

<i>In situ</i> remediation of polluted Spolic Technosols using Ca(OH) ₂ and smectitic marlstone L. Vittori Antisari, G. Lo Papa, C. Ferronato, G. Falsone, G. Vianello and C. Dazzi	1
Non-parametric imputation of properties for soil profiles with sparse observations D. Clifford, M.J. Dobbie and R. Searle	10
The effect of aging time on the distribution of pyrene in soil particle-size fractions R. Wei, J. Ni, L. Guo, L. Yang and Y. Yang	19
Plant-availability of phosphorus recycled from pig manures and dairy effluents as assessed by isotopic labeling techniques D.L. Achat, M. Sperandio, M.-L. Daumer, A.-C. Santellani, L. Prud'Homme, M. Akhtar and C. Morel	24
Using model averaging to combine soil property rasters from legacy soil maps and from point data B.P. Malone, B. Minasny, N.P. Odgers and A.B. McBratney	34
Water retention and dye adsorption behavior of Gg-cl-poly(acrylic acid-aniline) based conductive hydrogels K. Sharma, B.S. Kaith, V. Kumar, S. Kalia, V. Kumar and H.C. Swart	45
Using meta-analyses to assess pedo-variability under different land uses and soil management in central Ohio, USA V. de Paul Obade and R. Lal	56
Scope to predict soil properties at within-field scale from small samples using proximally sensed γ -ray spectrometer and EM induction data J. Huang, R.M. Lark, D.A. Robinson, I. Lebron, A.M. Keith, B. Rawlins, A. Tye, O. Kuras, M. Raines and J. Triantafilis ...	69
Labile carbon pools and soil organic carbon stocks in the foothill Himalayas under different land use systems V. Sharma, S. Hussain, K.R. Sharma and V.M. Arya	81
Three-year study of CO ₂ efflux and CH ₄ /N ₂ O fluxes at an alpine steppe site on the central Tibetan Plateau and their responses to simulated N deposition D. Wei, Xu-Ri, Y. Liu, Y. Wang and Y. Wang	88
Updating soil survey maps using random forest and conditioned Latin hypercube sampling in the loess derived soils of northern Iran M.R. Pahlavan Rad, N. Toomanian, F. Khormali, C.W. Brungard, C.B. Komaki and P. Bogaert	97
Soil characteristics and herbicide sorption coefficients in 140 soil profiles of two irregular undulating to hummocky terrains of western Canada B. Singh, A. Farenhorst, J. Gaultier, D. Pennock, D. Degenhardt and R. McQueen	107
A highly sensitive method for the determination of hydroxylamine in soils S. Liu, H. Vereecken and N. Brüggemann	117

A Markov chain method for simulating bulk density profiles in boreal peatlands D.K. Thompson and J.M. Waddington	123
Mercury distribution in a toposequence of sub-Antarctic forest soils of Tierra del Fuego (Argentina) as consequence of the prevailing soil processes S. Peña-Rodríguez, X. Pontevedra-Pombal, E.G.-R. Gayoso, A. Moretto, R. Mansilla, L. Cutillas-Barreiro, M. Arias-Estévez and J.C. Nóvoa-Muñoz	130
Characterizing soils via portable X-ray fluorescence spectrometer: 3. Soil reaction (pH) A. Sharma, D.C. Weindorf, T. Man, A.A.A. Aldabaa and S. Chakraborty	141
Spatial prediction of soil great groups by boosted regression trees using a limited point dataset in an arid region, southeastern Iran A. Jafari, H. Khademi, P.A. Finke, J. Van de Wauw and S. Ayoubi	148
Phosphate minerals and solubility in native and agricultural calcareous soils M. Zhang, C. Li, Y.C. Li and W.G. Harris	164
Sampling density and proportion for the characterization of the variability of Oxisol attributes on different materials D.S. Siqueira, J. Marques Jr., G.T. Pereira, R.S. Barbosa, D.B. Teixeira and R.G. Peluco	172
Characterization of properties and main processes related to the genesis and evolution of tropical mountain mires from Serra do Espinhaço Meridional, Minas Gerais, Brazil I. Horák-Terra, A. Martínez Cortizas, P.B. de Camargo, A.C. Silva and P. Vidal-Torrado	183
