Balwant Singh

List of Publications by Year in descending order

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		53794	48315
127	8,378	45	88
papers	citations	h-index	g-index
132	132	132	8905
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Changes in particulate and mineral-associated organic carbon with land use in contrasting soils. Pedosphere, 2023, 33, 421-435.	4.0	4
2	Biochar characterization for water and wastewater treatments. , 2022, , 135-152.		0
3	Metal oxides. , 2022, , .		1
4	Plastics in soil environments: All things considered. Advances in Agronomy, 2022, , 1-132.	5.2	3
5	Biochar aging increased microbial carbon use efficiency but decreased biomass turnover time. Geoderma, 2021, 382, 114710.	5.1	26
6	Prediction of Soil Clay Content and Cation Exchange Capacity Using Visible Near-Infrared Spectroscopy, Portable X-ray Fluorescence, and X-ray Diffraction Techniques. Environmental Science & Technology, 2021, 55, 4629-4637.	10.0	18
7	Biochar effects on crop yields with and without fertilizer: A metaâ€analysis of field studies using separate controls. Soil Use and Management, 2020, 36, 2-18.	4.9	188
8	Effect of land use on organic matter composition in density fractions of contrasting soils: A comparative study using 13C NMR and DRIFT spectroscopy. Science of the Total Environment, 2020, 726, 138395.	8.0	32
9	Checks and Mass Balances for In Situ Quantification of Mineral Composition using Proximal Soil Sensors. Soil Science Society of America Journal, 2019, 83, 1253-1262.	2.2	1
10	Chemically oxidized biochar increases ammonium-15N recovery and phosphorus uptake in a grassland. Biology and Fertility of Soils, 2019, 55, 577-588.	4.3	17
11	Interactive carbon priming, microbial response and biochar persistence in a Vertisol with varied inputs of biochar and labile organic matter. European Journal of Soil Science, 2019, 70, 960-974.	3.9	26
12	Evaluation of the Influence of Individual Clay Minerals on Biochar Carbon Mineralization in Soils. Soil Systems, 2019, 3, 79.	2.6	4
13	Enhanced biological nitrogen fixation and competitive advantage of legumes in mixed pastures diminish with biochar aging. Plant and Soil, 2018, 424, 639-651.	3.7	36
14	The long-term role of organic amendments in building soil nutrient fertility: a meta-analysis and review. Nutrient Cycling in Agroecosystems, 2018, 111, 103-125.	2.2	129
15	Nutrient changes in potting mix and Eucalyptus nitens leaf tissue under macadamia biochar amendments. Journal of Forestry Research, 2018, 29, 383-393.	3.6	17
16	Evaluation of pre-treatment procedures for improved interpretation of mid infrared spectra of soil organic matter. Geoderma, 2017, 304, 83-92.	5.1	25
17	Aged biochar affects gross nitrogen mineralization and recovery: a ¹⁵ N study in two contrasting soils. GCB Bioenergy, 2017, 9, 1196-1206.	5.6	76
18	Aging Induced Changes in Biochar's Functionality and Adsorption Behavior for Phosphate and Ammonium. Environmental Science & Technology, 2017, 51, 8359-8367.	10.0	192

