

# Babak Kakavandi

## List of Publications by Year in descending order

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Version: 2024-02-01

78  
papers

6,518  
citations

34493

54  
h-index

87275

74  
g-index

78  
all docs

78  
docs citations

78  
times ranked

5577  
citing authors

#	ARTICLE	IF	CITATIONS
1	Catalytic ozonation assisted by Fe <sub>3</sub> O <sub>4</sub> @SiO <sub>2</sub> @TiO <sub>2</sub> in the degradation of Aniline from aqueous solution: modelling and optimisation by response surface methodology. <i>International Journal of Environmental Analytical Chemistry</i> , 2022, 102, 7863-7880.	1.8	11
2	Encapsulation of spinel CuCo <sub>2</sub> O <sub>4</sub> hollow sphere in V <sub>2</sub> O <sub>5</sub> -decorated graphitic carbon nitride as high-efficiency double Z-type nanocomposite for levofloxacin photodegradation. <i>Journal of Hazardous Materials</i> , 2022, 423, 127090.	6.5	82
3	Bisphenol A degradation by peroxymonosulfate photo-activation coupled with carbon-based cobalt ferrite nanocomposite: Performance, upgrading synergy and mechanistic pathway. <i>Chemosphere</i> , 2022, 287, 132024.	4.2	71
4	Effective promotion of g-C <sub>3</sub> N <sub>4</sub> photocatalytic performance via surface oxygen vacancy and coupling with bismuth-based semiconductors towards antibiotics degradation. <i>Chemosphere</i> , 2022, 287, 132273.	4.2	70
5	Intensification of persulfate-mediated elimination of bisphenol A by a spinel cobalt ferrite-anchored g-C <sub>3</sub> N <sub>4</sub> S-scheme photocatalyst: Catalytic synergies and mechanistic interpretation. <i>Separation and Purification Technology</i> , 2022, 285, 120313.	3.9	89
6	Enhanced spatially coupling heterojunction assembled from CuCo <sub>2</sub> S <sub>4</sub> yolk-shell hollow sphere capsulated by Bi-modified TiO <sub>2</sub> for highly efficient CO <sub>2</sub> photoreduction. <i>Chemical Engineering Journal</i> , 2022, 444, 136493.	6.6	33
7	Enhanced three-dimensional electrochemical process using magnetic recoverable of Fe <sub>3</sub> O <sub>4</sub> @GAC towards furfural degradation and mineralization. <i>Arabian Journal of Chemistry</i> , 2022, 15, 103980.	2.3	25
8	Exploring the visible light-assisted conversion of CO <sub>2</sub> into methane and methanol, using direct Z-scheme TiO <sub>2</sub> @g-C <sub>3</sub> N <sub>4</sub> nanosheets: synthesis and photocatalytic performance. <i>Environmental Science and Pollution Research</i> , 2022, 29, 74951-74966.	2.7	6
