GÃ©rard Liger-Belair

List of Publications by Year
in descending order

84 papers	2,088 citations	218381 26 h-index	253896 43 g-index
86 all docs	86 docs citations	86 times ranked	1310 citing authors

#	Article	IF	Citations
1	The Physics and Chemistry behind the Bubbling Properties of Champagne and Sparkling Wines:â€‰ A State-of-the-Art Review. Journal of Agricultural and Food Chemistry, 2005, 53, 2788-2802.	2.4	112
2	Recent advances in the science of champagne bubbles. Chemical Society Reviews, 2008, 37, 2490.	18.7	106
3	Unraveling different chemical fingerprints between a champagne wine and its aerosols. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16545-16549.	3.3	104
4	Dynamics of jets produced by bursting bubbles. Physical Review Fluids, 2018, 3, .	1.0	99
5	Kinetics of Gas Discharging in a Glass of Champagne:â€‰ The Role of Nucleation Sites. Langmuir, 2002, 18, 1294-1301.	1.6	88
6	Proteomic Approach To Identify Champagne Wine Proteins as Modified by Botrytis cinerea Infection. Journal of Proteome Research, 2008, 7, 1199-1208.	1.8	81
7	Metabolomics reveals simultaneous influences of plant defence system and fungal growth in Botrytis cinerea-infected Vitis vinifera cv. Chardonnay berries. Journal of Experimental Botany, 2012, 63, 5773-5785.	2.4	67
8	Influence of Botrytis cinerea infection on Champagne wine proteins (characterized by) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 467 Td (tw 2007, 103, 139-149.	4.2	62
9	Diffusion Coefficient of CO2Molecules as Determined by13C NMR in Various Carbonated Beverages. Journal of Agricultural and Food Chemistry, 2003, 51, 7560-7563.	2.4	59
10	On the Velocity of Expanding Spherical Gas Bubbles Rising in Line in Supersaturated Hydroalcoholic Solutions: Application to Bubble Trains in Carbonated Beverages. Langmuir, 2000, 16, 1889-1895.	1.6	54
11	Modeling the Kinetics of Bubble Nucleation in Champagne and Carbonated Beverages. Journal of Physical Chemistry B, 2006, 110, 21145-21151.	1.2	53
12	Kinetics of CO₂ Fluxes Outgassing from Champagne Glasses in Tasting Conditions: The Role of Temperature. Journal of Agricultural and Food Chemistry, 2009, 57, 1997-2003.	2.4	47
13	Chemical messages in 170-year-old champagne bottles from the Baltic Sea: Revealing tastes from the past. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5893-5898.	3.3	47
14	On the Losses of Dissolved CO₂ during Champagne Serving. Journal of Agricultural and Food Chemistry, 2010, 58, 8768-8775.	2.4	44
15	Modeling Nonclassical Heterogeneous Bubble Nucleation from Cellulose Fibers:Â Application to Bubbling in Carbonated Beverages. Journal of Physical Chemistry B, 2005, 109, 14573-14580.	1.2	42
16	Foaming properties of various Champagne wines depending on several parameters: Grape variety, aging, protein and CO2 content. Analytica Chimica Acta, 2010, 660, 164-170.	2.6	42
17	Evaporation of droplets in a Champagne wine aerosol. Scientific Reports, 2016, 6, 25148.	1.6	40
18	Effervescence in champagne and sparkling wines: From grape harvest to bubble rise. European Physical Journal: Special Topics, 2017, 226, 3-116.	1.2	40