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19	Allometric equations for biomass and carbon stocks of forests along an altitudinal gradient in the eastern Himalayas. Forestry, 2017, 90, 445-454.	2.3	11
20	Role of oxygen-containing functional groups in forest fire-generated and pyrolytic chars for immobilization of copper and nickel. Environmental Pollution, 2017, 220, 946-954.	7.5	8
21	Organic carbon characteristics in density fractions of soils with contrasting mineralogies. Geochimica Et Cosmochimica Acta, 2017, 218, 215-236.	3.9	43
22	Aged acidic biochar increases nitrogen retention and decreases ammonia volatilization in alkaline bauxite residue sand. Ecological Engineering, 2017, 98, 157-165.	3.6	90
23	A Fourierâ€Transform Infrared Study of Biochar Aging in Soils. Soil Science Society of America Journal, 2016, 80, 613-622.	2.2	62
24	Soil warming and liming impacts on the recovery of 15 N in an acidic soil under soybean cropping. Journal of Plant Nutrition and Soil Science, 2016, 179, 193-197.	1.9	1
25	Soil carbon and nitrogen stocks in forests along an altitudinal gradient in the eastern Himalayas and a metaâ€analysis of global data. Global Change Biology, 2016, 22, 2255-2268.	9.5	129
26	Biochar Field Study: Greenhouse Gas Emissions, Productivity, and Nutrients in Two Soils. Agronomy Journal, 2016, 108, 1805-1815.	1.8	19
27	Biochar for <i>Eucalyptus</i> forestry plantations. Acta Horticulturae, 2016, , 55-62.	0.2	7
28	Effects of <i>Eucalyptus saligna</i> biochar-amended media on the growth of <i>Acmena smithii, Viola</i> var. <i>hybrida</i> , and <i>Viola × wittrockiana</i> . Journal of Horticultural Science and Biotechnology, 2015, 90, 187-194.	1.9	6
29	Carbon dynamics from carbonate dissolution in Australian agricultural soils. Soil Research, 2015, 53, 144.	1.1	28
30	The Efficacy of Lime, Gypsum and Their Combination to Ameliorate Sodicity in Irrigated Cropping Soils in the Lachlan Valley of New South Wales. Arid Land Research and Management, 2015, 29, 17-40.	1.6	17
31	Biochar reduces the rhizosphere priming effect on soil organic carbon. Soil Biology and Biochemistry, 2015, 88, 372-379.	8.8	57
32	Influence of Gypsum Enhanced Chicken-Manure-and-Wheat-Straw Compost on Amelioration of an Irrigated Sodic Brown Vertisol – Laboratory Experiment. Arid Land Research and Management, 2015, 29, 415-431.	1.6	8
33	The stability of low- and high-ash biochars in acidic soils of contrasting mineralogy. Soil Biology and Biochemistry, 2015, 89, 217-225.	8.8	23
34	Effect of temperature on biochar priming effects and its stability in soils. Soil Biology and Biochemistry, 2015, 80, 136-145.	8.8	161
35	Mid-infrared spectroscopy and partial least-squares regression to estimate soil arsenic at a highly variable arsenic-contaminated site. International Journal of Environmental Science and Technology, 2015, 12, 1965-1974.	3.5	74
36	Organo-mineral interactions in contrasting soils under natural vegetation. Frontiers in Environmental Science, 2014, 2, .	3.3	46

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37	Opportunities and constraints for biochar technology in Australian agriculture: looking beyond carbon sequestration. Soil Research, 2014, 52, 739.	1.1	49
38	Biochar carbon stability in four contrasting soils. European Journal of Soil Science, 2014, 65, 60-71.	3.9	190
39	Temperature sensitivity of biochar and native carbon mineralisation in biochar-amended soils. Agriculture, Ecosystems and Environment, 2014, 191, 158-167.	5.3	83
40	Agronomic performance of a high ash biochar in two contrasting soils. Agriculture, Ecosystems and Environment, 2014, 191, 99-107.	5.3	120
41	Effect of ageing on surface charge characteristics and adsorption behaviour of cadmium and arsenate in two contrasting soils amended with biochar. Soil Research, 2014, 52, 155.	1.1	43
42	Temperature sensitivity and carbon release in an acidic soil amended with lime and mulch. Geoderma, 2014, 214-215, 168-176.	5.1	29
43	Dissolution kinetics of soil clays in sulfuric acid solutions: Ionic strength and temperature effects. Applied Geochemistry, 2014, 51, 170-183.	3.0	27
44	Antimony Accumulation in Wheat Seedlings Grown in Soil and Water. Communications in Soil Science and Plant Analysis, 2014, 45, 968-983.	1.4	9
45	Influence of mineral characteristics on the retention of low molecular weight organic compounds: A batch sorption–desorption and ATR-FTIR study. Journal of Colloid and Interface Science, 2014, 432, 246-257.	9.4	70
46	NEXAFS and XPS characterisation of carbon functional groups of fresh and aged biochars. Organic Geochemistry, 2014, 77, 1-10.	1.8	188
47	Temperature sensitivity of soil and root respiration in contrasting soils. Plant and Soil, 2014, 382, 253-267.	3.7	23
48	Influence of soil texture and mineralogy on organic matter content and composition in physically separated fractions soils of Thailand. Geoderma, 2013, 195-196, 207-219.	5.1	62
49	Surface charge properties of kaolinite from Thai soils. Geoderma, 2013, 192, 120-131.	5.1	49
50	Inorganic and organic carbon dynamics in a limed acid soil are mediated by plants. Soil Biology and Biochemistry, 2013, 57, 549-555.	8.8	47
51	Dissolution behaviour of soil kaolinites in acidic solutions. Clay Minerals, 2013, 48, 447-461.	0.6	14
52	Interactive effects of iron oxides and organic matter on charge properties of red soils in Thailand. Soil Research, 2013, 51, 222.	1.1	13
53	Phytoremediation of an arsenic-contaminated site using Pteris vittata L. and Pityrogramma calomelanos var. austroamericana: a long-term study. Environmental Science and Pollution Research, 2012, 19, 3506-3515.	5.3	76
54	EFFECT OF PLANTS ON THE BIOAVAILABILITY OF METALS AND OTHER CHEMICAL PROPERTIES OF BIOSOLIDS IN A COLUMN STUDY. International Journal of Phytoremediation, 2012, 14, 878-893.	3.1	5

