Scott A Bradford

List of Publications by Year
in descending order

59 papers	3,788 citations	172457 29 h-index	133252 59 g-index
59 all docs	59 docs citations	59 times ranked	2400 citing authors

#	Article	IF	Citations
1	Physical factors affecting the transport and fate of colloids in saturated porous media. Water Resources Research, 2002, 38, 63-1-63-12.	4.2	599
2	Colloid Transport and Retention in Unsaturated Porous Media: A Review of Interfaceâ€, Collectorâ€, and Poreâ€Scale Processes and Models. Vadose Zone Journal, 2008, 7, 667-681.	2.2	286
3	Resolving the Coupled Effects of Hydrodynamics and DLVO Forces on Colloid Attachment in Porous Media. Langmuir, 2007, 23, 9652-9660.	3.5	236
4	Transport and fate of bacteria in porous media: Coupled effects of chemical conditions and pore space geometry. Water Resources Research, 2008, 44, .	4.2	205
5	Transport and Fate of Microbial Pathogens in Agricultural Settings. Critical Reviews in Environmental Science and Technology, 2013, 43, 775-893.	12.8	197
6	<i>Escherichia coli</i> O157:H7 Transport in Saturated Porous Media: Role of Solution Chemistry and Surface Macromolecules. Environmental Science & Technology, 2009, 43, 4340-4347.	10.0	147
7	Critical role of surface roughness on colloid retention and release in porous media. Water Research, 2016, 88, 274-284.	11.3	141
8	Coupled Factors Influencing Concentration-Dependent Colloid Transport and Retention in Saturated Porous Media. Environmental Science & Technology, 2009, 43, 6996-7002.	10.0	140
9	A Theoretical Analysis of Colloid Attachment and Straining in Chemically Heterogeneous Porous Media. Langmuir, 2013, 29, 6944-6952.	3.5	138
10	Colloid Interaction Energies for Physically and Chemically Heterogeneous Porous Media. Langmuir, 2013, 29, 3668-3676.	3.5	129
11	Contributions of Nanoscale Roughness to Anomalous Colloid Retention and Stability Behavior. Langmuir, 2017, 33, 10094-10105.	3.5	94
12	Determining Parameters and Mechanisms of Colloid Retention and Release in Porous Media. Langmuir, 2015, 31, 12096-12105.	3.5	85
13	Poreâ€Scale Simulations to Determine the Applied Hydrodynamic Torque and Colloid Immobilization. Vadose Zone Journal, 2011, 10, 252-261.	2.2	81
14	Modeling colloid and microorganism transport and release with transients in solution ionic strength. Water Resources Research, 2012, 48, .	4.2	73
15	Transport, retention, and long-term release behavior of ZnO nanoparticle aggregates in saturated quartz sand: Role of solution pH and biofilm coating. Water Research, 2016, 90, 247-257.	11.3	72
16	Impacts of bridging complexation on the transport of surface-modified nanoparticles in saturated sand. Journal of Contaminant Hydrology, 2012, 136-137, 86-95.	3.3	70
17	Colloid Adhesive Parameters for Chemically Heterogeneous Porous Media. Langmuir, 2012, 28, 13643-13651.	3.5	69
18	Release of Quantum Dot Nanoparticles in Porous Media: Role of Cation Exchange and Aging Time. Environmental Science & Technology, 2013, 47, 11528-11536.	10.0	65

#	Article	IF	Citations
19	Transport of biochar colloids in saturated porous media in the presence of humic substances or proteins. Environmental Pollution, 2019, 246, 855-863.	7.5	55
20	Equilibrium and kinetic models for colloid release under transient solution chemistry conditions. Journal of Contaminant Hydrology, 2015, 181, 141-152.	3.3	53
21	Can nanoscale surface charge heterogeneity really explain colloid detachment from primary minima upon reduction of solution ionic strength?. Journal of Nanoparticle Research, 2018, 20, 1.	1.9	53
22	Coupled factors influencing the transport and retention of Cryptosporidium parvum oocysts in saturated porous media. Water Research, 2010, 44, 1213-1223.	11.3	52
23	Roles of cation valance and exchange on the retention and colloid-facilitated transport of functionalized multi-walled carbon nanotubes in a natural soil. Water Research, 2017, 109, 358-366.	11.3	49
24	Do Goethite Surfaces Really Control the Transport and Retention of Multi-Walled Carbon Nanotubes in Chemically Heterogeneous Porous Media?. Environmental Science & Technology, 2016, 50, 12713-12721.	10.0	47
25	Analysis of stability behavior of carbon black nanoparticles in ecotoxicological media: Hydrophobic and steric effects. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 554, 306-316.	4.7	38
26	Comparison of Types and Amounts of Nanoscale Heterogeneity on Bacteria Retention. Frontiers in Environmental Science, 2018, 6, .	3.3	32
27	Particleâ€“bubble interaction energies for particles with physical and chemical heterogeneities. Minerals Engineering, 2020, 155, 106472.	4.3	32
28	Co-transport of chlordecone and sulfadiazine in the presence of functionalized multi-walled carbon nanotubes in soils. Environmental Pollution, 2017, 221, 470-479.	7.5	31
29	Evaluating drywells for stormwater management and enhanced aquifer recharge. Advances in Water Resources, 2018, 116, 167-177.	3.8	31
30	Mechanisms of graphene oxide aggregation, retention, and release in quartz sand. Science of the Total Environment, 2019, 656, 70-79.	8.0	30
31	Evidence for the critical role of nanoscale surface roughness on the retention and release of silver nanoparticles in porous media. Environmental Pollution, 2020, 258, 113803.	7.5	29
32	Co-transport of multi-walled carbon nanotubes and sodium dodecylbenzenesulfonate in chemically heterogeneous porous media. Environmental Pollution, 2019, 247, 907-916.	7.5	28
33	Drywell infiltration and hydraulic properties in heterogeneous soil profiles. Journal of Hydrology, 2019, 570, 598-611.	5.4	27
34	Shape and orientation of bare silica particles influence their deposition under intermediate ionic strength: A study with QCMâ€“D and DLVO theory. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 599, 124921.	4.7	26
35	Transport and retention of surfactant- and polymer-stabilized engineered silver nanoparticles in silicate-dominated aquifer material. Environmental Pollution, 2018, 236, 195-207.	7.5	23
36	Physicochemical Factors That Favor Conjugation of an Antibiotic Resistant Plasmid in Non-growing Bacterial Cultures in the Absence and Presence of Antibiotics. Frontiers in Microbiology, 2018, 9, 2122.	3.5	23

