

# Grard Liger-Belair

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

79 papers	1,671 citations	25 h-index	37 g-index
86 ext. papers	1,921 ext. citations	5.5 avg, IF	4.91 L-index

#	Paper	IF	Citations
79	The physics and chemistry behind the bubbling properties of champagne and sparkling wines: a state-of-the-art review. <i>Journal of Agricultural and Food Chemistry</i> , <b>2005</b> , 53, 2788-802	5.7	95
78	Recent advances in the science of champagne bubbles. <i>Chemical Society Reviews</i> , <b>2008</b> , 37, 2490-511	58.5	91
77	Unraveling different chemical fingerprints between a champagne wine and its aerosols. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 16545-9	11.5	89
76	Proteomic approach to identify champagne wine proteins as modified by Botrytis cinerea infection. <i>Journal of Proteome Research</i> , <b>2008</b> , 7, 1199-208	5.6	78
75	Kinetics of Gas Discharging in a Glass of Champagne: The Role of Nucleation Sites. <i>Langmuir</i> , <b>2002</b> , 18, 1294-1301	4	77
74	Influence of Botrytis cinerea infection on Champagne wine proteins (characterized by two-dimensional electrophoresis/immunodetection) and wine foaming properties. <i>Food Chemistry</i> , <b>2007</b> , 103, 139-149	8.5	58
73	Dynamics of jets produced by bursting bubbles. <i>Physical Review Fluids</i> , <b>2018</b> , 3,	2.8	57
72	Metabolomics reveals simultaneous influences of plant defence system and fungal growth in Botrytis cinerea-infected Vitis vinifera cv. Chardonnay berries. <i>Journal of Experimental Botany</i> , <b>2012</b> , 63, 5773-85	7	55
71	Diffusion coefficient of CO(2) molecules as determined by (13)C NMR in various carbonated beverages. <i>Journal of Agricultural and Food Chemistry</i> , <b>2003</b> , 51, 7560-3	5.7	49
70	On the Velocity of Expanding Spherical Gas Bubbles Rising in Line in Supersaturated Hydroalcoholic Solutions: Application to Bubble Trains in Carbonated Beverages. <i>Langmuir</i> , <b>2000</b> , 16, 1889-1895	4	49
69	Modeling the kinetics of bubble nucleation in champagne and carbonated beverages. <i>Journal of Physical Chemistry B</i> , <b>2006</b> , 110, 21145-51	3.4	42
68	Foaming properties of various Champagne wines depending on several parameters: grape variety, aging, protein and CO2 content. <i>Analytica Chimica Acta</i> , <b>2010</b> , 660, 164-70	6.6	41
67	Kinetics of CO(2) fluxes outgassing from champagne glasses in tasting conditions: the role of temperature. <i>Journal of Agricultural and Food Chemistry</i> , <b>2009</b> , 57, 1997-2003	5.7	40
66	Modeling nonclassical heterogeneous bubble nucleation from cellulose fibers: application to bubbling in carbonated beverages. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 14573-80	3.4	38
65	On the losses of dissolved CO(2) during champagne serving. <i>Journal of Agricultural and Food Chemistry</i> , <b>2010</b> , 58, 8768-75	5.7	37
64	CO2 volume fluxes outgassing from champagne glasses in tasting conditions: flute versus coupe. <i>Journal of Agricultural and Food Chemistry</i> , <b>2009</b> , 57, 4939-47	5.7	35
63	Metabolic influence of Botrytis cinerea infection in champagne base wine. <i>Journal of Agricultural and Food Chemistry</i> , <b>2011</b> , 59, 7237-45	5.7	31

