Tanapon Phenrat

List of Publications by Year
in descending order

71 papers	6,682 citations	29 h-index (172457)	58 g-index (138484)
72 all docs	72 docs citations	72 times ranked	5747 citing authors

#	Article	IF	Citations
1	Nanoparticle Aggregation: Challenges to Understanding Transport and Reactivity in the Environment. Journal of Environmental Quality, 2010, 39, 1909-1924.	2.0	983
2	Aggregation and Sedimentation of Aqueous Nanoscale Zerovalent Iron Dispersions. Environmental Science & Technology, 2007, 41, 284-290.	10.0	917
3	Ionic Strength and Composition Affect the Mobility of Surface-Modified Fe⁰ Nanoparticles in Water-Saturated Sand Columns. Environmental Science & Technology, 2008, 42, 3349-3355.	10.0	478
4	Stabilization of aqueous nanoscale zerovalent iron dispersions by anionic polyelectrolytes: adsorbed anionic polyelectrolyte layer properties and their effect on aggregation and sedimentation. Journal of Nanoparticle Research, 2008, 10, 795-814.	1.9	467
5	Surface Modifications Enhance Nanoiron Transport and NAPL Targeting in Saturated Porous Media. Environmental Engineering Science, 2007, 24, 45-57.	1.6	403
6	Effect of TCE Concentration and Dissolved Groundwater Solutes on NZVI-Promoted TCE Dechlorination and H₂ Evolution. Environmental Science & Technology, 2007, 41, 7881-7887.	10.0	317
7	Adsorbed Triblock Copolymers Deliver Reactive Iron Nanoparticles to the Oil/Water Interface. Nano Letters, 2005, 5, 2489-2494.	9.1	302
8	Particle Size Distribution, Concentration, and Magnetic Attraction Affect Transport of Polymer-Modified Fe⁰ Nanoparticles in Sand Columns. Environmental Science & Technology, 2009, 43, 5079-5085.	10.0	292
9	Partial Oxidation (â€œAgingâ€) and Surface Modification Decrease the Toxicity of Nanosized Zerovalent Iron. Environmental Science & Technology, 2009, 43, 195-200.	10.0	270
10	Adsorbed Polyelectrolyte Coatings Decrease Fe⁰ Nanoparticle Reactivity with TCE in Water: Conceptual Model and Mechanisms. Environmental Science & Technology, 2009, 43, 1507-1514.	10.0	211
11	Effect of kaolinite, silica fines and pH on transport of polymer-modified zero valent iron nano-particles in heterogeneous porous media. Journal of Colloid and Interface Science, 2012, 370, 1-10.	9.4	181
12	Fe⁰ Nanoparticles Remain Mobile in Porous Media after Aging Due to Slow Desorption of Polymeric Surface Modifiers. Environmental Science & Technology, 2009, 43, 3824-3830.	10.0	148
13	Estimating Attachment of Nano- and Submicrometer-particles Coated with Organic Macromolecules in Porous Media: Development of an Empirical Model. Environmental Science & Technology, 2010, 44, 4531-4538.	10.0	146
14	Transport and Deposition of Polymer-Modified Fe⁰ Nanoparticles in 2-D Heterogeneous Porous Media: Effects of Particle Concentration, Fe⁰ Content, and Coatings. Environmental Science & Technology, 2010, 44, 9086-9093.	10.0	142
15	Hydrophobic Interactions Increase Attachment of Gum Arabic- and PVP-Coated Ag Nanoparticles to Hydrophobic Surfaces. Environmental Science & Technology, 2011, 45, 5988-5995.	10.0	134
16	Effect of Adsorbed Polyelectrolytes on Nanoscale Zero Valent Iron Particle Attachment to Soil Surface Models. Environmental Science & Technology, 2009, 43, 3803-3808.	10.0	123
17	Continuum-based models and concepts for the transport of nanoparticles in saturated porous media: A state-of-the-science review. Advances in Colloid and Interface Science, 2017, 246, 75-104.	14.7	119