Soils with iron-cemented layers on golf courses in the USA G.R. Obear, A.E. Hartemink and D.J. Soldat	198
Consideration of peak parameters derived from continuum-removed spectra to predict extractable nutrients in soils with visible and near-infrared diffuse reflectance spectroscopy (VNIR-DRS) R. Vašát, R. Kodešová, L. Borůvka, A. Klement, O. Jakšík and A. Gholizadeh	208
The evolution of Mediterranean wetlands in the first millennium AD: The case of Les Arenes floodplain (Tortosa, NE Spain) A. Puy, A.L. Balbo, A. Virgili and H. Kirchner	219
Black carbon and soil properties at historical charcoal production sites in Germany N. Borchard, B. Ladd, S. Eschemann, D. Hegenberg, B.M. Möselers and W. Amelung	236
A comparison of calibration sampling schemes at the field scale K. Schmidt, T. Behrens, J. Daumann, L. Ramirez-Lopez, U. Werban, P. Dietrich and T. Scholten	243
Impact of lignite on pedogenetic processes and microbial functions in Mediterranean soils M. Clouard, S. Criquet, D. Borschneck, F. Ziarelli, F. Marzaioli, J. Balesdent and C. Keller	257
Assessing the spatial variability of soil organic carbon stocks in an alpine setting (Grindelwald, Swiss Alps) U. Hoffmann, T. Hoffmann, G. Jurasinski, S. Glatzel and N.J. Kuhn	270
National scale 3D modelling of soil organic carbon stocks with uncertainty propagation — An example from Scotland L. Poggio and A. Gimona	284
Influence of mussel shell on As and Cr competitive and non-competitive sorption–desorption kinetics in a mine soil: stirred flow chamber experiments D. Fernández-Calviño, B. Garrido-Rodríguez, L. Cutillas-Barreiro, P. Araújo-Nespereira, M. Arias-Estévez, M.J. Fernández-Sanjurjo, E. Álvarez-Rodríguez and A. Núñez-Delgado	300
A new adsorption model to quantify the net contribution of minerals to butachlor sorption in natural soils with various degrees of organo-mineral aggregation Y. He, Z. Liu, P. Su, X. Shen, P.C. Brookes and J. Xu	309
Multi-depth electrical resistivity survey for mapping soil units within two 3 ha plots S. Buvat, J. Thiesson, J. Michelin, B. Nicoulaud, H. Bourennane, Y. Coquet and A. Tabbagh	317
Roots induce stronger soil water repellency than leaf waxes J. Mao, K.G.J. Nierop, J.S. Sinninghe Damsté and S.C. Dekker	328
Nutrient release from switchgrass-derived biochar pellets embedded with fertilizers P. Kim, D. Hensley and N. Labbé	341
Linkages among land use, macronutrient levels, and soil erosion in northern Vietnam: A plot-scale study P.T.Q. Anh, T. Gomi, L.H. MacDonald, S. Mizugaki, P. Van Khoa and T. Furuichi	352
Effect of land use management on greenhouse gas emissions from water stable aggregates K.K. Bandyopadhyay and R. Lal	363
Evaluation of sampling and sample preparation procedures for the determination of aromatic acids and their distribution in a podzol soil using liquid chromatography–tandem mass spectrometry M.A. Olofsson, S.H. Norström and D. Bylund	373
Determination of site-specific management zones using soil physico-chemical properties and crop yields in coastal reclaimed farmland R.-J. Yao, J.-S. Yang, T.-J. Zhang, P. Gao, X.-P. Wang, L.-Z. Hong and M.-W. Wang	381

(continued)

An integrated evaluation of soil resource depletion from diachronic settlement maps and soil cartography in peri-urban Rome, Italy C. Ferrara, L. Salvati and I. Tombolini	394
Reconstitution of cutin monomers on smectite surfaces: adsorption and esterification Y. Olshansky, T. Polubesova and B. Chefetz	406
Impacts of surface soil organic content on the soil thermal dynamics of alpine meadows in permafrost regions: data from field observations G. Wang, T. Mao, J. Chang and J. Du	414
Effects of litter manipulation in a tropical <i>Eucalyptus</i> plantation on leaching of mineral nutrients, dissolved organic nitrogen and dissolved organic carbon A. Versini, L. Mareschal, T. Matsoumbou, B. Zeller, J. Ranger and J.-P. Laclau	426