9	Activation of peroxymonosulfate into amoxicillin degradation using cobalt ferrite nanoparticles anchored on graphene (CoFe <sub>2</sub> O <sub>4</sub> @Gr). <i>Toxin Reviews</i> , 2021, 40, 215-224.	1.5	13
10	Photocatalytic oxidation of tetracycline by magnetic carbon-supported TiO <sub>2</sub> nanoparticles catalyzed peroxydisulfate: Performance, synergy and reaction mechanism studies. <i>Separation and Purification Technology</i> , 2021, 258, 117936.	3.9	88
11	A heterogeneous photocatalytic sulfate radical-based oxidation process for efficient degradation of 4-chlorophenol using TiO <sub>2</sub> anchored on Fe oxides@carbon. <i>Chemical Engineering Research and Design</i> , 2021, 149, 35-47.	2.7	76
12	CuO and ZnO co-anchored on g-C <sub>3</sub> N <sub>4</sub> nanosheets as an affordable double Z-scheme nanocomposite for photocatalytic decontamination of amoxicillin. <i>Applied Catalysis B: Environmental</i> , 2021, 285, 119838.	10.8	189
13	Co-implanting of TiO <sub>2</sub> and liquid-phase-delaminated g-C <sub>3</sub> N <sub>4</sub> on multi-functional graphene nanobridges for enhancing photocatalytic degradation of acetaminophen. <i>Chemical Engineering Journal</i> , 2021, 414, 128618.	6.6	81
14	Peroxymonosulfate catalyzed by core/shell magnetic ZnO photocatalyst towards malathion degradation: Enhancing synergy, catalytic performance and mechanism. <i>Separation and Purification Technology</i> , 2021, 275, 119163.	3.9	76
15	Photocatalytic activation of peroxydisulfate by magnetic Fe <sub>3</sub> O <sub>4</sub> @SiO <sub>2</sub> @TiO <sub>2</sub> /rGO core-shell towards degradation and mineralization of metronidazole. <i>Applied Surface Science</i> , 2021, 570, 151145.	3.1	62
16	Ultrasound-assisted photocatalytic degradation of sulfadiazine using MgO@CNT heterojunction composite: Effective factors, pathway and biodegradability studies. <i>Chemical Engineering Journal</i> , 2020, 381, 122636.	6.6	177
17	Sono-photocatalytic degradation of tetracycline and pharmaceutical wastewater using WO <sub>3</sub> /CNT heterojunction nanocomposite under US and visible light irradiations: A novel hybrid system. <i>Journal of Hazardous Materials</i> , 2020, 390, 122050.	6.5	206
18	N, Cu co-doped TiO <sub>2</sub> @functionalized SWCNT photocatalyst coupled with ultrasound and visible-light: An effective sono-photocatalysis process for pharmaceutical wastewaters treatment. <i>Chemical Engineering Journal</i> , 2020, 392, 123685.	6.6	170

