Simon M Pimblott

List of Publications by Year
in descending order

121	3,667	185998 28	143772 57
papers	citations	h-index	g-index

123	123	123	2305
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Visualizing time-dependent microstructural and chemical evolution during molten salt corrosion of Ni-20Cr model alloy using correlative quasi in situ TEM and in situ synchrotron X-ray nano-tomography. Corrosion Science, 2022, 195, 109962.	3.0	19
2	H2 production from the radiolysis of aqueous suspensions of ZnO nanoparticles by 5.5ÂMeV He2+ ions. Radiation Physics and Chemistry, 2022, 197, 110189.	1.4	0
3	Radiation-Induced Long-Lived Transients and Metal Particle Formation in Solid KClâ€“MgCl₂ Mixtures. Journal of Physical Chemistry C, 2022, 126, 9820-9830.	1.5	0
4	Radiation-induced reaction kinetics of Zn²⁺ with e_S^{â^'} and Cl₂Ë™^{â^'} in Molten LiClâ€“KCl eutectic at 400â€“600 Â°C. Physical Chemistry Chemical Physics, 2022, 24, 25088-25098.	1.3	4
5	Gamma radiation-induced defects in KCl, MgCl2, and ZnCl2 salts at room temperature. Physical Chemistry Chemical Physics, 2021, 23, 10384-10394.	1.3	4
6	Hydroxyl radical yields in the heavy ion radiolysis of water. Radiation Physics and Chemistry, 2021, 188, 109629.	1.4	6
7	Radiation-Assisted Formation of Metal Nanoparticles in Molten Salts. Journal of Physical Chemistry Letters, 2021, 12, 157-164.	2.1	14
8	Resurgence of a Nationâ€™s Radiation Science Driven by Its Nuclear Industry Needs. Applied Sciences (Switzerland), 2021, 11, 11081.	1.3	2
9	Design and performance of high-temperature furnace and cell holder for in situ spectroscopic, electrochemical, and radiolytic investigations of molten salts. Review of Scientific Instruments, 2020, 91, 083105.	0.6	9
10	A novel method for measuring the radiolysis yields of water adsorbed on ZrO2 nanoparticles. Radiation Physics and Chemistry, 2020, 174, 108924.	1.4	5
11	Effect of Ionizing Radiation on the Redox Chemistry of Penta- and Hexavalent Americium. Inorganic Chemistry, 2019, 58, 8551-8559.	1.9	18
12	Radiation Damage Effects in Chlorite Investigated Using Microfocus Synchrotron Techniques. ACS Earth and Space Chemistry, 2019, 3, 652-662.	1.2	0
13	Material dependence on the mean charge state of light ions in titanium, zirconium and copper. European Physical Journal D, 2019, 73, 1.	0.6	0
14	Roadmap for the application of ion beam technologies to the challenges of nuclear energy technologies. Nuclear Instruments & Methods in Physics Research B, 2019, 441, 41-45.	0.6	17
15	Surface speciation and interactions between adsorbed chloride and water on cerium dioxide. Journal of Solid State Chemistry, 2018, 262, 16-25.	1.4	5
16	Molecular Hydrogen Yields from the Î±-Self-Radiolysis of Nitric Acid Solutions Containing Plutonium or Americium. Journal of Physical Chemistry B, 2018, 122, 2627-2634.	1.2	10
17	Methods for the Simulation of the Slowing of Lowâ€Energy Electrons in Water. Journal of Computational Chemistry, 2018, 39, 2217-2225.	1.5	1
18	Gas Production from the Radiolysis of Water Adsorbed on ZnO Nanoparticles. Journal of Physical Chemistry C, 2018, 122, 25158-25164.	1.5	11

