

(Abstracted/Indexed in: AGI's Bibliography and Index of Geology; Biological Abstracts; Biosis; Bulletin Signalétique; Chemical Abstracts/CAS; Current Contents/Agriculture, Biology & Environmental Sciences; Elsevier BIOBASE/Current Awareness in Biological Sciences; Environmental Periodicals Bibliography; Embiology; GEOBASE; Irrigation, Drainage Abstracts; PASCAL; Science Citation Index; SciSearch; Soils and Fertilizers). Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.

Regular Articles

Which strategy is best to predict soil properties of a local site from a national Vis–NIR database? F. Gogé, C. Gomez, C. Jolivet and R. Joffre	1
Oxidation of Cr(III)-citrate/tartrate complexes by δ -MnO ₂ : Production of Cr(VI) and its impact factors F. Yang, J. Guo, R. Dai and Y. Lan	10
Digital mapping of soil salinity in Ardakan region, central Iran R. Taghizadeh-Mehrjardi, B. Minasny, F. Sarmadian and B.P. Malone	15
Interpolation of Mexican soil properties at a scale of 1: 1,000,000 G. Cruz-Cárdenas, L. López-Mata, C.A. Ortiz-Solorio, J.L. Villaseñor, E. Ortiz, J.T. Silva and F. Estrada-Godoy	29
A pedotransfer function for estimating bulk density of forest soil in Japan affected by volcanic ash K. Nanko, S. Ugawa, S. Hashimoto, A. Imaya, M. Kobayashi, H. Sakai, S. Ishizuka, S. Miura, N. Tanaka, M. Takahashi and S. Kaneko	36
Soil organic carbon stocks in the Limpopo National Park, Mozambique: Amount, spatial distribution and uncertainty A.H. Cambule, D.G. Rossiter, J.J. Stoorvogel and E.M.A. Smaling	46
Mid-infrared attenuated total reflectance spectroscopy for soil carbon and particle size determination Y. Ge, J.A. Thomasson and C.L.S. Morgan	57
Predicting soil bulk density for incomplete databases C.H. Sequeira, S.A. Wills, C.A. Seybold and L.T. West	64
Changes in soil organic matter driven by shifts in co-dominant plant species in a grassland R. Erfanzadeh, B. Bahrami, J. Motamedi and J. Pétilion	74
Sorption of organic carbon compounds to the fine fraction of surface and subsurface soils S. Jagadamma, M.A. Mayes, Y.L. Zinn, G. Gísladóttir and A.E. Russell	79
Net anthropogenic nitrogen inputs (NANI) index application in Mainland China Y. Han, Y. Fan, P. Yang, X. Wang, Y. Wang, J. Tian, L. Xu and C. Wang	87
Soil microbial activity in response to fire severity in Zagros oak (<i>Quercus brantii</i> Lindl.) forests, Iran, after one year M. Pourreza, S.M. Hosseini, A.A. Safari Sinangani, M. Matinzadeh and W.A. Dick	95
Preferential flow and metal distribution in a contaminated alluvial soil from São Domingos mine (Portugal) F. Garrido, S. Serrano, L. Barrios, J. Uruñuela and M. Helmhart	103
Proton transfer processes in polar regions of humic substances initiated by aqueous aluminum cation bridges: A computational study A.J.A. Aquino, D. Tunega, G.E. Schaumann, G. Haberhauer, M.H. Gerzabek and H. Lischka	115