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19	CO2 Volume Fluxes Outgassing from Champagne Glasses in Tasting Conditions: Flute versus Coupe. Journal of Agricultural and Food Chemistry, 2009, 57, 4939-4947.	2.4	38
20	Metabolic Influence of Botrytis cinerea Infection in Champagne Base Wine. Journal of Agricultural and Food Chemistry, 2011, 59, 7237-7245.	2.4	38
21	Visualization of Mixing Flow Phenomena in Champagne Glasses under Various Glass-Shape and Engravement Conditions. Journal of Agricultural and Food Chemistry, 2007, 55, 882-888.	2.4	32
22	Use of magnetic resonance spectroscopy for the investigation of the CO2 dissolved in champagne and sparkling wines: a nondestructive and unintrusive method. Analytica Chimica Acta, 2005, 535, 73-78.	2.6	31
23	Bubbles and Flow Patterns in Champagne. American Scientist, 2009, 97, 294.	0.1	31
24	Monitoring Gaseous CO2 and Ethanol above Champagne Glasses: Flute versus Coupe, and the Role of Temperature. PLoS ONE, 2012, 7, e30628.	1.1	30
25	Kinetics and stability of the mixing flow patterns found in champagne glasses as determined by laser tomography techniques: likely impact on champagne tasting. Analytica Chimica Acta, 2008, 621, 30-37.	2.6	29
26	Is the Wall of a Cellulose Fiber Saturated with Liquid Whether or Not Permeable with CO2Dissolved Molecules? Application to Bubble Nucleation in Champagne Wines. Langmuir, 2004, 20, 4132-4138.	1.6	28
27	How Many Bubbles in Your Glass of Bubbly?. Journal of Physical Chemistry B, 2014, 118, 3156-3163.	1.2	26
28	Bubble streams in Titanâ€™s seas as a product of liquid N2â€‰+ CH4â€‰+ C2H6 cryogenic mixture. Nature Astronomy, 2017, 1, .	4.2	26
29	Flow Patterns of Bubble Nucleation Sites (Called Fliers) Freely Floating in Champagne Glasses. Langmuir, 2007, 23, 10976-10983.	1.6	25
30	The Science of Bubbly. Scientific American, 2003, 288, 80-85.	1.0	24
31	Losses of Dissolved CO₂ Through the Cork Stopper during Champagne Aging: Toward a Multiparameter Modeling. Journal of Agricultural and Food Chemistry, 2011, 59, 4051-4056.	2.4	24
32	Simultaneous Monitoring of Gaseous CO₂ and Ethanol above Champagne Glasses via Micro-gas Chromatography (Î¼GC). Journal of Agricultural and Food Chemistry, 2011, 59, 7317-7323.	2.4	24
33	Monitoring the losses of dissolved carbon dioxide from laser-etched champagne glasses. Food Research International, 2013, 54, 516-522.	2.9	24
34	Bubble dynamics in various commercial sparkling bottled waters. Journal of Food Engineering, 2015, 163, 60-70.	2.7	24
35	Unraveling the evolving nature of gaseous and dissolved carbon dioxide in champagne wines: A state-of-the-art review, from the bottle to the tasting glass. Analytica Chimica Acta, 2012, 732, 1-15.	2.6	23
36	It's time to pop a cork on champagne's proteome!. Journal of Proteomics, 2014, 105, 351-362.	1.2	23

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37	More on the Surface State of Expanding Champagne Bubbles Rising at Intermediate Reynolds and High Peclet Numbers. Langmuir, 2003, 19, 801-808.	1.6	22
38	Monitoring gas-phase CO2 in the headspace of champagne glasses through combined diode laser spectrometry and micro-gas chromatography analysis. Food Chemistry, 2018, 264, 255-262.	4.2	22
39	CO₂ Diffusion in Champagne Wines: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2014, 118, 1839-1847.	1.2	20
40	Development and validation of a diode laser sensor for gas-phase CO2 monitoring above champagne and sparkling wines. Sensors and Actuators B: Chemical, 2018, 257, 745-752.	4.0	19
41	Period-adding route in sparkling bubbles. Physical Review E, 2005, 72, 037204.	0.8	18
42	More on the Losses of Dissolved CO₂ during Champagne Serving: Toward a Multiparameter Modeling. Journal of Agricultural and Food Chemistry, 2012, 60, 11777-11786.	2.4	18
43	Capillary-Driven Flower-Shaped Structures around Bubbles Collapsing in a Bubble Raft at the Surface of a Liquid of Low Viscosity. Langmuir, 2003, 19, 5771-5779.	1.6	17
44	Carbon Dioxide in Bottled Carbonated Waters and Subsequent Bubble Nucleation under Standard Tasting Condition. Journal of Agricultural and Food Chemistry, 2019, 67, 4560-4567.	2.4	17
45	Unveiling CO2 heterogeneous freezing plumes during champagne cork popping. Scientific Reports, 2017, 7, 10938.	1.6	16
46	Does shaking increase the pressure inside a bottle of champagne?. Journal of Colloid and Interface Science, 2015, 439, 42-53.	5.0	15
47	Unveiling self-organized two-dimensional (2D) convective cells in champagne glasses. Journal of Food Engineering, 2016, 188, 58-65.	2.7	14
48	How Many CO₂ Bubbles in a Glass of Beer?. ACS Omega, 2021, 6, 9672-9679.	1.6	14
49	Modeling the Losses of Dissolved CO2 from Laser-Etched Champagne Glasses. Journal of Physical Chemistry B, 2016, 120, 3724-3734.	1.2	13
50	Champagne cork popping revisited through high-speed infrared imaging: The role of temperature. Journal of Food Engineering, 2013, 116, 78-85.	2.7	12
51	Flow analysis from PIV in engraved champagne tasting glasses: flute versus coupe. Experiments in Fluids, 2015, 56, 1.	1.1	12
52	Evidence for moderate losses of dissolved CO 2 during aging on lees of a champagne prestige cuvee. Journal of Food Engineering, 2018, 233, 40-48.	2.7	12
53	CO2 volume fluxes outgassing from champagne glasses: The impact of champagne ageing. Analytica Chimica Acta, 2010, 660, 29-34.	2.6	11
54	Unveiling the Interplay Between Diffusing CO₂ and Ethanol Molecules in Champagne Wines by Classical Molecular Dynamics and ¹³C NMR Spectroscopy. Journal of Physical Chemistry Letters, 2014, 5, 4232-4237.	2.1	11