#	Article	IF	Citations
37	Transport and fate of viruses in sediment and stormwater from a Managed Aquifer Recharge site. Journal of Hydrology, 2017, 555, 724-735.	5.4	21
38	DLVO Interaction Energies between Hollow Spherical Particles and Collector Surfaces. Langmuir, 2017, 33, 10455-10467.	3.5	21
39	Synergies of surface roughness and hydration on colloid detachment in saturated porous media: Column and atomic force microscopy studies. Water Research, 2020, 183, 116068.	11.3	21
40	Interaction energies for hollow and solid cylinders: Role of aspect ratio and particle orientation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 580, 123781.	4.7	20
41	Colloid Interaction Energies for Surfaces with Steric Effects and Incompressible and/or Compressible Roughness. Langmuir, 2021, 37, 1501-1510.	3.5	20
42	Unraveling the complexities of the velocity dependency of E. coli retention and release parameters in saturated porous media. Science of the Total Environment, 2017, 603-604, 406-415.	8.0	19
43	Groundwater recharge from drywells under constant head conditions. Journal of Hydrology, 2020, 583, 124569.	5.4	19
44	Evidence on enhanced transport and release of silver nanoparticles by colloids in soil due to modification of grain surface morphology and co-transport. Environmental Pollution, 2021, 276, 116661.	7.5	18
45	Transport and retention of engineered silver nanoparticles in carbonate-rich sediments in the presence and absence of soil organic matter. Environmental Pollution, 2019, 255, 113124.	7.5	15
46	Nanobubble Retention in Saturated Porous Media under Repulsive van der Waals and Electrostatic Conditions. Langmuir, 2019, 35, 6853-6860.	3.5	15
47	Micro- and nanoplastics retention in porous media exhibits different dependence on grain surface roughness and clay coating with particle size. Water Research, 2022, 221, 118717.	11.3	15
48	Critical Role of Preferential Flow in Fieldâ€Scale Pathogen Transport and Retention. Vadose Zone Journal, 2017, 16, 1-13.	2.2	12
49	Release of colloidal biochar during transient chemical conditions: The humic acid effect. Environmental Pollution, 2020, 260, 114068.	7.5	11
50	Significance of Non-DLVO Interactions on the Co-Transport of Functionalized Multiwalled Carbon Nanotubes and Soil Nanoparticles in Porous Media. Environmental Science & Technology, 2022, 56, 10668-10680.	10.0	10
51	Minimizing Virus Transport in Porous Media by Optimizing Solid Phase Inactivation. Journal of Environmental Quality, 2018, 47, 1058-1067.	2.0	9
52	DLVO Interaction Energies for Hollow Particles: The Filling Matters. Langmuir, 2018, 34, 12764-12775.	3.5	9
53	Reply to comment by William P. Johnson et al. on â€œTransport and fate of bacteria in porous media: Coupled effects of chemical conditions and pore space geometryâ€• Water Resources Research, 2009, 45, .	4.2	8
54	Comparison of recharge from drywells and infiltration basins: A modeling study. Journal of Hydrology, 2021, 594, 125720.	5.4	8

#	Article	IF	Citations
55	Impact of phosphate adsorption on the mobility of PANIâ€supported nano zeroâ€valent iron. Vadose Zone Journal, 2021, 20, e20091.	2.2	7
56	Virus transport from drywells under constant head conditions: AÂmodeling study. Water Research, 2021, 197, 117040.	11.3	7
57	Non-monotonic contribution of nonionic surfactant on the retention of functionalized multi-walled carbon nanotubes in porous media. Journal of Hazardous Materials, 2021, 407, 124874.	12.4	6
58	Novel analytical expressions for determining van der Waals interaction between a particle and airâ€“water interface: Unexpected stronger van der Waals force than capillary force. Journal of Colloid and Interface Science, 2022, 610, 982-993.	9.4	6
59	Why Are Viruses Spiked?. MSphere, 2021, 6, .	2.9	5