Erzsebet Takacs

List of Publications by Citations

90 papers	1,942 citations	24 h-index	39 g-index
96 ext. papers	2,418 ext. citations	4.8 avg, IF	5.63 L-index

#	Paper	IF	Citations
90	Occurrence and fate of antibiotics, antibiotic resistant genes (ARGs) and antibiotic resistant bacteria (ARB) in municipal wastewater treatment plant: An overview. *Science of the Total Environment*, **2020**, 744, 140997	10.2	184
89	Irradiation treatment of azo dye containing wastewater: An overview. *Radiation Physics and Chemistry*, **2008**, 77, 225-244	2.5	141
88	Rate constants of sulfate radical anion reactions with organic molecules: A review. *Chemosphere*, **2019**, 220, 1014-1032	8.4	84
87	Hydroxyl radical induced degradation of ibuprofen. *Science of the Total Environment*, **2013**, 447, 286-92	10.2	82
86	Ketoprofen removal by O□and O□/UV processes: kinetics, transformation products and ecotoxicity. *Science of the Total Environment*, **2014**, 472, 178-84	10.2	70
85	Synthesis of carboxymethylcellulose/starch superabsorbent hydrogels by gamma-irradiation. *Chemistry Central Journal*, **2017**, 11, 46		53
84	Radiation induced degradation of pharmaceutical residues in water: Chloramphenicol. *Radiation Physics and Chemistry*, **2012**, 81, 1489-1494	2.5	51
83	Rate coefficients of hydroxyl radical reactions with pesticide molecules and related compounds: A review. *Radiation Physics and Chemistry*, **2014**, 96, 120-134	2.5	49
82	Cellulose functionalization via high-energy irradiation-initiated grafting of glycidyl methacrylate and cyclodextrin immobilization. *Radiation Physics and Chemistry*, **2011**, 80, 1358-1362	2.5	49
81	Synthesis of cellulose derivative based superabsorbent hydrogels by radiation induced crosslinking. *Cellulose*, **2014**, 21, 4157-4165	5.5	45
80	Elimination of diclofenac from water using irradiation technology. *Chemosphere*, **2011**, 85, 603-8	8.4	42
79	Synthesis and characterization of superabsorbent hydrogels based on hydroxyethylcellulose and acrylic acid. *Carbohydrate Polymers*, **2017**, 166, 300-308	10.3	40
78	Synthesis of cellulose-based superabsorbent hydrogels by high-energy irradiation in the presence of crosslinking agent. *Radiation Physics and Chemistry*, **2016**, 118, 114-119	2.5	39
77	Analytical approaches to the OH radical induced degradation of sulfonamide antibiotics in dilute aqueous solutions. *Journal of Pharmaceutical and Biomedical Analysis*, **2015**, 106, 52-60	3.5	37
76	Rate constants of carbonate radical anion reactions with molecules of environmental interest in aqueous solution: A review. *Science of the Total Environment*, **2020**, 717, 137219	10.2	36
75	Structure dependence of the rate coefficients of hydroxyl radical+aromatic molecule reaction. *Radiation Physics and Chemistry*, **2013**, 87, 82-87	2.5	33
74	Wastewater treatment with ionizing radiation. *Journal of Radioanalytical and Nuclear Chemistry*, **2017**, 311, 973-981	1.5	29