18	Empirical correlations to estimate agglomerate size and deposition during injection of a polyelectrolyte-modified Fe0 nanoparticle at high particle concentration in saturated sand. Journal of Contaminant Hydrology, 2010, 118, 152-164.	3.3	98

#	ARTICLE	IF	CITATIONS
19	Polymer-Modified Fe⁰ Nanoparticles Target Entrapped NAPL in Two Dimensional Porous Media: Effect of Particle Concentration, NAPL Saturation, and Injection Strategy. Environmental Science & Technology, 2011, 45, 6102-6109.	10.0	86
20	Electromagnetic Induction of Zerovalent Iron (ZVI) Powder and Nanoscale Zerovalent Iron (NZVI) Particles Enhances Dechlorination of Trichloroethylene in Contaminated Groundwater and Soil: Proof of Concept. Environmental Science & Technology, 2016, 50, 872-880.	10.0	80
21	A SEM and X-ray study for investigation of solidified/stabilized arsenicâ€"iron hydroxide sludge. Journal of Hazardous Materials, 2005, 118, 185-195.	12.4	71
22	<i>In situ</i>remediation of subsurface contamination: opportunities and challenges for nanotechnology and advanced materials. Environmental Science: Nano, 2019, 6, 1283-1302.	4.3	65
23	Parameter Identifiability in Application of Soft Particle Electrokinetic Theory To Determine Polymer and Polyelectrolyte Coating Thicknesses on Colloids. Langmuir, 2012, 28, 10334-10347.	3.5	45
24	PCE dissolution and simultaneous dechlorination by nanoscale zero-valent iron particles in a DNAPL source zone. Journal of Contaminant Hydrology, 2012, 131, 9-28.	3.3	42
25	Investigation of magnetic silica with thermoresponsive chitosan coating for drug controlled release and magnetic hyperthermia application. Materials Science and Engineering C, 2019, 97, 23-30.	7.3	39
26	Recycled Concrete Aggregates in Roadways: Laboratory Examination of Self-Cementing Characteristics. Journal of Materials in Civil Engineering, 2015, 27, .	2.9	38
27	Electromagnetic induction of nanoscale zerovalent iron particles accelerates the degradation of chlorinated dense non-aqueous phase liquid: Proof of concept. Water Research, 2016, 107, 19-28.	11.3	36
28	Parameterization and prediction of nanoparticle transport in porous media: A reanalysis using artificial neural network. Water Resources Research, 2017, 53, 4564-4585.	4.2	34
29	Electromagnetic induction of foam-based nanoscale zerovalent iron (NZVI) particles to thermally enhance non-aqueous phase liquid (NAPL) volatilization in unsaturated porous media: Proof of concept. Chemosphere, 2017, 183, 323-331.	8.2	31
30	Modified MODFLOW-based model for simulating the agglomeration and transport of polymer-modified Fe0 nanoparticles in saturated porous media. Environmental Science and Pollution Research, 2018, 25, 7180-7199.	5.3	29
31	Adsorbed poly(aspartate) coating limits the adverse effects of dissolved groundwater solutes on Fe0 nanoparticle reactivity with trichloroethylene. Environmental Science and Pollution Research, 2018, 25, 7157-7169.	5.3	28
32	Combining biochar and zerovalent iron (BZVI) as a paddy field soil amendment for heavy cadmium (Cd) contamination decreases Cd but increases zinc and iron concentrations in rice grains: a field-scale evaluation. Chemical Engineering Research and Design, 2020, 141, 222-233.	5.6	28
33	Leaching Behaviors of Arsenic from Arsenic-Iron Hydroxide Sludge during TCLP. Journal of Environmental Engineering, ASCE, 2008, 134, 671-682.	1.4	25
34	Vetiver plantlets in aerated system degrade phenol in illegally dumped industrial wastewater by phytochemical and rhizomicrobial degradation. Environmental Science and Pollution Research, 2017, 24, 13235-13246.	5.3	25