62	Use of magnetic resonance spectroscopy for the investigation of the CO <sub>2</sub> dissolved in champagne and sparkling wines: a nondestructive and unintrusive method. <i>Analytica Chimica Acta</i> , <b>2005</b> , 535, 73-78	6.6	31
61	Effervescence in champagne and sparkling wines: From grape harvest to bubble rise. <i>European Physical Journal: Special Topics</i> , <b>2017</b> , 226, 3-116	2.3	29
60	Chemical messages in 170-year-old champagne bottles from the Baltic Sea: Revealing tastes from the past. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 5893-8	11.5	29
59	Visualization of mixing flow phenomena in champagne glasses under various glass-shape and engraving conditions. <i>Journal of Agricultural and Food Chemistry</i> , <b>2007</b> , 55, 882-8	5.7	29
58	Evaporation of droplets in a Champagne wine aerosol. <i>Scientific Reports</i> , <b>2016</b> , 6, 25148	4.9	28
57	Monitoring gaseous CO <sub>2</sub> and ethanol above champagne glasses: flute versus coupe, and the role of temperature. <i>PLoS ONE</i> , <b>2012</b> , 7, e30628	3.7	26
56	Is the wall of a cellulose fiber saturated with liquid whether or not permeable with CO <sub>2</sub> dissolved molecules? Application to bubble nucleation in champagne wines. <i>Langmuir</i> , <b>2004</b> , 20, 4132-8	4	26
55	Kinetics and stability of the mixing flow patterns found in champagne glasses as determined by laser tomography techniques: likely impact on champagne tasting. <i>Analytica Chimica Acta</i> , <b>2008</b> , 621, 30-7	6.6	25
54	Bubbles and Flow Patterns in Champagne. <i>American Scientist</i> , <b>2009</b> , 97, 294	2.7	23
53	Flow patterns of bubble nucleation sites (called fliers) freely floating in champagne glasses. <i>Langmuir</i> , <b>2007</b> , 23, 10976-83	4	22
52	Losses of dissolved CO <sub>2</sub> through the cork stopper during Champagne aging: toward a multiparameter modeling. <i>Journal of Agricultural and Food Chemistry</i> , <b>2011</b> , 59, 4051-6	5.7	21
51	The Science of Bubbly. <i>Scientific American</i> , <b>2003</b> , 288, 80-85	0.5	21
50	More on the Surface State of Expanding Champagne Bubbles Rising at Intermediate Reynolds and High Peclet Numbers. <i>Langmuir</i> , <b>2003</b> , 19, 801-808	4	21
49	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. <i>Analytica Chimica Acta</i> , <b>2012</b> , 732, 1-15	6.6	20
48	Bubble streams in Titan seas as a product of liquid N <sub>2</sub> + CH <sub>4</sub> + C <sub>2</sub> H <sub>6</sub> cryogenic mixture. <i>Nature Astronomy</i> , <b>2017</b> , 1,	12.1	19
47	It's time to pop a cork on champagne's proteome!. <i>Journal of Proteomics</i> , <b>2014</b> , 105, 351-62	3.9	19
46	How many bubbles in your glass of bubbly?. <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 3156-63	3.4	19
45	Monitoring the losses of dissolved carbon dioxide from laser-etched champagne glasses. <i>Food Research International</i> , <b>2013</b> , 54, 516-522	7	19

44	Simultaneous monitoring of gaseous CO(2) and ethanol above champagne glasses via micro-gas chromatography (GC). <i>Journal of Agricultural and Food Chemistry</i> , <b>2011</b> , 59, 7317-23	5.7	19
43	Period-adding route in sparkling bubbles. <i>Physical Review E</i> , <b>2005</b> , 72, 037204	2.4	18
42	Bubble dynamics in various commercial sparkling bottled waters. <i>Journal of Food Engineering</i> , <b>2015</b> , 163, 60-70	6	17
41	Capillary-Driven Flower-Shaped Structures around Bubbles Collapsing in a Bubble Raft at the Surface of a Liquid of Low Viscosity. <i>Langmuir</i> , <b>2003</b> , 19, 5771-5779	4	16
40	CO2 diffusion in champagne wines: a molecular dynamics study. <i>Journal of Physical Chemistry B</i> , <b>2014</b> , 118, 1839-47	3.4	15
39	Monitoring gas-phase CO in the headspace of champagne glasses through combined diode laser spectrometry and micro-gas chromatography analysis. <i>Food Chemistry</i> , <b>2018</b> , 264, 255-262	8.5	14
38	More on the losses of dissolved CO(2) during champagne serving: toward a multiparameter modeling. <i>Journal of Agricultural and Food Chemistry</i> , <b>2012</b> , 60, 11777-86	5.7	13
37	CO2 volume fluxes outgassing from champagne glasses: the impact of champagne ageing. <i>Analytica Chimica Acta</i> , <b>2010</b> , 660, 29-34	6.6	11
36	Champagne cork popping revisited through high-speed infrared imaging: The role of temperature. <i>Journal of Food Engineering</i> , <b>2013</b> , 116, 78-85	6	10
35	Modeling the Losses of Dissolved CO(2) from Laser-Etched Champagne Glasses. <i>Journal of Physical Chemistry B</i> , <b>2016</b> , 120, 3724-34	3.4	10
34	Does shaking increase the pressure inside a bottle of champagne?. <i>Journal of Colloid and Interface Science</i> , <b>2015</b> , 439, 42-53	9.3	9
33	Unveiling CO heterogeneous freezing plumes during champagne cork popping. <i>Scientific Reports</i> , <b>2017</b> , 7, 10938	4.9	9
32	Champagne experiences various rhythmical bubbling regimes in a flute. <i>Journal of Agricultural and Food Chemistry</i> , <b>2006</b> , 54, 6989-94	5.7	9
31	Uncorked <b>2013</b> ,		9
30	Carbon Dioxide in Bottled Carbonated Waters and Subsequent Bubble Nucleation under Standard Tasting Condition. <i>Journal of Agricultural and Food Chemistry</i> , <b>2019</b> , 67, 4560-4567	5.7	8
29	Flow analysis from PIV in engraved champagne tasting glasses: flute versus coupe. <i>Experiments in Fluids</i> , <b>2015</b> , 56, 1	2.5	8
28	Effervescence in a glass of champagne: A bubble story. <i>Europhysics News</i> , <b>2002</b> , 33, 10-14	0.2	8
27	Unveiling self-organized two-dimensional (2D) convective cells in champagne glasses. <i>Journal of Food Engineering</i> , <b>2016</b> , 188, 58-65	6	8

