Jean-Paul Jay-Gerin

List of Publications by Year
in descending order

71	2,828	257450 24	182427 51
papers	citations	h-index	g-index

73	73	73	3065
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generation of ultrafast, transient, highly acidic pH spikes in the radiolysis of water at very high dose rates: relevance for FLASH radiotherapy. Canadian Journal of Chemistry, 2022, 100, 272-279.	1.1	6
2	High-dose-rate effects in the radiolysis of water at elevated temperatures. Canadian Journal of Chemistry, 2021, 99, 594-602.	1.1	7
3	Yield of the Fricke dosimeter irradiated with the recoil Î± and Li ions of the ¹⁰B(n,Î±)⁷Li nuclear reaction: effects of multiple ionization and temperature. Canadian Journal of Chemistry, 2021, 99, 425-435.	1.1	1
4	Transient hypoxia in water irradiated by swift carbon ions at ultra-high dose rates: implication for FLASH carbon-ion therapy. Canadian Journal of Chemistry, 2021, 99, 842-849.	1.1	4
5	Yields of primary species in the low-linear energy transfer radiolysis of water in the temperature range of 25â€“700 Â°C. Physical Chemistry Chemical Physics, 2020, 22, 7430-7439.	2.8	8
6	Ultra-high dose-rate (FLASH) radiotherapy: Generation of early, transient, strongly acidic spikes in the irradiated tumor environment. Cancer Radiotherapie: Journal De La Societe Francaise De Radiotherapie Oncologique, 2020, 24, 332-334.	1.4	11
7	Linear energy transfer dependence of transient yields in water irradiated by 150 keV â€“ 500 MeV protons in the limit of low dose rates. Canadian Journal of Chemistry, 2020, 98, 427-433.	1.1	10
8	Ultra-High Dose-Rate, Pulsed (FLASH) Radiotherapy with Carbon Ions: Generation of Early, Transient, Highly Oxygenated Conditions in the Tumor Environment. Radiation Research, 2020, 194, 587-593.	1.5	35
9	Formation of Local, Transient â€œAcid Spikesâ€•in the Fast Neutron Radiolysis of Supercritical Water at 400â€‰Â°C: A Potential Source of Corrosion in Supercritical Water-Cooled Reactors?. Journal of Nuclear Engineering and Radiation Science, 2020, 6, .	0.4	3
10	â€œAcid spikeâ€•formation in the fast neutron radiolysis of supercritical water at 400 Â°C studied by Monte Carlo track chemistry simulations. Canadian Journal of Chemistry, 2019, 97, 366-372.	1.1	4
11	Radiolysis of supercritical water at 400 Â°C: density dependence of the rate constant for the reaction of hydronium ions with hydrated electrons. Physical Chemistry Chemical Physics, 2019, 21, 9141-9144.	2.8	5
12	Low linear energy transfer radiolysis of supercritical water at 400 Â°C: in situ generation of ultrafast, transient, density-dependent â€œacid spikesâ€• Physical Chemistry Chemical Physics, 2019, 21, 7137-7146.	2.8	6
13	Evaluation of the radioprotective ability of cystamine for 150 keV â€“ 500 MeV proton irradiation: a Monte Carlo track chemistry simulation study. Canadian Journal of Chemistry, 2019, 97, 100-111.	1.1	7
14	Self-radiolysis of tritiated water. 4. The scavenging effect of azide ions (N₃^{â^’}) on the molecular hydrogen yield in the radiolysis of water by ⁶⁰Co Î³-rays and tritium Î²-particles at room temperature. RSC Advances, 2018, 8, 2449-2458.	3.6	4
15	In situ generation of ultrafast transient â€œacid spikesâ€•in the 10B(n,Î±)7Li radiolysis of water. Chemical Physics Letters, 2018, 693, 210-215.	2.6	11
16	Monte Carlo track chemistry simulations of the radiolysis of water induced by the recoil ions of the ¹⁰B(n,Î±)⁷Li nuclear reaction. 1. Calculation of the yields of primary species up to 350 Â°C. RSC Advances, 2017, 7, 10782-10790.	3.6	8