35	An examination of natural rubber modified asphalt: Effects of rubber latex contents based on macro- and micro-observation analyses. Construction and Building Materials, 2021, 289, 123158.	7.2	24
36	Assessing potential hydrogen cyanide exposure from cyanide-contaminated mine tailing management practices in Thailand's gold mining. Journal of Environmental Management, 2019, 249, 109357.	7.8	23

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37	XRD and Unconfined Compressive Strength Study for a Qualitative Examination of Calciumâ€“Arsenic Compounds Retardation of Cement Hydration in Solidified/Stabilized Arsenicâ€“Iron Hydroxide Sludge. Journal of Environmental Engineering, ASCE, 2007, 133, 595-607.	1.4	17
38	Legal obstacles for the circular economy in Thailand: Illegal dumping of recyclable hazardous industrial waste. Journal of Cleaner Production, 2021, 302, 126969.	9.3	17
39	Constructed sediment microbial fuel cell for treatment of fat, oil, grease (FOG) trap effluent: Role of anode and cathode chamber amendment, electrode selection, and scalability. Chemosphere, 2022, 286, 131619.	8.2	17
40	Nanoscale zerovalent iron particles for magnet-assisted soil washing of cadmium-contaminated paddy soil: proof of concept. Environmental Chemistry, 2019, 16, 446.	1.5	14
41	Ten-Year Monitored Natural Recovery of Lead-Contaminated Mine Tailing in Klity Creek, Kanchanaburi Province, Thailand. Environmental Health Perspectives, 2016, 124, 1511-1520.	6.0	13
42	Community Citizen Science for Risk Management of a Spontaneously Combusting Coalâ€Mine Waste Heap in Ban Chaung, Dawei District, Myanmar. GeoHealth, 2020, 4, e2020GH000249.	4.0	12
43	Physicochemistry of Polyelectrolyte Coatings that Increase Stability, Mobility, and Contaminant Specificity of Reactive Nanoparticles Used for Groundwater Remediation. , 2009, , 249-267.		11
44	Comparative analysis of public participation in the EIA process for Thai overseas investment projects: Krabi coal terminal, Hongsa coal power plant, and Dawei special economic zone. Impact Assessment and Project Appraisal, 2017, 35, 325-339.	1.8	8
45	Comparison of a new mass-concentration, chain-reaction model with the population-balance model for early- and late-stage aggregation of shattered graphene oxide nanoparticles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 582, 123862.	4.7	8
46	Physiologically based pharmacokinetic modeling of hydrogen cyanide in humans following the oral administration of potassium cyanide and cyanogenic glycosides from food. Human and Ecological Risk Assessment (HERA), 2020, 26, 1496-1511.	3.4	8
47	Aggregation and sedimentation of shattered graphene oxide nanoparticles in dynamic environments: a solid-body rotational approach. Environmental Science: Nano, 2018, 5, 1859-1872.	4.3	7
48	Treatability Study for a TCE Contaminated Area using Nanoscale- and Microscale-Zerovalent Iron Particles: Reactivity and Reactive Life Time. ACS Symposium Series, 2010, , 183-202.	0.5	6
49	Arsenic residue in residential area after cleanup of pesticide illegal dumping sources in Thanh Hoa province, Central Vietnam. Environmental Forensics, 2018, 19, 66-78.	2.6	6
50	Nanoscale Zerovalent Iron (NZVI) for Environmental Decontamination: A Brief History of 20 Years of Research and Field-Scale Application. , 2019, , 1-43.		6
51	Enhanced degradation of methylene blue by a solution plasma process catalyzed by incidentally co-generated copper nanoparticles. Water Science and Technology, 2019, 79, 967-974.	2.5	6