73	Photocatalytic, photolytic and radiolytic elimination of imidacloprid from aqueous solution: Reaction mechanism, efficiency and economic considerations. *Applied Catalysis B: Environmental*, **2019**, 250, 429-439	21.8	26
72	Degradation of fluoroquinolone antibiotics during ionizing radiation treatment and assessment of antibacterial activity, toxicity and biodegradability of the products. *Radiation Physics and Chemistry*, **2018**, 147, 101-105	2.5	26
71	Radiolysis of paracetamol in dilute aqueous solution. *Radiation Physics and Chemistry*, **2012**, 81, 1503-1507	2.5	26
70	Degradation of organic molecules in advanced oxidation processes: relation between chemical structure and degradability. *Chemosphere*, **2013**, 91, 383-9	8.4	26
69	High-energy irradiation treatment of aqueous solutions of azo dyes: steady-state gamma radiolysis experiments. *Radiation Physics and Chemistry*, **2003**, 67, 531-534	2.5	26
68	Synthesis of carboxymethylcellulose/acrylic acid hydrogels with superabsorbent properties by radiation-initiated crosslinking. *Radiation Physics and Chemistry*, **2016**, 124, 135-139	2.5	25
67	Enhancing the biological degradability of sulfamethoxazole by ionizing radiation treatment in aqueous solution. *Radiation Physics and Chemistry*, **2016**, 124, 179-183	2.5	25
66	Determination of the rate constant of hydroperoxyl radical reaction with phenol. *Radiation Physics and Chemistry*, **2014**, 102, 135-138	2.5	24
65	Re-evaluation of the rate constant for the H atom reaction with tert-butanol in aqueous solution. *Radiation Physics and Chemistry*, **2004**, 69, 217-219	2.5	24
64	Change in hydrophilicity of penicillins during advanced oxidation by radiolytically generated OH compromises the elimination of selective pressure on bacterial strains. *Science of the Total Environment*, **2016**, 551-552, 393-403	10.2	23
63	The state of water in thermoresponsive poly(acryloyl-l-proline methyl ester) hydrogels observed by DSC and 1H-NMR relaxometry. *Radiation Physics and Chemistry*, **1999**, 55, 209-218	2.5	23
62	Critical evaluation of rate coefficients for hydroxyl radical reactions with antibiotics: A review. *Critical Reviews in Environmental Science and Technology*, **2018**, 48, 575-613	11.1	22
61	Radiation induced degradation of ciprofloxacin and norfloxacin: Kinetics and product analysis. *Radiation Physics and Chemistry*, **2019**, 158, 68-75	2.5	21
60	Study on the Microstructure of Polyester Polyurethane Irradiated in Air and Water. *Polymers*, **2015**, 7, 1755-1766	4.5	21
59	Radiolysis of sulfonamide antibiotics in aqueous solution: Degradation efficiency and assessment of antibacterial activity, toxicity and biodegradability of products. *Science of the Total Environment*, **2018**, 622-623, 1009-1015	10.2	20
58	OH and e-aq are yet good candidates for demolishing the lactam system of a penicillin eliminating the antimicrobial activity. *Radiation Physics and Chemistry*, **2016**, 124, 84-90	2.5	20
57	Electron beam treatment for tackling the escalating problems of antibiotic resistance: Eliminating the antimicrobial activity of wastewater matrices originating from erythromycin. *Chemical Engineering Journal*, **2017**, 321, 314-324	14.7	19
56	Oxidative and reductive degradation of sulfamethoxazole in aqueous solutions: decomposition efficiency and toxicity assessment. *Journal of Radioanalytical and Nuclear Chemistry*, **2014**, 301, 475-482	1.5	19

55	One-electron oxidation of molecules with aromatic and thioether functions: Cl2•− Br2•− and OH induced oxidation of penicillins studied by pulse radiolysis. *Journal of Photochemistry and Photobiology A: Chemistry*, **2016**, 326, 50-59	4.7	19
54	Mechanism of azo dye degradation in Advanced Oxidation Processes: Degradation of Sulfanilic Acid Azochromotrop and its parent compounds in aqueous solution by ionizing radiation. *Radiation Physics and Chemistry*, **2011**, 80, 462-470	2.5	18
53	Radiation induced degradation of ketoprofen in dilute aqueous solution. *Radiation Physics and Chemistry*, **2012**, 81, 1479-1483	2.5	17
52	The influence of radical transfer and scavenger materials in various concentrations on the gamma radiolysis of phenol. *Radiation Physics and Chemistry*, **2016**, 124, 52-57	2.5	16
51	Rate constants for the reaction of hydrated electrons and hydroxyl radicals with acrylate monomers. *Macromolecular Rapid Communications*, **1996**, 17, 353-357	4.8	15
50	Treatment of pharmaceutical wastewater by ionizing radiation: Removal of antibiotics, antimicrobial resistance genes and antimicrobial activity. *Journal of Hazardous Materials*, **2021**, 415, 125724	12.8	15
49	Improvement of pesticide adsorption capacity of cellulose fibre by high-energy irradiation-initiated grafting of glycidyl methacrylate. *Radiation Physics and Chemistry*, **2012**, 81, 1389-1392	2.5	14
48	Ionizing radiation induced reactions of 2,6-dichloroaniline in dilute aqueous solution. *Radiation Physics and Chemistry*, **2012**, 81, 1499-1502	2.5	14
47	The impact of H 2 O 2 and the role of mineralization in biodegradation or ecotoxicity assessment of advanced oxidation processes. *Radiation Physics and Chemistry*, **2018**, 144, 361-366	2.5	14
46	Drugs with susceptible sites for free radical induced oxidative transformations: the case of a penicillin. *Free Radical Research*, **2016**, 50, 26-38	4	13
45	Electron beam treatment for eliminating the antimicrobial activity of piperacillin in wastewater matrix. *Journal of Industrial and Engineering Chemistry*, **2018**, 58, 24-32	6.3	13
44	Reactions of clofibric acid with oxidative and reductive radicals: Products, mechanisms, efficiency and toxic effects. *Radiation Physics and Chemistry*, **2014**, 102, 72-78	2.5	13
43	Rate coefficients of the initial steps of radiation induced oligomerization of acrylates in dilute aqueous solution. *Radiation Physics and Chemistry*, **1999**, 55, 639-644	2.5	13
42	Effect of mild alkali/ultrasound treatment on flax and hemp fibres: the different responses of the two substrates. *Cellulose*, **2016**, 23, 2117-2128	5.5	12
41	Hydroxyl radical induced degradation of salicylates in aerated aqueous solution. *Radiation Physics and Chemistry*, **2014**, 97, 239-245	2.5	12
40	Hydroxyl radical-induced degradation of fenuron in pulse and gamma radiolysis: kinetics and product analysis. *Environmental Science and Pollution Research*, **2014**, 21, 12693-700	5.1	12
39	Ionizing radiation induced degradation of monuron in dilute aqueous solution. *Radiation Physics and Chemistry*, **2016**, 124, 191-197	2.5	11
38	Ionizing radiation induced degradation of diuron in dilute aqueous solution. *Chemistry Central Journal*, **2015**, 9, 21		11