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55	Interactive Priming of Biochar and Labile Organic Matter Mineralization in a Smectite-Rich Soil. Environmental Science & Technology, 2011, 45, 9611-9618.	10.0	282
56	Evaluation of Spatial Variability of Soil Arsenic Adjacent to a Disused Cattle-Dip Site, Using Model-Based Geostatistics. Environmental Science & Technology, 2011, 45, 10463-10470.	10.0	39
57	Dissolution of illite in saline–acidic solutions at 25°C. Geochimica Et Cosmochimica Acta, 2011, 75, 3237-3249.	3.9	85
58	Akaganéite (β-FeOOH) precipitation in inland acid sulfate soils of south-western New South Wales (NSW), Australia. Geochimica Et Cosmochimica Acta, 2011, 75, 6429-6438.	3.9	50
59	Arsenic Speciation and Phytoavailability in Contaminated Soils Using a Sequential Extraction Procedure and XANES Spectroscopy. Environmental Science & Technology, 2011, 45, 7135-7142.	10.0	140
60	Influence of Drought Stress on the Nickel-Hyperaccumulating Shrub Hybanthus floribundus (Lindl.) F.Muell. subsp. floribundus. International Journal of Plant Sciences, 2011, 172, 315-322.	1.3	8
61	Phytoremediation Potential of <i>Pityrogramma Calomelanos</i> Var. <i>Austroamericana</i> and <i>Pteris Vittata</i> L. Grown at a Highly Variable Arsenic Contaminated Site. International Journal of Phytoremediation, 2011, 13, 912-932.	3.1	26
62	Preface: Proceedings from the 1st Asia-Pacific Biochar Conference, 2009, Gold Coast, Australia. Soil Research, 2010, 48, i.	1.1	4
63	Plant-induced changes in the bioavailability of heavy metals in soil and biosolids assessed by DGT measurements. Journal of Soils and Sediments, 2010, 10, 1131-1141.	3.0	24
64	Influence of Biochars on Nitrous Oxide Emission and Nitrogen Leaching from Two Contrasting Soils. Journal of Environmental Quality, 2010, 39, 1224-1235.	2.0	630
65	The role of low molecular weight ligands in nickel hyperaccumulation in Hybanthus floribundus subspecies floribundus. Functional Plant Biology, 2010, 37, 1143.	2.1	2
66	Influence of biochar application to soil on the availability of As, Cd, Cu, Pb, and Zn to maize (Zea mays) Tj ETQqC	0 0 0 ₁ gBT	Overlock 10
67	Applications of Synchrotron-Based X-Ray Diffraction and X-Ray Absorption Spectroscopy to the Understanding of Poorly Crystalline and Metal-Substituted Iron Oxides. Developments in Soil Science, 2010, , 199-254.	0.5	17
68	Characterisation and evaluation of biochars for their application as a soil amendment. Soil Research, 2010, 48, 516.	1.1	763
69	Dissolution of Cr, Zn, Cd, and Pb single- and multi-metal-substituted goethite: relationship to structural, morphological, and dehydroxylation properties. Clays and Clay Minerals, 2010, 58, 415-430.	1.3	19
70	Arsenic Speciation in Tissues of the Hyperaccumulator <i>P. calomelanos</i> var. <i>austroamericana</i> using X-ray Absorption Spectroscopy. Environmental Science & Technology, 2010, 44, 4735-4740.	10.0	37
71	Salinity-induced acidification in a wetland sediment through the displacement of clay-bound iron(II). Environmental Chemistry, 2010, 7, 413.	1.5	13
72	Simultaneous incorporation of Cr, Zn, Cd, and Pb in the goethite structure. Clays and Clay Minerals, 2009, 57, 234-250.	1.3	50