52	Assessment of Lead (Pb) Leakage From Abandoned Mine Tailing Ponds to Klity Creek, Kanchanaburi Province, Thailand. GeoHealth, 2021, 5, e2020GH000252.	4.0	5
53	Characteristics and Performance of Cement Modifiedâ€“Base Course Material in Western Australia. Journal of Materials in Civil Engineering, 2014, 26, 04014056.	2.9	4
54	Chemical Reduction and Oxidation of Organic Contaminants by Nanoscale Zerovalent Iron. , 2019, , 97-155.		4

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55	Acid-Assisted Recycling of Iron Hydroxide Sludge as a Coagulant for Metalworking Fluid Wastewater Treatment. Waste and Biomass Valorization, 2019, 10, 3635-3645.	3.4	4
56	Human continuous hydrogen cyanide inhalation predictor with a physiologically based pharmacokinetic (PBPK) model. Environmental Science and Pollution Research, 2020, 27, 24650-24658.	5.3	4
57	Nanoscale Zero-Valent Iron Particles for Water Treatment: From Basic Principles to Field-Scale Applications. Applied Environmental Science and Engineering for A Sustainable Future, 2020, , 19-52.	0.5	4
58	Using sequential H2O2 addition to sustain 1,2-dichloroethane detoxification by a nanoscale zerovalent iron-induced Fenton's system at a natural pH. Chemosphere, 2022, 305, 135376.	8.2	4
59	Rhizomicrobial-augmented mature vetiver root system rapidly degrades phenol in illegally dumped industrial wastewater. , 0, 159, 40-52.		3
60	Assessing Potential Health Impacts of Cyanide-Contaminated Seepage in Paddy Field Near a Gold Mine in Thailand: Cyanide Speciation and Vapor Intrusion Modeling. Exposure and Health, 2022, 14, 459-473.	4.9	3
61	Technological and policy innovations toward cleaner development. Clean Technologies and Environmental Policy, 2022, 24, 1009-1011.	4.1	3
62	Physicochemistry of Polyelectrolyte Coatings that Increase Stability, Mobility, and Contaminant Specificity of Reactive Nanoparticles Used for Groundwater Remediation. , 2014, , 473-490.		1
63	State of Knowledge and Future Needs for NZVI Applications in Subsurface Remediation. , 2019, , 563-579.		1
64	Colloidal and Surface Science and Engineering for Bare and Polymer-Modified NZVI Applications: Dispersion Stability, Mobility in Porous Media, and Contaminant Specificity. , 2019, , 201-233.		1
65	Mechanistic, Mechanistic-Based Empirical, and Continuum-Based Concepts and Models for the Transport of Polyelectrolyte-Modified Nanoscale Zerovalent Iron (NZVI) in Saturated Porous Media. , 2019, , 235-291.		1
66	Editorial: frontier technology for water treatment and pollutant removal is key for securing the present, correcting the past, and sustaining the future. Water Science and Technology, 2019, 79, iii-v.	2.5	1
67	Electromagnetic Induction of Nanoscale Zerovalent Iron for Enhanced Thermal Dissolution/Desorption and Dechlorination of Chlorinated Volatile Organic Compounds. , 2019, , 415-434.		1
68	Vadose Zone Remediation of Dense Nonaqueous Phase Liquid Residuals Using Foam-Based Nanoscale Zerovalent Iron Particles with Low-Frequency Electromagnetic Field. , 2019, , 471-494.		0
69	Electrical resistivity tomography as a tool for community citizen science: A case study of community-driven investigation outside of the fence line. , 2021, , .		0
70	Three lines of evidence: Using geophysical approaches, geochemical approaches, and visual observation to assess potential leakage of mine water from tailing storage facility of a gold mine in Thailand. , 2021, , .		0
71	USING ELECTRICAL RESISTIVITY IMAGING TO ASSESS SOIL AND GROUNDWATER CONTAMINATION FROM ACCIDENTAL SPILL OF CHROME PROCESS WATER THROUGH REINFORCED CONCRETE FLOOR. , 2019, , .		0