Soil Biol. Biochem. 19, 143-148.

Stein, L.Y. Nealson, K.H., (1999) Manganese, Metallogenium, and Martian microfossils, Jet Propulsion Laboratory, 4800 Oak Grove Drive, MS 183-301, Pasadena, CA 91109.

Stone, A.T., Morgan, J.J., (1984a) Reduction and dissolution of manganese(III) and manganese(IV)oxides by organics. 1. Reaction with Hydroquinone. Environ. Sci. Technol. 18, 450-456.

Stone, A.T., Morgan, J.J., (1984b) Reduction and dissolution of manganese(III) and manganese(IV)oxides by organics. 2. Survey of the reactivity of organics. Environ. Sci. Technol. 18, 617-624.

Stone, A.T., (1997) Reactions of extracellular organic ligands with dissolved metal ions and mineral surfaces, In: Banfield, J.F. and Nealson, K.H., ed. Geomicrobiology: Interactions between Microbes and Minerals, Washington, D.C.: Mineral. Soc. Am., 309-344.

Stone, A.T., (1987) Reductive dissolution of manganese(III/IV) oxides by substituted phenols, Environ. Sci. Technol. 21, 979-988.

Sulter, J.H., (1974) Inorg. Chem., 13, 1444.

Stumm, W., Sulzberger, B. Geochim., (1992) Cosmochim. Acta, 56, 3233.

Stumm, W., Wollast, R., (1990) Coordination chemistry of weathering: kinetics of the surface-controlled dissolution of oxide minerals. Reviews of Geophysics, 28, (1), 53-69.

Stumm, W., (1997) Reactivity at the mineral-water interface: dissolution and inhibition,

Coll. Sur. A: Phys. Eng. 120, 143-166.

Stipp, S. and Hochella, M.F., Jr. (1991) Structure and bonding environments at the calcite surface observed with X-ray photoelectron spectroscopy (XPS) and low energy diffraction (LEED). Geochim. Cosmochim. Acta 55, 1723-1736.

Taina, S.J. and Doner, H.E., (1985) Copper-manganese(II) exchange on a chemically reduced birnessite. Soil Sci. Soc. Am. J. 49, 307-313.

Tamaura, Y., (1985) Inorg. Chem. 24, 4363.

Tan, W., Feng, X., Huang, Q., Li, X., (2005) Adsorption and redox reactions of heavy metals on Fe-Mn nodules from Chinese soils. J. Colloid Int. Sci. 284, 600-605.

Teo, K.C., and Chen J., (2001) Determination of manganese in water samples by flame atomic absorption spectrometry after cloud point extraction, Analyst 126, 534-537.

Tokashiki, Y., Dixon, J.B., Golden, D.C., (1986) Manganese oxide analysis in soils by combined X-ray diffraction and selective dissolution methods. Soil Sci Soc am. J. 50, 1079-1084.

Toombs, H.A., and Rixon, A.F., (1959) The use of acids in the preparation of vertebrate fossils. Curator, 2, (4), 304-312.

Tomoyuki, M., Katsuhiro, U., Yasuhiro, S. and Kazuo, S., (2002) The mechanism of manganese oxide dissolution by soil drying. 17th WCSS, 14-21 August 2002, Thailand.

Tribble, J.S., Arvidson, R.S., Lane(III), M., Mackenzie, F.T., (1995) Crystal chemistry, and thermodynamic and kinetic properties of calcite, dolomite, apatite, and biogenic silica: applications to petrologic problems. Sed. Geol. 95 (1995) 11-37.

Van Capellen, P., Charlet, L., Stumm, L., Wersin, P., (1993) A surface complexation model of the carbonate mineral-aqueous solution interface. Geochimica Acta 57, 3505-3518.

Van Der Weijden, C.H., and Reith M., (1982) Chromium(III)-chromium(VI) interconversions in seawater. Mar. Chem. 11, 565-572.

Von Endt, D.W., 'Bone' In Rose, C.L., and Von Endt, D.W., editors., (1984) Protein Chemistry for Conservation. American Institute for Conservation of Historic and Artistic Works, Washington, D.C.

Wangersky, P.J., and Joensuu, O., (1964) Strontium, magnesium and manganese in fossil foraminiferal carbonates. J. Geol., 72, 477-483.

Wesson, L.G., (1942) Outline of the chemistry of dental materials. St. Louis, The C.V. Mosby company United States of America.

Weast, R.C., (ed) (1978) CRC handbook of chemistry and physics. 58th ed. CRC Press, Inc., West Palm Beach, FL.

Wehrli, B., Sulzberger, B. and Stumm, W., (1989) Redox processes catalyzed by hydrous oxide surfaces. In: J. Schott and A.C. Lasaga (Editors), Kinetic Geochemistry. Chem. Geol., 78, 167-179.

Werain, P., (1990) The Fe(II)-CO_2-H_2O system in anoxic natural waters: Equilibria and surface chemistry. Ph.D. thesis, Swiss Federal Institute of Technology.

Wieder, R.K., and Lang, G.E., (1986) Fe, Al, Mn and S chemistry of Sphagnum Peat in four peatlands with different metal and sulfur input. Water, Air and Soil Pollution, 29, 309-320.

White, W.B., (1997) Thermodynamic equilibrium, kinetics, activation barriers and reaction mechanisms for chemical reactions in Karst terrains. Environmental Geology. 30, 46-58.

Willard, H.H., Merritt, L.L., Dean, Jr.J.A., F.A. Settle, Jr.,(1988) Instrumental Methods Of Analysis, 7th edition, Wadsworth publishing company, Belmont, California, Ch10.

Wollast, R., Mackenzie, F.T., (1983) The global cycle of silica, in Silicon Geochemistry and Biochemistry, edited by S.R. Aston, 39-76, academic, San Diego, California.

Yamaguchi, K.S. and Sawyer .D.T., (1985) Isr. J. Chern. 25, 164.

Young, L.B., Harvey, H.H., (1992) Geochemistry of Mn and Fe in lake sediments in relation to lake acidity. Limnol Oceanogy. 37, (3), 603-613.

Zhang, M., and Karathanasis, A.D., (1997) Charachterization of iron-manganese concretions in Kentucky alfisols with perched water tables. Clays and Clay Minerals, 45, (3), 428-439.

Zinder, B., Furrer, G., and W Stumm, W., (1986) The coordination chemistry of weathering. 2. Dissolution of Fe(III) oxides, Geochim. Cosmochim. Acta 50, 1861-1869.

Zipkin, I., (1970) Inorganic Composition of bone. In Biological Calcification: Cellular and Molecular Aspects (H. Schraer, Ed.), Appleton-Century-Crofts, New York, 69–104.