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73	Copper substitution alone and in the presence of chromium, zinc, cadmium and lead in goethite (α-FeOOH). Clay Minerals, 2009, 44, 293-310.	0.6	22
74	Effects of insoluble Zn, Cd, and EDTA on the growth, activities of antioxidant enzymes and uptake of Zn and Cd in Vetiveria zizanioides. Journal of Environmental Sciences, 2009, 21, 186-192.	6.1	45
75	Nickel, Zn and Cd localisation in seeds of metal hyperaccumulators using μ-PIXE spectroscopy. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 2176-2180.	1.4	30
76	Cadmium bioaccumulation in Proisotoma minuta in relation to bioavailability in soils. Ecotoxicology and Environmental Safety, 2009, 72, 1767-1773.	6.0	20
77	The preparation and characterization of vanadium-substituted goethite: The importance of temperature. Geochimica Et Cosmochimica Acta, 2009, 73, 582-593.	3.9	45
78	Effect of Soil Properties on Arsenic Hyperaccumulation in <i>Pteris Vittata</i> and <i>Pityrogramma Calomelanos</i> var. <i>Austroamericana</i> . International Journal of Phytoremediation, 2009, 12, 174-187.	3.1	17
79	Quantitative elemental localisation in leaves and stems of nickel hyperaccumulating shrub Hybanthusfloribundus subsp. floribundus using micro-PIXE spectroscopy. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 667-676.	1.4	37
80	Localisation of trace metals in metalâ€accumulating plants using µâ€PIXE. X-Ray Spectrometry, 2008, 37, 133-136.	1.4	17
81	Copper and arsenate co-sorption at the mineral–water interfaces of goethite and jarosite. Journal of Colloid and Interface Science, 2008, 322, 399-413.	9.4	75
82	Evaluation of specimen preparation techniques for micro-PIXE localisation of elements in hyperaccumulating plants. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 1598-1604.	1.4	18
83	Effects of phytoextraction on heavy metal concentrations and pH of pore-water of biosolids determined using an in situ sampling technique. Environmental Pollution, 2008, 156, 874-882.	7.5	22
84	Chapter 7 Temperature and Aging Effects on the Surface Speciation of Cd(II) at the Goethite–Water Interface. Developments in Earth and Environmental Sciences, 2007, , 187-204.	0.1	1
85	Chapter 8 Cadmium and Lead Desorption from Kaolinite. Developments in Earth and Environmental Sciences, 2007, 7, 205-233.	0.1	1
86	Heavy metal tolerance in common fern species. Australian Journal of Botany, 2007, 55, 63.	0.6	56
87	Surface speciation of Cd(II) and Pb(II) on kaolinite by XAFS spectroscopy. Journal of Colloid and Interface Science, 2007, 315, 21-32.	9.4	88
88	Arsenic hyperaccumulation and localization in the pinnule and stipe tissues of the gold-dust fern (Pityrogramma calomelanos (L.) Link var. austroamericana (Domin) Farw.) using quantitative micro-PIXE spectroscopy. Plant and Soil, 2007, 300, 207-219.	3.7	32
89	Desorption of cadmium from goethite: Effects of pH, temperature and aging. Chemosphere, 2006, 64, 856-865.	8.2	62
90	Heavy Metals Contamination in Vegetables Grown in Urban and Metal Smelter Contaminated Sites in Australia. Water, Air, and Soil Pollution, 2006, 169, 101-123.	2.4	358

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91	Ultra-violet, visible, near-infrared, and mid-infrared diffuse reflectance spectroscopic techniques to predict several soil properties. Soil Research, 2005, 43, 713.	1.1	111
92	Competitive adsorption behavior of heavy metals on kaolinite. Journal of Colloid and Interface Science, 2005, 290, 28-38.	9.4	295
93	Rapid estimation of soil variability from the convex hull biplot area of topsoil ultra-violet, visible and near-infrared diffuse reflectance spectra. Geoderma, 2005, 128, 249-257.	5.1	26
94	The effects of cadmium, copper, lead, and zinc on the growth and reproduction of Proisotoma minuta Tullberg (Collembola). Ecotoxicology and Environmental Safety, 2005, 60, 306-314.	6.0	57
95	Potassium adsorption characteristics and potassium forms in some New South Wales soils in relation to early senescence in cotton. Soil Research, 2004, 42, 747.	1.1	14
96	Microbial biomass and microbial biodiversity in some soils from New South Wales, Australia. Soil Research, 2004, 42, 777.	1.1	20
97	Cadmium adsorption and desorption behaviour on goethite at low equilibrium concentrations: effects of pH and index cations. Chemosphere, 2004, 57, 1325-1333.	8.2	91
98	Field trials to assess the uptake of arsenic by vegetables from contaminated soils and soil remediation with iron oxides. Science of the Total Environment, 2003, 311, 19-33.	8.0	227
99	Simultaneous estimation of several soil properties by ultra-violet, visible, and near-infrared reflectance spectroscopy. Soil Research, 2003, 41, 1101.	1.1	295
100	Cd-substituted Goethites - A Structural Investigation by Synchrotron X-ray Diffraction. Clays and Clay Minerals, 2003, 51, 397-402.	1.3	38
101	Acid buffering capacity and potential acidification of cotton soils in northern New South Wales. Soil Research, 2003, 41, 875.	1.1	32
102	Carbon storage in cotton soils of northern New South Wales. Soil Research, 2003, 41, 889.	1.1	42
103	Studies of Synthetic Kaolinites Containing Copper and Zinc. , 2003, , 505-512.		0
104	Layer charge characteristics of smectites from Vertosols (Vertisols) of New South Wales. Soil Research, 2002, 40, 1159.	1.1	21
105	Iron in soil kaolins from Indonesia and Western Australia. Clay Minerals, 2002, 37, 671-685.	0.6	14
106	The Nature of Soil Kaolins from Indonesia and Western Australia. Clays and Clay Minerals, 2002, 50, 198-207.	1.3	41
107	Incorporation of Cr, Mn and Ni into goethite (α-FeOOH): mechanism from extended X-ray absorption fine structure spectroscopy. Clay Minerals, 2002, 37, 639-649.	0.6	90
108	Potassium and magnesium in clay minerals of some Brazilian soils as indicated by A sequential extraction procedure. Communications in Soil Science and Plant Analysis, 2002, 33, 2203-2225.	1.4	43