17	Rate constant for the HË™ + H₂O â†’ Ë™OH + H₂ reaction at elevated temperatures measured by pulse radiolysis. Physical Chemistry Chemical Physics, 2017, 19, 30834-30841.	2.8	15
18	Radiolysis of Supercritical Water at 400Â°C: A Sensitivity Study of the Density Dependence of the Yield of Hydrated Electrons on the (eaqâ^’+eaqâ^˙) Reaction Rate Constant. Journal of Nuclear Engineering and Radiation Science, 2016, 2, .	0.4	8

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19	Heterogeneous character of supercritical water at 400 Â°C and different densities unveiled by simulation. RSC Advances, 2016, 6, 30484-30487.	3.6	12
20	Yields of H₂ and hydrated electrons in low-LET radiolysis of water determined by Monte Carlo track chemistry simulations using phenol/N₂O aqueous solutions up to 350 Â°C. RSC Advances, 2015, 5, 76813-76824.	3.6	11
21	Acid spike effect in spurs/tracks of the low/high linear energy transfer radiolysis of water: potential implications for radiobiology. RSC Advances, 2015, 5, 43361-43370.	3.6	20
22	Modeling the Radiolysis of Supercritical Water by Fast Neutrons: Density Dependence of the Yields of Primary Species at 400Â°C. Radiation Research, 2014, 182, 695-704.	1.5	10
23	Self-radiolysis of tritiated water. 3. The Ë™OH scavenging effect of bromide ions on the yield of H2O2in the radiolysis of water by60Co Î³-rays and tritium Î²-particles at room temperature. RSC Advances, 2014, 4, 43572-43581.	3.6	12
24	Effect of Temperature on the Low-Linear Energy Transfer Radiolysis of the Ceric-Cerous Sulfate Dosimeter: A Monte Carlo Simulation Study. Radiation Research, 2014, 181, 495-502.	1.5	2
25	Calculation of the Yields for the Primary Species Formed from the Radiolysis of Liquid Water by Fast Neutrons at Temperatures between 25â€“350Â°C. Radiation Research, 2014, 181, 659-665.	1.5	8
26	Self-radiolysis of tritiated water. 2. Density dependence of the yields of primary species formed in the radiolysis of supercritical water by tritium Î²-particles at 400 Â°C. RSC Advances, 2014, 4, 22980.	3.6	3
27	Time-dependent yield of OH radicals in the low linear energy transfer radiolysis of water between 25 and 350 Â°C. Chemical Physics Letters, 2013, 588, 82-86.	2.6	14
28	Density dependence of the yield of hydrated electrons in the low-LET radiolysis of supercritical water at 400 Â°C: influence of the geminate recombination of subexcitation-energy electrons prior to thermalization. Physical Chemistry Chemical Physics, 2013, 15, 16450.	2.8	10
29	Self-radiolysis of tritiated water. 1. A comparison of the effects of 60Co Î³-rays and tritium Î²-particles on water and aqueous solutions at room temperature. RSC Advances, 2013, 3, 19282.	3.6	24
30	Human cell responses to ionizing radiation are differentially affected by the expressed connexins. Journal of Radiation Research, 2013, 54, 251-259.	1.6	21
31	On the Temperature Dependence of the Rate Constant of the Bimolecular Reaction of Two Hydrated Electrons. Atom Indonesia, 2013, 39, 51.	0.5	8
32	Water Chemistry in a Supercritical Water-Cooled Pressure Tube Reactor. Nuclear Technology, 2012, 179, 205-219.	1.2	59
33	Density dependence of the â€œescapeâ€•yield of hydrated electrons in the low-LET radiolysis of supercritical water at 400 Â°C. Physical Chemistry Chemical Physics, 2012, 14, 11277.	2.8	10