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55	Effervescence in a glass of champagne: A bubble story. Europhysics News, 2002, 33, 10-14.	0.1	10
56	Champagne Experiences Various Rhythmical Bubbling Regimes in a Flute. Journal of Agricultural and Food Chemistry, 2006, 54, 6989-6994.	2.4	9
57	A synchronized particle image velocimetry and infrared thermography technique applied to convective mass transfer in champagne glasses. Experiments in Fluids, 2016, 57, 1.	1.1	9
58	Bubbles in Titanâ€™s Seas: Nucleation, Growth, and RADAR Signature. Astrophysical Journal, 2018, 859, 26.	1.6	9
59	Recent Progress in the Analytical Chemistry of Champagne and Sparkling Wines. Annual Review of Analytical Chemistry, 2021, 14, 21-46.	2.8	9
60	Under-expanded supersonic CO ₂ freezing jets during champagne cork popping. Science Advances, 2019, 5, eaav5528.	4.7	8
61	On the 3D-reconstruction of Taylor-like bubbles trapped inside hollow cellulose fibers acting as bubble nucleation sites in supersaturated liquids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 263, 303-314.	2.3	6
62	How Does Gas-Phase CO₂ Evolve in the Headspace of Champagne Glasses?. Journal of Agricultural and Food Chemistry, 2021, 69, 2262-2270.	2.4	6
63	Unraveling the release of gaseous CO2 during champagne serving through high-speed infrared imaging. Journal of Visualization, 2013, 16, 47-52.	1.1	4
64	Flower-shaped structures around bubbles collapsing in a bubble monolayer. Comptes Rendus Physique, 2001, 2, 775-780.	0.1	3
65	Visual Perception of Effervescence in Champagne and Other Sparkling Beverages. Advances in Food and Nutrition Research, 2010, 61, 1-55.	1.5	3
66	Fizz-ball Fizzics. Physics Teacher, 2012, 50, 284-287.	0.2	3
67	Three-dimensional modeling of complex swirling flows in champagne glasses: CFD and flow visualization. Acta Mechanica, 2019, 230, 213-224.	1.1	3
68	Unravelling CO2 transfer through cork stoppers for Champagne and sparkling wines. Food Packaging and Shelf Life, 2021, 27, 100618.	3.3	3
69	Toward In Silico Prediction of CO₂ Diffusion in Champagne Wines. ACS Omega, 2021, 6, 11231-11239.	1.6	3
70	Temperature Dependence of Ascending Bubble-Driven Flow Patterns Found in Champagne Glasses as Determined through Numerical Modeling. Advances in Mechanical Engineering, 2013, 5, 156430.	0.8	3
71	The science of bubbly. Scientists study the nose-tickling effervescence of champagne--an alluring and unmistakable aspect of its appeal. Scientific American, 2003, 288, 80-5.	1.0	3
72	Six secrets of champagne. Physics World, 2015, 28, 26-30.	0.0	2

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73	Computational Fluid Dynamics (CFD) as a Tool for Investigating Self-Organized Ascending Bubble-Driven Flow Patterns in Champagne Glasses. Foods, 2020, 9, 972.	1.9	2
74	Unveiling Carbon Dioxide and Ethanol Diffusion in Carbonated Water-Ethanol Mixtures by Molecular Dynamics Simulations. Molecules, 2021, 26, 1711.	1.7	2
75	Does the Temperature of the prise de mousse Affect the Effervescence and the Foam of Sparkling Wines?. Molecules, 2021, 26, 4434.	1.7	2
76	Computational fluid dynamic simulation of the supersonic CO2 flow during champagne cork popping. Physics of Fluids, 2022, 34, .	1.6	2
77	Carbon Dioxide and Ethanol Release from Champagne Glasses, Under Standard Tasting Conditions. Advances in Food and Nutrition Research, 2012, 67, 289-340.	1.5	1
78	INSTABILITIES AND TOPOLOGICAL BEHAVIOR OF FLOW INSIDE CHAMPAGNE GLASSES. Journal of Flow Visualization and Image Processing, 2015, 22, 97-115.	0.3	1
79	Unsteady evolution of the two-phase flow in sparkling wine tasting and the subsequent role of glass shape. Experiments in Fluids, 2019, 60, 1.	1.1	1
80	A first step towards the mapping of gas-phase CO2 in the headspace of champagne glasses. Infrared Physics and Technology, 2020, 109, 103437.	1.3	1
81	Temperature Dependence of CO₂and Ethanol Diffusion in Champagne Wines: A Joint Molecular Dynamics and¹³C NMR Study. ACS Symposium Series, 2015, , 69-83.	0.5	0
82	CO2 and Bubbles in Sparkling Waters. , 2020, , 37-62.		0
83	Combined Experimental and CFD Approach of Two-Phase Flow Driven by Low Thermal Gradients in Wine Tanks: Application to Light Lees Resuspension. Foods, 2020, 9, 865.	1.9	0
84	HÃ©tÃ©ro-nuclÃ©ation de cristaux de neige carbonique au dÃ©bouchage dâ€™une bouteille de champagne. , 2019, , 32-35.	0.1	0