A model for the interpretation of the experimental drainage moisture characteristic N. Collis-George	124
Digital Soil Assessments and Beyond, by Budiman Minasny P. Krasilnikov	131
Statistical sampling design impact on predictive quality of harmonization functions between soil monitoring networks B.P. Louis, N.P.A. Saby, T.G. Orton, E. Lacarce, L. Boulonne, C. Jolivet, C. Ratié and D. Arrouays	133
Chernozem properties of Black Soils in the Baltic region of Germany as revealed by mass-spectrometric fingerprinting of organic matter S. Thiele-Bruhn, P. Leinweber, K.-U. Eckhardt, H.K. Siem and H.-P. Blume	144
Soil profile inversion in earthquake-induced liquefaction-affected soils and the potential effects on urban trees J. Morgenroth, P. Almond, B.C. Scharenbroch, T.M. Wilson and S. Sharp-Heward	155
Characterization and evaluation of arsenic and boron adsorption onto natural geologic materials, and their application in the disposal of excavated altered rock C.B. Tabelin, T. Igarashi, T. Arima, D. Sato, T. Tatsuhara and S. Tamoto	163
A new form of needle-fiber calcite produced by physical weathering of shells X.S. Villagran and R.M. Poch	173
Soil carbon and nitrogen pools and their relationship to plant and soil dynamics of degraded and artificially restored grasslands of the Qinghai–Tibetan Plateau Y.-Y. Li, S.-K. Dong, L. Wen, X.-X. Wang and Y. Wu	178
Effect of combine application of organic manure and inorganic fertilizer on methane and nitrous oxide emissions from a tropical flooded soil planted to rice S. Das and T.K. Adhya	185
The “Fabric” of soil micromorphological research in the 20th century — A bibliometric analysis G. Stoops	193
The dimensions of soil security A. McBratney, D.J. Field and A. Koch	203
Terrain attributes and spatial distribution of soil mineralogical attributes J.C. de Oliveira Jr., V. de Freitas Melo, L.C. de Paula Souza and H.O. da Rocha	214
A simplified approach to estimate water retention for Sicilian soils by the Arya–Paris model C. Antinoro, V. Bagarello, V. Ferro, G. Giordano and M. Iovino	226
Aspects of soil phenolic matter (SPM): An explorative investigation in agricultural, agroforestry, and wood ecosystems A. Buondonno, G.F. Capra, E. Coppola, C. Dazzi, E. Grilli, P. Odierna, M. Rubino and S. Vacca	235
Soil moisture induced changes on fine-scale spatial pattern of soil respiration in a semi-arid sandy grassland S. Fóti, J. Balogh, Z. Nagy, M. Herbst, K. Pintér, E. Péli, P. Koncz and S. Bartha	245
Extraction of mercury water-soluble fraction from soils: An optimization study A.T. Reis, C.B. Lopes, C.M. Davidson, A.C. Duarte and E. Pereira	255
Temporal dynamics of soil oxidative enzyme activity across a simulated gradient of nitrogen deposition in the Gurbantunggut Desert, Northwestern China X. Zhou and Y. Zhang	261
Reflectance spectroscopy of soils post-heating—Assessing thermal alterations in soil minerals R. Lugassi, E. Ben-Dor and G. Eshel	268
Soil aggregation and distribution of carbon and nitrogen in different fractions after 41 years long-term fertilizer experiment in tropical rice–rice system R. Tripathi, A.K. Nayak, P. Bhattacharyya, A.K. Shukla, M. Shahid, R. Raja, B.B. Panda, S. Mohanty, A. Kumar and V.K. Thilagam	280
Conversion of Norway spruce forests will reduce organic carbon pools in the mountain soils of SW Poland B. Galka, B. Labaz, A. Bogacz, O. Bojko and C. Kabala	287
High resolution 3D mapping of soil organic carbon in a heterogeneous agricultural landscape M. Lacoste, B. Minasny, A. McBratney, D. Michot, V. Viaud and C. Walter	296
An evaluation of digital elevation models (DEMs) for delineating land components Z.E. Mashimbye, W.P. de Clercq and A. Van Niekerk	312
Soil formation rates on silicate parent material in alpine environments: Different approaches—different results? M. Egli, D. Dahms and K. Norton	320
Disaggregation of component soil series on an Ohio County soil survey map using possibilistic decision trees S.K. Subburayalu, I. Jenhani and B.K. Slater	334
Clay formation and pedogenetic processes in tephra-derived soils and buried soils from Central-Southern Apennines (Italy) C. Colombo, V.M. Sellitto, G. Palumbo, E. Di Iorio, F. Terribile and D.G. Schulze	346