34	Ionizing radiation-induced metabolic oxidative stress and prolonged cell injury. Cancer Letters, 2012, 327, 48-60.	7.2	1,019
35	On the spur lifetime and its temperature dependence in the low linear energy transfer radiolysis of water. Physical Chemistry Chemical Physics, 2012, 14, 16731.	2.8	32
36	Utilization of the Ferrous Sulfate (Fricke) Dosimeter for Evaluating the Radioprotective Potential of Cystamine: Experiment and Monte Carlo Simulation. Radiation Research, 2012, 177, 813-826.	1.5	26

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37	Time-dependent yield of the hydrated electron in subcritical and supercritical water studied by ultrafast pulse radiolysis and Monte-Carlo simulation. Physical Chemistry Chemical Physics, 2012, 14, 14325.	2.8	34
38	The Role of Gap Junction Communication and Oxidative Stress in the Propagation of Toxic Effects among High-Dose Î±-Particle-Irradiated Human Cells. Radiation Research, 2011, 175, 347-357.	1.5	57
39	Temperature dependence of the Fricke dosimeter and spur expansion time in the low-LET high-temperature radiolysis of water up to 350 Â°C: a Monte-Carlo simulation study. Physical Chemistry Chemical Physics, 2011, 13, 10690.	2.8	21
40	Low-linear energy transfer radiolysis of liquid water at elevated temperatures up to 350Â°C: Monte-Carlo simulations. Chemical Physics Letters, 2011, 508, 224-230.	2.6	38
41	Intercellular Communication Amplifies Stressful Effects in High-Charge, High-Energy (HZE) Particle-Irradiated Human Cells. Journal of Radiation Research, 2011, 52, 408-414.	1.6	20
42	Radiolysis of supercritical water at 400ÂÂ°C and liquid-like densities near 0.5Âg/cm3 â€" A Monte Carlo calculation. Canadian Journal of Chemistry, 2010, 88, 646-653.	1.1	17
43	Temperature and density effects on the absorption maximum of solvated electrons in sub- and super-critical methanol. Canadian Journal of Chemistry, 2010, 88, 1026-1033.	1.1	1
44	Radiation Chemistry of Liquid Water with Heavy Ions. , 2010, , 355-400.		12
45	High-LET Ion Radiolysis of Water: Oxygen Production in Tracks. Radiation Research, 2009, 171, 379-386.	1.5	43
46	Effect of water density on the absorption maximum of hydrated electrons in sub- and supercritical water up to 400â€‰Â°C. Journal of Chemical Physics, 2008, 129, 114511.	3.0	24
47	Monte Carlo simulation study of the effects of acidity and LET on the primary free-radical and molecular yields of water radiolysis â€" Application to the Fricke dosimeter. Canadian Journal of Chemistry, 2007, 85, 214-229.	1.1	31
48	High-LET Ion Radiolysis of Water: Visualization of the Formation and Evolution of Ion Tracks and Relevance to the Radiation-Induced Bystander Effect. Radiation Research, 2006, 165, 485-491.	1.5	54
49	Monte-Carlo â€˜â€˜step-by-stepâ€™â€™ simulation of the early stages of liquid water radiolysis: 3D visualization of the initial radiation track structure and its subsequent chemical development. Journal of Physics: Conference Series, 2006, 56, 153-155.	0.4	2
50	SimulRad: a Java interface for a Monte-Carlo simulation code to visualize in 3D the early stages of water radiolysis. Radiation Physics and Chemistry, 2005, 72, 173-180.	2.8	21
51	Effect of Multiple Ionization on the Yield of H2O2Produced in the Radiolysis of Aqueous 0.4MH2SO4Solutions by High-LET12C6+and20Ne9+Ions. Radiation Research, 2005, 164, 688-694.	1.5	16