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19	Acetaminophen removal from aqueous solutions through peroxymonosulfate activation by CoFe <sub>2</sub> O <sub>4</sub> /mpg-C <sub>3</sub> N <sub>4</sub> nanocomposite: Insight into the performance and degradation kinetics. <i>Environmental Technology and Innovation</i> , 2020, 20, 101127.	3.0	104
20	LED-assisted sonocatalysis of sulfathiazole and pharmaceutical wastewater using N,Fe co-doped TiO <sub>2</sub> @SWCNT: Optimization, performance and reaction mechanism studies. <i>Journal of Water Process Engineering</i> , 2020, 38, 101693.	2.6	34
21	Performance and reaction mechanism of MgO/ZnO/Graphene ternary nanocomposite in coupling with LED and ultrasound waves for the degradation of sulfamethoxazole and pharmaceutical wastewater. <i>Separation and Purification Technology</i> , 2020, 251, 117373.	3.9	88
22	Enhanced electro-peroxone using ultrasound irradiation for the degradation of organic compounds: A comparative study. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 104167.	3.3	63
23	Enhanced photocatalytic degradation of metronidazole by TiO <sub>2</sub> decorated on magnetic reduced graphene oxide: Characterization, optimization and reaction mechanism studies. <i>Journal of Molecular Liquids</i> , 2020, 314, 113608.	2.3	45
24	Intensified peroxydisulfate/microparticles-zero valent iron process through aeration for degradation of organic pollutants: Kinetic studies, mechanism and effect of anions. <i>Journal of Water Process Engineering</i> , 2020, 36, 101321.	2.6	48
25	Sulfate radical-based oxidative degradation of acetaminophen over an efficient hybrid system: Peroxydisulfate decomposed by ferroferric oxide nanocatalyst anchored on activated carbon and UV light. <i>Separation and Purification Technology</i> , 2020, 250, 116950.	3.9	84
26	Photo-assisted electroperoxone of 2,4-dichlorophenoxy acetic acid herbicide: Kinetic, synergistic and optimization by response surface methodology. <i>Journal of Water Process Engineering</i> , 2019, 32, 100971.	2.6	22
27	Efficient clean-up of waters contaminated with diazinon pesticide using photo-decomposition of peroxymonosulfate by ZnO decorated on a magnetic core/shell structure. <i>Journal of Environmental Management</i> , 2019, 250, 109472.	3.8	84
28	Photo-assisted catalytic degradation of acetaminophen using peroxymonosulfate decomposed by magnetic carbon heterojunction catalyst. <i>Chemosphere</i> , 2019, 232, 140-151.	4.2	84
29	Efficient treatment of saline recalcitrant petrochemical wastewater using heterogeneous UV-assisted sono-Fenton process. <i>Ultrasonics Sonochemistry</i> , 2019, 56, 25-36.	3.8	82
30	Enhanced sono-photocatalysis of tetracycline antibiotic using TiO <sub>2</sub> decorated on magnetic activated carbon (MAC@T) coupled with US and UV: A new hybrid system. <i>Ultrasonics Sonochemistry</i> , 2019, 55, 75-85.	3.8	167
31	Preparation, characterization and catalytic potential of $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> @AC mesoporous heterojunction for activation of peroxymonosulfate into degradation of cyfluthrin insecticide. <i>Microporous and Mesoporous Materials</i> , 2019, 284, 111-121.	2.2	77
32	Heterogeneous catalytic degradation of organic compounds using nanoscale zero-valent iron supported on kaolinite: Mechanism, kinetic and feasibility studies. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2019, 96, 329-340.	2.7	92
33	A new approach in sono-photocatalytic degradation of recalcitrant textile wastewater using MgO@Zeolite nanostructure under UVA irradiation. <i>Chemical Engineering Journal</i> , 2018, 343, 95-107.	6.6	136
34	Simultaneous catalytic degradation of 2,4-D and MCPA herbicides using sulfate radical-based heterogeneous oxidation over persulfate activated by natural hematite ( $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> /PS). <i>Journal of Physics and Chemistry of Solids</i> , 2018, 117, 49-59.	1.9	96
35	Photocatalytic degradation of malathion using Zn <sup>2+</sup> -doped TiO <sub>2</sub> nanoparticles: statistical analysis and optimization of operating parameters. <i>Applied Physics A: Materials Science and Processing</i> , 2018, 124, 1.	1.1	55
36	Catalytic ozonation of high concentrations of catechol over TiO <sub>2</sub> @Fe <sub>3</sub> O <sub>4</sub> magnetic core-shell nanocatalyst: Optimization, toxicity and degradation pathway studies. <i>Journal of Cleaner Production</i> , 2018, 192, 597-607.	4.6	103