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109	Spatial variability of ammonium and nitrate in soils near a poultry farm. Environmental Pollution, 2002, 120, 659-669.	7.5	4
110	Cadmium Sorption by Hydroxy-Aluminium Interlayered Montmorillonite. Water, Air, and Soil Pollution, 2001, 131, 203-215.	2.4	35
111	Structural Chemistry of Fe, Mn, and Ni in Synthetic Hematites as Determined by Extended X-Ray Absorption Fine Structure Spectroscopy. Clays and Clay Minerals, 2000, 48, 521-527.	1.3	55
112	Cadmium sorption behavior of natural and synthetic zeolites. Communications in Soil Science and Plant Analysis, 2000, 31, 2775-2786.	1.4	30
113	Electrophoretic mobility of some tropical soil clays: effect of iron oxides and organic matter. Geoderma, 1999, 93, 325-334.	5.1	22
114	Mineralogy and chemistry of ochre sediments from an acid mine drainage near a disused mine in Cornwall, UK. Clay Minerals, 1999, 34, 301-317.	0.6	40
115	Mineralogy and Chemistry of Ochre Sediments from an Acid Mine Drainage Near a Disused Mine in Cornwall, UK. Clay Minerals, 1999, 34, 301-317.	0.6	2
116	Changes with time in the potassium content and phyllosilicates in the soil of the Broadbalk continuous wheat experiment at Rothamsted. European Journal of Soil Science, 1997, 48, 651-659.	3.9	37
117	Nature and properties of iron rich glaebules and mottles from some south-west Australian soils. Geoderma, 1996, 71, 95-120.	5.1	34
118	Application of analytical transmission electron microscopy to identifying intercrystal variations in the composition of clay minerals. Analyst, The, 1995, 120, 1335.	3.5	8
119	Mössbauer Spectra of Soil Kaolins from South-Western Australia. Clays and Clay Minerals, 1992, 40, 341-346.	1.3	21
120	Properties and distribution of iron oxides and their association with minor elements in the soils of south-western Australia. Journal of Soil Science, 1992, 43, 77-98.	1.2	187
121	Properties of soil kaolinites from south-western Australia. Journal of Soil Science, 1992, 43, 645-667.	1.2	116
122	Concentration of iron oxides from soil clays by 5 m NaOH treatment: the complete removal of sodalite and kaolin. Clay Minerals, 1991, 26, 463-472.	0.6	64
123	Detection of amorphous aluminoâ€silicate by Xâ€ray diffraction and chemical analysis to detect firing in archaeological sediments. Archaeology in Oceania, 1991, 26, 17-20.	0.7	2
124	Phosphorus sorption in relation to soil properties for the major soil types of South-Western Australia. Soil Research, 1991, 29, 603.	1.1	110
125	A potassium-rich beidellite from a laterite pallid zone in Western Australia. Clay Minerals, 1991, 26, 233-244.	0.6	12
126	Influence of Mycorrhizae, Rhizobium and Zinc On Growth, Nodulation, Zn, Cu And Mn Content Of Lentil (Lens esculenta). Zentralblatt Für Mikrobiologie, 1985, 140, 465-469.	0.2	0

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127	Regional Considerations for Targeted Use of Biochar in Agriculture and Remediation in Australia. SSSA Special Publication Series, 0, , 445-474.	0.2	2