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19	Plutonium and Americium Alpha Radiolysis of Nitric Acid Solutions. Journal of Physical Chemistry B, 2017, 121, 883-889.	1.2	19
20	Inhibition of Radiolytic Molecular Hydrogen Formation by Quenching of Excited State Water. Journal of Physical Chemistry B, 2017, 121, 5385-5390.	1.2	15
21	Kinetics of the Autoreduction of Hexavalent Americium in Aqueous Nitric Acid. Inorganic Chemistry, 2017, 56, 8295-8301.	1.9	23
22	Radiation damage in biotite mica by accelerated Î±-particles: A synchrotron microfocus X-ray diffraction and X-ray absorption spectroscopy studyk. American Mineralogist, 2016, 101, 928-942.	0.9	7
23	Decay Mechanism of NO₃^{â€¢} Radical in Highly Concentrated Nitrate and Nitric Acidic Solutions in the Absence and Presence of Hydrazine. Journal of Physical Chemistry B, 2016, 120, 5008-5014.	1.2	26
24	Multi-Scale Modeling of the Gamma Radiolysis of Nitrate Solutions. Journal of Physical Chemistry B, 2016, 120, 11781-11789.	1.2	28
25	Inelastic cross-sections and energy loss properties by non-relativistic heavy ions in zirconium dioxide. Nuclear Instruments & Methods in Physics Research B, 2016, 372, 119-126.	0.6	0
26	Radiolytic hydrogen generation at silicon carbideâ€“water interfaces. Journal of Nuclear Materials, 2016, 469, 43-50.	1.3	14
27	Novel utilisation of a circular multi-reflection cell applied to materials ageing experiments. Applied Physics B: Lasers and Optics, 2015, 119, 55-64.	1.1	3
28	The Impact of Gamma Radiation on Sediment Microbial Processes. Applied and Environmental Microbiology, 2015, 81, 4014-4025.	1.4	22
29	Unexpected Ultrafast Silver Ion Reduction: Dynamics Driven by the Solvent Structure. Journal of Physical Chemistry B, 2015, 119, 10096-10101.	1.2	18
30	Phenotypic Characterisation of Shewanella oneidensis MR-1 Exposed to X-Radiation. PLoS ONE, 2015, 10, e0131249.	1.1	7
31	The Impact of Î³ Radiation on the Bioavailability of Fe(III) Minerals for Microbial Respiration. Environmental Science & Technology, 2014, 48, 10672-10680.	4.6	16
32	Alpha particle damage in biotite characterized by microfocus X-ray diffraction and Fe K-edge X-ray absorption spectroscopy. Mineralogical Magazine, 2013, 77, 2867-2882.	0.6	9
33	Mass analyzed threshold ionization spectra of phenolâ‹¯Ar₂: ionization energy and cation intermolecular vibrational frequencies. Physical Chemistry Chemical Physics, 2011, 13, 6071-6076.	1.3	24
34	Dissociation energetics of the phenol+â‹¯Ar2 cluster ion: The role of Ï€â†'H isomerization. Journal of Chemical Physics, 2010, 133, 154308.	1.2	42
35	Aqueous Solution of UCl₆^{2â^'} in O₂ Saturated Acidic Medium: An Efficient System To Scavenge All Primary Radicals in Spurs Produced by Irradiation. Journal of Physical Chemistry A, 2009, 113, 949-951.	1.1	4
36	H atom yields in the radiolysis of water. Radiation Physics and Chemistry, 2008, 77, 1203-1207.	1.4	13