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37	Efficient activation of peroxymonosulfate by using ferroferric oxide supported on carbon/UV/US system: A new approach into catalytic degradation of bisphenol A. <i>Chemical Engineering Journal</i> , 2018, 331, 729-743.	6.6	180
38	Removal of vanadium and palladium ions by adsorption onto magnetic chitosan nanoparticles. <i>Environmental Science and Pollution Research</i> , 2018, 25, 34262-34276.	2.7	73
39	Photocatalytic activation of peroxymonosulfate by TiO <sub>2</sub> anchored on copper ferrite (TiO <sub>2</sub> @CuFe <sub>2</sub> O <sub>4</sub> ) into 2,4-D degradation: Process feasibility, mechanism and pathway. <i>Journal of Hazardous Materials</i> , 2018, 359, 325-337.	6.5	245
40	Heterogeneous sonocatalytic degradation of amoxicillin using ZnO@Fe <sub>3</sub> O <sub>4</sub> magnetic nanocomposite: Influential factors, reusability and mechanisms. <i>Journal of Molecular Liquids</i> , 2018, 264, 98-109.	2.3	109
41	Photocatalytic degradation of rhodamine B and real textile wastewater using Fe-doped TiO <sub>2</sub> anchored on reduced graphene oxide (Fe-TiO <sub>2</sub> /rGO): Characterization and feasibility, mechanism and pathway studies. <i>Applied Surface Science</i> , 2018, 462, 549-564.	3.1	292
42	Estimation of Short-term Mortality and Morbidity Attributed to Fine Particulate Matter in the Ambient Air of Eight Iranian Cities. <i>Annals of Global Health</i> , 2018, 84, 408-418.	0.8	10
43	Magnetic adsorption separation process: an alternative method of mercury extracting from aqueous solution using modified chitosan coated $\text{Fe}_3\text{O}_4$ nanocomposites. <i>Journal of Chemical Technology and Biotechnology</i> , 2017, 92, 188-200.	1.6	82
44	Performance, kinetic, and biodegradation pathway evaluation of anaerobic fixed film fixed bed reactor in removing phthalic acid esters from wastewater. <i>Scientific Reports</i> , 2017, 7, 41020.	1.6	58
45	Synthesis of chitosan zero-valent iron nanoparticles-supported for cadmium removal: characterization, optimization and modeling approach. <i>Journal of Water Supply: Research and Technology - AQUA</i> , 2017, 66, 116-130.	0.6	78
46	A systematic review on the efficiency of cerium-impregnated activated carbons for the removal of gas-phase, elemental mercury from flue gas. <i>Environmental Science and Pollution Research</i> , 2017, 24, 12092-12103.	2.7	18
47	Modeling and optimization of nonylphenol removal from contaminated water media using a magnetic recoverable composite by artificial neural networks. <i>Water Science and Technology</i> , 2017, 75, 1761-1775.	1.2	32
48	Oxidative degradation of aniline and benzotriazole over PAC@FeIIFe <sub>2</sub> III <sub>2</sub> O <sub>4</sub> : A recyclable catalyst in a heterogeneous photo-Fenton-like system. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2017, 336, 42-53.	2.0	55
49	Catalytic ozonation of high saline petrochemical wastewater using PAC@Fe II Fe <sub>2</sub> III O <sub>4</sub> : Optimization, mechanisms and biodegradability studies. <i>Separation and Purification Technology</i> , 2017, 177, 293-303.	3.9	92
50	Development of maghemite nanoparticles supported on cross-linked chitosan (γ-Fe <sub>2</sub> O <sub>3</sub> @CS) as a recoverable mesoporous magnetic composite for effective heavy metals removal. <i>Journal of Molecular Liquids</i> , 2017, 248, 184-196.	2.3	81
51	A novel combination of oxidative degradation for benzotriazole removal using TiO <sub>2</sub> loaded on FeIIFe <sub>2</sub> III <sub>2</sub> O <sub>4</sub> @C as an efficient activator of peroxymonosulfate. <i>Applied Catalysis B: Environmental</i> , 2017, 219, 216-230.	10.8	166
52	Comparative treatment of textile wastewater by adsorption, Fenton, UV-Fenton and US-Fenton using magnetic nanoparticles-functionalized carbon (MNPs@C). <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 56, 163-174.	2.9	117
53	Fenton-like catalytic oxidation of tetracycline by AC@Fe <sub>3</sub> O <sub>4</sub> as a heterogeneous persulfate activator: Adsorption and degradation studies. <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 45, 323-333.	2.9	217
54	Simultaneous adsorption of lead and aniline onto magnetically recoverable carbon: optimization, modeling and mechanism. <i>Journal of Chemical Technology and Biotechnology</i> , 2016, 91, 3000-3010.	1.6	41