Experimental approach of lessivage: Quantification and mechanisms S. Cornu, L. Quénard, I. Cousin and A. Samouëlian	357
Beaver pond effects on carbon storage in soils C.A. Johnston	371
Long-term effects of no-tillage management practice on soil organic carbon and its fractions in the northern China E. Liu, S.G. Tecler, C. Yan, J. Yu, R. Gu, S. Liu, W. He and Q. Liu	379
Semi-automated disaggregation of conventional soil maps using knowledge driven data mining and classification trees T.W. Nauman and J.A. Thompson	385
Changes in water repellency, aggregation and organic matter of a mollic horizon burned in laboratory: Soil depth affected by fire D. Badía-Villas, J.A. González-Pérez, J.M. Aznar, B. Arjona-Gracia and C. Martí-Dalmau	400
Magnetic, geochemical and pedological characterisation of soil profiles from different environments and geological backgrounds near Coimbra, Portugal A.M. Lourenço, E. Sequeira, H. Sant'Ovaia and C.R. Gomes	408
The effects of N and P additions on microbial N transformations and biomass on saline-alkaline grassland of Loess Plateau of Northern China W. Changhui, Z. Feng, Z. Xiang and D. Kuanhu	419
Near-saturated soil hydraulic properties as influenced by land use management systems in Koohrang region of central Zagros, Iran H. Kelishadi, M.R. Mosaddeghi, M.A. Hajabbasi and S. Ayoubi	426
Does organic management lead to enhanced soil physical quality? A. Papadopoulos, N.R.A. Bird, A.P. Whitmore and S.J. Mooney	435
Low-level nitrogen deposition significantly inhibits methane uptake from an alpine meadow soil on the Qinghai–Tibetan Plateau H. Fang, S. Cheng, G. Yu, J. Cooch, Y. Wang, M. Xu, L. Li, X. Dang and Y. Li	444
A wavelet analysis of the relationship between Loess Plateau erosion and sunspots P. Gao, V. Geissen, A.J.A.M. Temme, C.J. Ritsema, X. Mu and F. Wang	453
Evaluation of X-ray computed tomography for quantifying macroporosity of loamy pasture soils M.A. Rab, R.E. Haling, S.R. Aarons, M. Hannah, I.M. Young and D. Gibson	460
Micro-scale dry bulk density variation around earthworm (<i>Lumbricus terrestris</i> L.) burrows based on X-ray computed tomography H. Rogasik, S. Schrader, I. Onasch, J. Kiesel and H.H. Gerke	471
Surface properties and phosphate adsorption of binary systems containing goethite and kaolinite S. Wei, W. Tan, F. Liu, W. Zhao and L. Weng	478
Contrast agents for soil investigation with X-ray computed tomography D. Van Loo, L. Bouckaert, O. Leroux, E. Pauwels, M. Dierick, L. Van Hoorebeke, V. Cnudde, S. De Neve and S. Sleutel	485
Soil hydraulic properties determined by infiltration experiments and different heights of water pouring V. Bagarello, M. Castellini, S. Di Prima and M. Iovino	492
Microbiological, biochemical and ecotoxicological evaluation of soils in the area of biochar production in relation to polycyclic aromatic hydrocarbon content P. Oleszczuk, I. Joško, M. Kuśmiercz, B. Futa, E. Wielgosz, S. Ligeza and J. Pranagal	502
The effect of wetting and drying cycles on soil chemical composition and their impact on bulk density evaluation: An analysis by using XCOM data and gamma-ray computed tomography L.F. Pires, L.V. Prandel and S.C. Saab	512
The fate of chromium during tropical weathering: A laterite profile from Central Madagascar A. Berger and R. Frei	521
A stochastic–geometric model of the variability of soil formed in Pleistocene patterned ground R.M. Lark, E. Meerschman and M. Van Meirvenne	533
Converting pH 1: 1 H ₂ O and 1: 2 _{CaCl₂} to 1:5 H ₂ O to contribute to a harmonized global soil database Z. Libohova, S. Wills, N.P. Odgers, R. Ferguson, R. Nesser, J.A. Thompson, L.T. West and J.W. Hempel	544
The effect of nutrient-rich effluents from shrimp farming on mangrove soil carbon storage and geochemistry under semi-arid climate conditions in northern Brazil M. Suárez-Abelenda, T.O. Ferreira, M. Camps-Arbestain, V.H. Rivera-Monroy, F. Macías, G.N. Nóbrega and X.L. Otero	551
Soil layering and preferential flow impacts on seasonal changes of GPR signals in two contrasting soils J. Zhang, H. Lin and J. Doolittle	560

Special issue on Innovations in Pedometrics

Innovations in pedometrics

L. Borůvka, D. Brus and A.-X. Zhu	570
Using bivariate multiple-point statistics and proximal soil sensor data to map fossil ice-wedge polygons	
E. Meerschman, M. Van Meirvenne, G. Mariethoz, M.M. Islam, P. De Smedt, E. Van De Vijver and T. Saey	571
Hyper-scale digital soil mapping and soil formation analysis	
T. Behrens, K. Schmidt, L. Ramirez-Lopez, J. Gallant, A.-X. Zhu and T. Scholten	578
Curvelet transform to study scale-dependent anisotropic soil spatial variation	
A. Biswas, H.P. Cresswell, R.A. Viscarra Rossel and B.C. Si	589
Geostatistical monitoring of soil salinity in Uzbekistan by repeated EMI surveys	
A. Akramkhanov, D.J. Brus and D.J.J. Walvoort	600
Diversity of thermal conditions within the paleocryogenic soil complexes of the East European Plain: The discussion of key factors and mathematical modeling	
T.A. Arkhangelskaya	608