52	High-LET Radiolysis of Liquid Water with 1H+, 4He2+, 12C6+, and 20Ne9+ Ions:â€‰ Effects of Multiple Ionization. Journal of Physical Chemistry A, 2005, 109, 6406-6419.	2.5	77
53	Multiple ionization effects on the yields of HO2/O2â‘ and H2O2 produced in the radiolysis of liquid water with high-LET 12C6+ ions: a Monte-Carlo simulation study. Chemical Physics Letters, 2003, 377, 419-425.	2.6	27
54	Low-Energy Electron Penetration Range in Liquid Water. Radiation Research, 2002, 158, 657-660.	1.5	189

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55	On the temperature dependence of the primary yield and the product GÎµmax of hydrated electrons in the low-LET radiolysis of liquid water. Canadian Journal of Chemistry, 2002, 80, 767-773.	1.1	12
56	Radiolysis of liquid water: An attempt to reconcile Monte-Carlo calculations with new experimental hydrated electron yield data at early times. Canadian Journal of Chemistry, 2002, 80, 1367-1374.	1.1	40
57	Monte-Carlo calculation of the primary yields of H2O2 in the 1H+, 2H+, 4He2+, 7Li3+, and 12C6+ radiolysis of liquid water at 25 and 300Â°C. Canadian Journal of Chemistry, 2002, 80, 68-75.	1.1	10
58	Monte Carlo Calculation of the Primary Radical and Molecular Yields of Liquid Water Radiolysis in the Linear Energy Transfer Range 0.3â€“6.5 keV/Î¼m: Application to137Cs Gamma Rays1. Radiation Research, 2001, 155, 269-278.	1.5	49
59	Electron stimulated desorption of Hâ‚‚ from thin films of thymine and uracil. Journal of Chemical Physics, 2001, 114, 5755-5764.	3.0	89
60	A new estimate of the radical yield at early times in the radiolysis of liquid water. Chemical Physics Letters, 2000, 317, 388-391.	2.6	39
61	The effect of pH on water radiolysis: A still open question â€” A minireview. Research on Chemical Intermediates, 2000, 26, 549-565.	2.7	79
62	Radiolysis of Liquid Water at Temperatures up to 300 Â°C:Â A Monte Carlo Simulation Study. Journal of Physical Chemistry A, 2000, 104, 11757-11770.	2.5	77
63	On the validity of the independent reaction times approximation for the description of the nonhomogeneous kinetics of liquid water radiolysis. Radiation Physics and Chemistry, 1998, 51, 85-91.	2.8	62
64	Correlation between the electron solvation time and the solvent dielectric relaxation times Ï„2 and Ï„L1 in liquid alcohols and water: towards a universal concept of electron solvation?. Canadian Journal of Chemistry, 1997, 75, 1310-1314.	1.1	8
65	Ã‰lectrons en excÃ¨s dans les milieux polaires homogÃ¨nes et hÃ©tÃ©rogÃ¨nes. Canadian Journal of Chemistry, 1996, 74, 1-23.	1.1	16
66	On the dissociative electron attachment as a potential source of molecular hydrogen in irradiated liquid water. Radiation Physics and Chemistry, 1996, 47, 247-250.	2.8	29
67	<title>Dynamics of solvated electrons in polar liquids using 2-eV femtosecond laser pulses</title>. , 1994, 2041, 139.		2
68	A conjecture on the fate of the hydrated electron during its disproportionation reaction. Radiation Physics and Chemistry, 1993, 41, 487-490.	2.8	9
69	Thermalization of Subexcitation Electrons in Solid Water. Radiation Research, 1989, 118, 46.	1.5	40
70	Scavenging of â€œdryâ€•electrons prior to hydration by azide ions: effect on the formation of H2 in the radiolysis of water by 60Co Î³-rays and tritium Î²-electrons. Canadian Journal of Chemistry, 0, , 1-9.	1.1	1
71	GENERATION OF ULTRAFAST TRANSIENT ACID SPIKES IN HIGH-TEMPERATURE WATER IRRADIATED WITH LOW LINEAR ENERGY TRANSFER RADIATION. CNL Nuclear Review, 0, , 1-10.	0.6	3