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37	Gas Production in the Radiolysis of Poly(vinyl chloride). Journal of Physical Chemistry A, 2008, 112, 3345-3351.	1.1	8
38	An apparatus for the study of high temperature water radiolysis in a nuclear reactor: Calibration of dose in a mixed neutron/gamma radiation field. Review of Scientific Instruments, 2007, 78, 124101.	0.6	10
39	High dose radiolysis of aqueous solutions of chloromethanes: Importance in the storage of radioactive organic wastes. Journal of Nuclear Materials, 2007, 361, 10-17.	1.3	11
40	Production of low-energy electrons by ionizing radiation. Radiation Physics and Chemistry, 2007, 76, 1244-1247.	1.4	306
41	Products of the Triplet Excited State Produced in the Radiolysis of Liquid Benzene. Journal of Physical Chemistry A, 2006, 110, 4124-4130.	1.1	14
42	Radiolysis of Aqueous Solutions of 1,1- and 1,2-Dichloroethane. Journal of Physical Chemistry A, 2005, 109, 10294-10301.	1.1	7
43	Hydrated Electron Yields in the Heavy Ion Radiolysis of Water. Journal of Physical Chemistry A, 2005, 109, 9393-9401.	1.1	45
44	Role of Water in Electron-Initiated Processes and Radical Chemistry:â€‰ Issues and Scientific Advances. Chemical Reviews, 2005, 105, 355-390.	23.0	560
45	Rate Coefficient Measurements of Hydrated Electrons and Hydroxyl Radicals with Chlorinated Ethanes in Aqueous Solutions. Journal of Physical Chemistry A, 2005, 109, 7751-7756.	1.1	10
46	Yields and Migration Distances of Reducing Equivalents in the Radiolysis of Silica Nanoparticles. Journal of Physical Chemistry B, 2004, 108, 6996-7001.	1.2	17
47	Positronium formation in polyethylene: a computer simulation study. Radiation Physics and Chemistry, 2003, 68, 623-625.	1.4	1
48	Modeling of Physicochemical and Chemical Processes in the Interactions of Fast Charged Particles with Matter. , 2003, , .		2
49	On3H Î²-Particle and60Co Î³ Irradiation of Aqueous Systems. Radiation Research, 2002, 158, 493-504.	0.7	16
50	Stochastic Simulation of Gamma Radiolysis of Acidic Ferrous Sulphate Solution at Elevated Temperatures. Radiation Protection Dosimetry, 2002, 99, 73-76.	0.4	14
51	Positronium Formation Dynamics in Radiolytic Tracks:â€‰ A Computer Simulation Study. Journal of Physical Chemistry B, 2002, 106, 1124-1130.	1.2	9
52	Effects of Track Structure on the Ion Radiolysis of the Fricke Dosimeter. Journal of Physical Chemistry A, 2002, 106, 9420-9427.	1.1	62
53	Energy loss by non-relativistic electrons and positrons in liquid water. Nuclear Instruments & Methods in Physics Research B, 2002, 194, 237-250.	0.6	35
54	The design of an electrostatic variable energy positron beam for studies of defects in ceramic coatings and polymer films. Applied Surface Science, 2002, 194, 47-51.	3.1	2

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55	Hydrogen Peroxide Production in the Radiolysis of Water with High Radical Scavenger Concentrations. Journal of Physical Chemistry A, 2002, 106, 9352-9358.	1.1	42
56	Radiation track structure simulation in a molecular medium. Research on Chemical Intermediates, 2001, 27, 529-538.	1.3	10
57	Muonium formation dynamics in radiolytic tracks. Physica B: Condensed Matter, 2000, 289-290, 404-408.	1.3	5
58	New Mechanism for H2Formation in Water. Journal of Physical Chemistry A, 2000, 104, 9820-9822.	1.1	80
59	Energy Loss by Nonrelativistic Electrons and Positrons in Polymers and Simple Solid Hydrocarbons. Journal of Physical Chemistry B, 2000, 104, 9607-9614.	1.2	10
60	Simulation of muonium formation in liquid hydrocarbons. Journal of Chemical Physics, 1999, 111, 7493-7500.	1.2	13
61	Dependence of Molecular Hydrogen Formation in Water on Scavengers of the Precursor to the Hydrated Electron. Journal of Physical Chemistry A, 1999, 103, 5841-5846.	1.1	99
62	On the Radiation Chemical Kinetics of the Precursor to the Hydrated Electron. Journal of Physical Chemistry A, 1998, 102, 2967-2975.	1.1	76
63	Competition between Geminate Recombination and Reaction with a Macromolecule. Journal of Physical Chemistry A, 1998, 102, 730-739.	1.1	7
64	Effect of Electron Energy on the Radiation Chemistry of Liquid Water. Radiation Research, 1998, 150, 159.	0.7	46
65	Radiation Chemistry at the DNA Level: A Radiation Study Section Workshop: Washington, D.C., June 5, 1996. Radiation Research, 1997, 147, 511.	0.7	1
66	Effect of Elastic Collisions on Energy Deposition by Electrons in Water. Journal of Physical Chemistry A, 1997, 101, 4504-4510.	1.1	16
67	Diffusionâ^'Kinetic Modeling of the Î³-Radiolysis of Liquid Cycloalkanes. Journal of Physical Chemistry A, 1997, 101, 1628-1634.	1.1	18
68	Stochastic Simulation of the Electron Radiolysis of Water and Aqueous Solutions. Journal of Physical Chemistry A, 1997, 101, 5828-5838.	1.1	130
69	Modelling of geminate annihilation in quasi-one-dimensional solids. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 3391.	1.7	3
70	Reconciliation of Transient Absorption and Chemically Scavenged Yields of the Hydrated Electron in Radiolysis. The Journal of Physical Chemistry, 1996, 100, 9412-9415.	2.9	55
71	Monte Carlo Simulation of Range and Energy Deposition by Electrons in Gaseous and Liquid Water. The Journal of Physical Chemistry, 1996, 100, 8595-8606.	2.9	125
72	Simulation of ion recombination in low permittivity solvents: Extended clusters. Radiation Physics and Chemistry, 1996, 47, 233-240.	1.4	3