37	Rate coefficient for the H atom reaction with acrylate monomers in aqueous solution. *Tetrahedron*, **2003**, 59, 8353-8358	2.4	11
36	Protonation kinetics of acrylate radical anions. *Physical Chemistry Chemical Physics*, **2000**, 2, 1431-1433	3.6	11
35	Rate constants of dichloride radical anion reactions with molecules of environmental interest in aqueous solution: a review. *Environmental Science and Pollution Research*, **2021**, 28, 41552-41575	5.1	11
34	Hydrogen peroxide formation during radiolysis of aerated aqueous solutions of organic molecules. *Radiation Physics and Chemistry*, **2017**, 134, 8-13	2.5	10
33	Kinetics of the early stages of high-energy radiation initiated polymerization. *Macromolecular Chemistry and Physics*, **2000**, 201, 2170-2175	2.6	10
32	Thermally reversible gels based on acryloyl-l-proline methyl ester as drug delivery systems. *Radiation Physics and Chemistry*, **1999**, 55, 185-192	2.5	10
31	Transformation of Z-thiacloprid by three advanced oxidation processes: Kinetics, intermediates and the role of reactive species. *Catalysis Today*, **2017**, 284, 187-194	5.3	9
30	High-energy ionising radiation initiated decomposition of acetovanillone. *Radiation Physics and Chemistry*, **2012**, 81, 1495-1498	2.5	9
29	Application of coumarin and coumarin-3-carboxylic acid for the determination of hydroxyl radicals during different advanced oxidation processes. *Radiation Physics and Chemistry*, **2020**, 170, 108610	2.5	9
28	Antibiotics in a wastewater matrix at environmentally relevant concentrations affect coexisting resistant/sensitive bacterial cultures with profound impact on advanced oxidation treatment. *Science of the Total Environment*, **2021**, 754, 142181	10.2	9
27	A Microbiological Assay for Assessing the Applicability of Advanced Oxidation Processes for Eliminating the Sublethal Effects of Antibiotics on Selection of Resistant Bacteria. *Environmental Science and Technology Letters*, **2017**, 4, 251-255	11	8
26	Comparison of hydrogen atom and hydroxyl radical reactions with simple aromatic molecules in aqueous solution. *Chemical Physics*, **2020**, 534, 110754	2.3	8
25	Mineralization of aqueous phenolate solutions: A combination of irradiation treatment and wet oxidation. *Radiation Physics and Chemistry*, **2012**, 81, 1484-1488	2.5	8
24	Intelligent drug delivery systems obtained by radiation. *Radiation Physics and Chemistry*, **1998**, 52, 295-299	2.5	8
23	The effect of combined cometabolism and gamma irradiation treatment on the biodegradability of diclofenac and sulfamethoxazole. *Radiation Physics and Chemistry*, **2020**, 170, 108642	2.5	8
22	Hydroxyl radical induced transformation of phenylurea herbicides: A theoretical study. *Radiation Physics and Chemistry*, **2017**, 132, 16-21	2.5	7
21	The Chemical Background of Advanced Oxidation Processes. *Israel Journal of Chemistry*, **2014**, 54, 233-241	3.4	7
20	Use of bovine catalase and manganese dioxide for elimination of hydrogen peroxide from partly oxidized aqueous solutions of aromatic molecules – Unexpected complications. *Radiation Physics and Chemistry*, **2017**, 139, 147-151	2.5	6