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55	Silica-coated magnetite nanoparticles core-shell spheres (Fe <sub>3</sub> O <sub>4</sub> @SiO <sub>2</sub> ) for natural organic matter removal. <i>Journal of Environmental Health Science &amp; Engineering</i> , 2016, 14, 21.	1.4	64
56	Development of response surface methodology for optimization of phenol and p-chlorophenol adsorption on magnetic recoverable carbon. <i>Microporous and Mesoporous Materials</i> , 2016, 231, 192-206.	2.2	70
57	Experimental and modeling study on adsorption of cationic methylene blue dye onto mesoporous biochars prepared from agrowaste. <i>Desalination and Water Treatment</i> , 2016, 57, 27199-27212.	1.0	59
58	Batch and column studies for the adsorption of chromium(VI) on low-cost Hibiscus Cannabinus kenaf, a green adsorbent. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 68, 80-89.	2.7	91
59	Application of mesoporous magnetic carbon composite for reactive dyes removal: Process optimization using response surface methodology. <i>Korean Journal of Chemical Engineering</i> , 2016, 33, 2878-2890.	1.2	54
60	Heterogeneous Fenton-like oxidation of petrochemical wastewater using a magnetically separable catalyst (MNPs@C): process optimization, reaction kinetics and degradation mechanisms. <i>RSC Advances</i> , 2016, 6, 84999-85011.	1.7	57
61	Optimization and evaluation of reactive dye adsorption on magnetic composite of activated carbon and iron oxide. <i>Desalination and Water Treatment</i> , 2016, 57, 6411-6422.	1.0	54
62	Optimization of cationic dye adsorption on activated spent tea: Equilibrium, kinetics, thermodynamic and artificial neural network modeling. <i>Korean Journal of Chemical Engineering</i> , 2016, 33, 1352-1361.	1.2	60
63	Application of Fe <sub>3</sub> O <sub>4</sub> @C catalyzing heterogeneous UV-Fenton system for tetracycline removal with a focus on optimization by a response surface method. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2016, 314, 178-188.	2.0	147
64	Nitrate adsorption by synthetic activated carbon magnetic nanoparticles: kinetics, isotherms and thermodynamic studies. <i>Desalination and Water Treatment</i> , 2016, 57, 16445-16455.	1.0	57
65	Enhanced removal of nitrate from water using nZVI@MWCNTs composite: synthesis, kinetics and mechanism of reduction. <i>Water Science and Technology</i> , 2015, 72, 1988-1999.	1.2	51
66	A comprehensive study (kinetic, thermodynamic and equilibrium) of arsenic (V) adsorption using KMnO <sub>4</sub> modified clinoptilolite. <i>Korean Journal of Chemical Engineering</i> , 2015, 32, 2078-2086.	1.2	52
67	Rapid and efficient magnetically removal of heavy metals by magnetite-activated carbon composite: a statistical design approach. <i>Journal of Porous Materials</i> , 2015, 22, 1083-1096.	1.3	54
68	Pb(II) Adsorption Onto a Magnetic Composite of Activated Carbon and Superparamagnetic Fe <sub>3</sub> O <sub>4</sub> Nanoparticles: Experimental and Modeling Study. <i>Clean - Soil, Air, Water</i> , 2015, 43, 1157-1166.	0.7	70
69	Powder activated carbon/Fe <sub>3</sub> O <sub>4</sub> hybrid composite as a highly efficient heterogeneous catalyst for Fenton oxidation of tetracycline: degradation mechanism and kinetic. <i>RSC Advances</i> , 2015, 5, 84718-84728.	1.7	61
70	Iron-silver oxide nanoadsorbent synthesized by co-precipitation process for fluoride removal from aqueous solution and its adsorption mechanism. <i>RSC Advances</i> , 2015, 5, 87377-87391.	1.7	61
71	Development of a novel magnetite-chitosan composite for the removal of fluoride from drinking water: adsorption modeling and optimization. <i>RSC Advances</i> , 2015, 5, 73279-73289.	1.7	103
72	Magnetic Fe <sub>3</sub> O <sub>4</sub> @C nanoparticles as adsorbents for removal of amoxicillin from aqueous solution. <i>Water Science and Technology</i> , 2014, 69, 147-155.	1.2	84

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73	Enhanced chromium (VI) removal using activated carbon modified by zero valent iron and silver bimetallic nanoparticles. <i>Journal of Environmental Health Science &amp; Engineering</i> , 2014, 12, 115.	1.4	116
74	Synthesis and properties of Fe <sub>3</sub> O <sub>4</sub> -activated carbon magnetic nanoparticles for removal of aniline from aqueous solution: equilibrium, kinetic and thermodynamic studies. <i>Iranian Journal of Environmental Health Science &amp; Engineering</i> , 2013, 10, 19.	1.8	106
75	The performance of mesoporous magnetite zeolite nanocomposite in removing dimethyl phthalate from aquatic environments. <i>Desalination and Water Treatment</i> , 0, , 1-15.	1.0	19
76	Removal of nitrate from aqueous solution using activated carbon modified with Fenton reagents. , 0, 76, 265-275.		27
77	Study of the performances of low-cost adsorbents extracted from <i>Rosa damascena</i> in aqueous solutions decolorization. , 0, 80, 357-369.		27
78	Efficient adsorption of cobalt on chemical modified activated carbon: characterization, optimization and modeling studies. , 0, 111, 310-321.		39