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73	Electron Energy-Loss Distributions in Solid, Dry DNA. Radiation Research, 1995, 141, 208.	0.7	182
74	Electron Energy Loss Distributions in Solid and Gaseous Hydrocarbons. The Journal of Physical Chemistry, 1995, 99, 10540-10548.	2.9	34
75	Spin effects on spur kinetics. Re-encounters and the indepedent pairs approximation. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 223.	1.7	8
76	Recent Advances in the Kinetics of Radiolytic Processes. , 1995, , 117-174.		24
77	Simulation of geminate ion recombination kinetics in anisotropic media. Chemical Physics Letters, 1994, 221, 175-182.	1.2	1
78	Diffusion-Kinetic Theories for LET Effects on the Radiolysis of Water. The Journal of Physical Chemistry, 1994, 98, 6136-6143.	2.9	31
79	Models for the Radiation Chemistry of Aqueous Solutions. Radiation Protection Dosimetry, 1994, 52, 183-188.	0.4	4
80	Generalizations of the Stern-Volmer relation. The Journal of Physical Chemistry, 1993, 97, 196-202.	2.9	39
81	Diffusion-kinetic modeling of the electron radiolysis of water at elevated temperatures. The Journal of Physical Chemistry, 1993, 97, 3291-3297.	2.9	40
82	Stochastic analysis of the asymptotic kinetics of multi-particle spurs. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 1299.	1.7	2
83	Stochastic modelling of the influence of an applied electric field on the ion recombination kinetics of multiple-ion-pair spurs in low-permittivity liquids. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3533.	1.7	10
84	Diffusion-kinetic modelling of the cooperative effect of scavengers on the scavenged yield of the hydroxyl radical. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3527.	1.7	18
85	Yields of Hydroxyl Radical and Hydrated Electron Scavenging Reactions in Aqueous Solutions of Biological Interest. Radiation Research, 1993, 135, 16.	0.7	72
86	Mean reaction times in non-homogeneous kinetics. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 471.	1.7	0
87	Scavenger concentration dependences of yields in radiation chemistry. The Journal of Physical Chemistry, 1992, 96, 746-752.	2.9	19
88	Diffusion-kinetic calculations of the effect of nitrous oxide on the yields of ionic species in the radiation chemistry of water. The Journal of Physical Chemistry, 1992, 96, 7839-7841.	2.9	6
89	Cooperative effects of scavengers on the scavenged yield of the hydrated electron. The Journal of Physical Chemistry, 1992, 96, 8904-8909.	2.9	29
90	Stochastic modeling of partially diffusion-controlled reactions in spur kinetics. The Journal of Physical Chemistry, 1992, 96, 9338-9348.	2.9	23