19	Radiation Induced Degradation of Organic Pollutants in Waters and Wastewaters. *Topics in Current Chemistry*, **2016**, 374, 50	7.2	6
18	Applicability evaluation of advanced processes for elimination of neurophysiological activity of antidepressant fluoxetine. *Chemosphere*, **2018**, 193, 489-497	8.4	6
17	Mechanistic study on thiacloprid transformation: Free radical reactions. *Journal of Photochemistry and Photobiology A: Chemistry*, **2017**, 343, 17-25	4.7	5
16	One-Electron Reduction of Penicillins in Relation to the Oxidative Stress Phenomenon. *International Journal of Molecular Sciences*, **2015**, 16, 29673-81	6.3	5
15	Reaction of the 2-hydroxy-2-propyl radical with acrylate type molecules in aqueous solution: Radical addition or electron transfer. *Chemical Physics*, **2006**, 327, 335-343	2.3	5
14	On the complex OH/O-induced free radical chemistry of arylalkylamines with special emphasis on the contribution of the alkylamine side chain. *Free Radical Research*, **2017**, 51, 124-140	4	4
13	Nucleophilic and electrophilic radical attack on maleic and fumaric acids in aqueous solution. *Chemical Physics Letters*, **2008**, 460, 451-456	2.5	4
12	Transformation of atrazine by photolysis and radiolysis: kinetic parameters, intermediates and economic consideration. *Environmental Science and Pollution Research*, **2019**, 26, 23268-23278	5.1	3
11	The effect of hydrogen peroxide on the biochemical oxygen demand (BOD) values measured during ionizing radiation treatment of wastewater. *Radiation Physics and Chemistry*, **2021**, 189, 109773	2.5	3
10	Comparison of catalysis and high energy irradiation for the intensification of wet oxidation as process wastewater pretreatment. *Reaction Kinetics, Mechanisms and Catalysis*, **2015**, 116, 95-103	1.6	2
9	Elimination of oxacillin, its toxicity and antibacterial activity by using ionizing radiation. *Chemosphere*, **2022**, 286, 131467	8.4	2
8	Radiation Induced Degradation of Organic Pollutants in Waters and Wastewaters. *Topics in Current Chemistry Collections*, **2017**, 1-35	1.8	1
7	Degradation of Triton X-100 surfactant/lipid regulator systems by ionizing radiation in water. *Journal of Radioanalytical and Nuclear Chemistry*, **2017**, 314, 1189-1196	1.5	1
6	Reaction of 2-hydroxy-2-propyl radical with maleic and fumaric acids in aqueous solution: pH dependence. *Chemical Physics Letters*, **2007**, 438, 224-228	2.5	1
5	Letter to the editor | Dyes and Pigments - Volume 75, Issue 2. *Dyes and Pigments*, **2007**, 75, 505-506	4.6	1
4	Advanced treatment of antibiotic wastewater by ionizing radiation combined with peroxymonosulfate/H2O2 oxidation. *Journal of Cleaner Production*, **2021**, 321, 128921	10.3	1
3	Matrix effect in the hydroxyl radical induced degradation of β-lactam and tetracycline type antibiotics. *Radiation Physics and Chemistry*, **2022**, 193, 109980	2.5	0
2	Abatement of antibiotics and antimicrobial resistance genes from cephalosporin fermentation residues by ionizing radiation: From lab-scale study to full-scale application. *Journal of Cleaner Production*, **2021**, 325, 129334	10.3	0

1 Interpenetrating-network formation during electron beam crosslinking of an unsaturated polyester-1,6-hexanediol diacrylate monomer system. *International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements*, **1992**, 40, 75-79