Evaluation of a model framework to estimate soil and soil organic carbon redistribution by water and tillage using ¹³⁷ Cs in two U.S. Midwest agricultural fields C.J. Young, S. Liu, J.A. Schumacher, T.E. Schumacher, T.C. Kaspar, G.W. McCarty, D. Napton and D.B. Jaynes	437
Rapid determination of soil organic matter quality indicators using visible near infrared reflectance spectroscopy M. St. Luce, N. Ziadi, B.J. Zebarth, C.A. Grant, G.F. Tremblay and E.G. Gregorich	449
Responses of soil nutrient concentrations and stoichiometry to different human land uses in a subtropical tidal wetland W. Wang, J. Sardans, C. Zeng, C. Zhong, Y. Li and J. Peñuelas	459
Wind erosion susceptibility of European soils P. Borrelli, C. Ballabio, P. Panagos and L. Montanarella	471
A regional-scale assessment of digital mapping of soil attributes in a tropical hillslope environment W. de Carvalho Junior, P. Lagacherie, C. da Silva Chagas, B. Calderano Filho and S.B. Bhering	479
Improving forest soil carbon models using spatial data and geostatistical approaches K. Black, R.E. Creamer, G. Xenakis and S. Cook	487
Occurrence and origin of soils with andic properties in Calabria (southern Italy) S. Vingiani, F. Scarciglia, F.A. Mileti, P. Donato and F. Terribile	500
Soil type mediates effects of land use on soil carbon and nitrogen in the Konya Basin, Turkey M. Mayes, E. Marin-Spiotta, L. Szymanski, M. Akif Erdoğan, M. Özdoğan and M. Clayton	517
The effect of inorganic nanoparticles (ZnO, Cr ₂ O ₃ , CuO and Ni) and their bulk counterparts on enzyme activities in different soils I. Joško, P. Oleszczuk and B. Futa	528
Nano-structural and chemical characterization of charred organic matter in a fire-affected Arenosol S. Filimonova, A. Hilscher and I. Kögel-Knabner	538
Optimization arsenic immobilization in a sandy loam soil using iron-based amendments by response surface methodology E. Naseri, A. Reyhanitabar, S. Oustan, A.A. Heydari and L. Alidokht	547
A method for measuring erosive flow velocity with simulated rill Y. Dong, X. Zhuang, T. Lei, Z. Yin and Y. Ma	556
Long term effects of nutrient management regimes on abundance of bacterial genes and soil biochemical processes for fertility sustainability in a semi-arid tropical Alfisol C. Chinnadurai, G. Gopaldaswamy and D. Balachandar	563
Sorption of inositol hexaphosphate on desert soils B. Fuentes, M.d.l.L. Mora, R. Bol, F. San Martin, E. Pérez and P. Cartes	573
Converting leguminous green manure into biochar: changes in chemical composition and C and N mineralization C.-P. Chen, C.-H. Cheng, Y.-H. Huang, C.-T. Chen, C.-M. Lai, O.V. Menyailo, L.-J. Fan and Y.-W. Yang	581
Soil quality characteristics of kikuyu-ryegrass pastures in South Africa P.A. Swanepoel, C.C. du Preez, P.R. Botha, H.A. Snyman and J. Habig	589
Adsorption and surface precipitation of phosphate onto CaCO ₃ -montmorillonite: effect of pH, ionic strength and competition with humic acid I. Perassi and L. Borgnino	600
Sulfur accumulation in Melanudands during development by upbuilding pedogenesis since 14–15 cal. ka T. Tanikawa, Y. Hashimoto, N. Yamaguchi, Y. Ito, S. Fukushima, K. Kanda, M. Uemura, T. Hasegawa, M. Takahashi and S. Yoshinaga	609
What limits soil N-cycling and potential losses under grassland at Hob Moor, York, UK? A. Bhatti, C.J. McClean and M.S. Cresser	619
Transport, sorption and degradation of atrazine in two clay soils from Mexico: Andosol and Vertisol B. Prado, C. Duwig, C. Hidalgo, K. Müller, L. Mora, E. Raymundo and J.D. Etchevers	628
Combined use of beneficial soil microorganism and agrowaste residue to cope with plant water limitation under semiarid conditions E. Armada, G. Portela, A. Roldán and R. Azcón	640