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91	Investigation of various factors influencing the effect of scavengers on the radiation chemistry following the high-energy electron radiolysis of water. The Journal of Physical Chemistry, 1992, 96, 4485-4491.	2.9	22
92	Molecular Product Formation in the Electron Radiolysis of Water. Radiation Research, 1992, 129, 265.	0.7	21
93	Effects of spur overlap in radiation chemistry : reaction in two nearby spurs. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 925.	1.7	5
94	Geminate ion recombination in anisotropic media : naphthalene. Journal of the Chemical Society, Faraday Transactions, 1992, 88, 2989.	1.7	2
95	Scavenger kinetics and the Laplace transform relationship. Molecular Physics, 1991, 74, 811-832.	0.8	17
96	Scavenger kinetics and the Laplace transform relationship. Molecular Physics, 1991, 74, 795-810.	0.8	7
97	Use of dipole oscillator strength in the calculation of the range of electrons in various gases. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1991, 38, 75-81.	0.0	1
98	Ordered distances in theories of multiple ion-pair spur kinetics. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1991, 37, 161-168.	0.0	0
99	Scavenger and time dependences of radicals and molecular products in the electron radiolysis of water: examination of experiments and models. The Journal of Physical Chemistry, 1991, 95, 3196-3206.	2.9	149
100	Spin effects on spur kinetics: analytic models for single-species spurs. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 2427.	1.7	14
101	Spin effects on spur kinetics: independent pairs modelling of two-species spurs. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 3601.	1.7	12
102	Structure of electron tracks in water. 2. Distribution of primary ionizations and excitations in water radiolysis. The Journal of Physical Chemistry, 1991, 95, 7291-7300.	2.9	74
103	Tripletâ€"triplet annihilation rate in anisotropic crystals: diffusion and non-diffusion controlled cases. Chemical Physics Letters, 1991, 180, 497-502.	1.2	5
104	Stochastic models of spur kinetics in water. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1991, 37, 377-388.	0.0	27
105	Energy loss by electrons in gaseous saturated hydrocarbons. The Journal of Physical Chemistry, 1991, 95, 3907-3914.	2.9	16
106	Independent pairs modeling of the kinetics following the photoionization of liquid water. The Journal of Physical Chemistry, 1991, 95, 6946-6951.	2.9	48
107	ENERGY LOSS BY ELECTRONS IN HYDROCARBON GASES. , 1991, , 291.		0
108	THE SCAVENGER AND TIME DEPENDENCES OF RADICALS IN THE RADIOLYSIS OF WATER. , 1991, , 292.		0

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109	Structure of electron tracks in water. 1. Distribution of energy deposition events. The Journal of Physical Chemistry, 1990, 94, 488-495.	2.9	109
110	Comparison of Stochastic and Deterministic Methods for Modeling Spur Kinetics. Radiation Research, 1990, 122, 12.	0.7	25
111	Diffusion-controlled ion recombination in multipair clusters in low-permittivity solvents. The Journal of Physical Chemistry, 1990, 94, 2922-2926.	2.9	18
112	Comment on â€œgeminate electron-ion recombination probability in highly anisotropic mediaâ€• Chemical Physics Letters, 1990, 168, 511-512.	1.2	2
113	The influence of the diffusional anisotropy on bimolecular reaction rate of neutrals in molecular crystals: Tripletâ€”triplet annihilation in anthracene. Chemical Physics Letters, 1990, 167, 542-546.	1.2	12
114	Geminate ion recombination in anisotropic media. Effects of initial distribution and external field. Journal of Chemical Physics, 1989, 90, 6595-6602.	1.2	20
115	Asymptotic analysis of diffusion-influenced kinetics with a potential. The Journal of Physical Chemistry, 1989, 93, 5462-5467.	2.9	22
116	Stochastic models of diffusion-controlled ionic reactions-induced spurs. 2. Low-permittivity solvents. The Journal of Physical Chemistry, 1989, 93, 8025-8031.	2.9	48
117	Stochastic models of short-time kinetics in irradiated liquids. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1989, 34, 105-114.	0.0	4
118	Hydrogen and hydrogen peroxide yields in the radiolysis of water: A comparison of stochastic and deterministic kinetic models. International Journal of Radiation Applications and Instrumentation Nuclear Tracks and Radiation Measurements, 1987, 30, 125-132.	0.0	3
119	Electron-ion geminate escape probability in anisotropic media. Chemical Physics Letters, 1987, 142, 385-388.	1.2	16
120	Stochastic models of diffusion-controlled ionic reactions in radiation-induced spurs. 1. High-permittivity solvents. The Journal of Physical Chemistry, 1987, 91, 4417-4422.	2.9	55
121	Stochastic models of multi-species kinetics in radiation-induced spurs. Journal of the Chemical Society Faraday Transactions I, 1986, 82, 2673.	1.0	87