26	Development and validation of a diode laser sensor for gas-phase CO <sub>2</sub> monitoring above champagne and sparkling wines. <i>Sensors and Actuators B: Chemical</i> , <b>2018</b> , 257, 745-752	8.5	8
25	Evidence for moderate losses of dissolved CO <sub>2</sub> during aging on lees of a champagne prestige cuvee. <i>Journal of Food Engineering</i> , <b>2018</b> , 233, 40-48	6	7
24	Unveiling the Interplay Between Diffusing CO <sub>2</sub> and Ethanol Molecules in Champagne Wines by Classical Molecular Dynamics and (13)C NMR Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 4232-7	6.4	7
23	Bubbles in Titan's Seas: Nucleation, Growth, and RADAR Signature. <i>Astrophysical Journal</i> , <b>2018</b> , 859, 26	4.7	7
22	A synchronized particle image velocimetry and infrared thermography technique applied to convective mass transfer in champagne glasses. <i>Experiments in Fluids</i> , <b>2016</b> , 57, 1	2.5	6
21	On the 3D-reconstruction of Taylor-like bubbles trapped inside hollow cellulose fibers acting as bubble nucleation sites in supersaturated liquids. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2005</b> , 263, 303-314	5.1	6
20	Unraveling the release of gaseous CO <sub>2</sub> during champagne serving through high-speed infrared imaging. <i>Journal of Visualization</i> , <b>2013</b> , 16, 47-52	1.6	4
19	Under-expanded supersonic CO <sub>2</sub> freezing jets during champagne cork popping. <i>Science Advances</i> , <b>2019</b> , 5, eaav5528	14.3	3
18	Visual perception of effervescence in champagne and other sparkling beverages. <i>Advances in Food and Nutrition Research</i> , <b>2010</b> , 61, 1-55	6	3
17	How Many CO <sub>2</sub> Bubbles in a Glass of Beer?. <i>ACS Omega</i> , <b>2021</b> , 6, 9672-9679	3.9	3
16	Flower-shaped structures around bubbles collapsing in a bubble monolayer. <i>Comptes Rendus Physique</i> , <b>2001</b> , 2, 775-780		2
15	Temperature Dependence of Ascending Bubble-Driven Flow Patterns Found in Champagne Glasses as Determined through Numerical Modeling. <i>Advances in Mechanical Engineering</i> , <b>2013</b> , 5, 156430	1.2	2
14	Unravelling CO <sub>2</sub> transfer through cork stoppers for Champagne and sparkling wines. <i>Food Packaging and Shelf Life</i> , <b>2021</b> , 27, 100618	8.2	2
13	Fizz-ball Fizzics. <i>Physics Teacher</i> , <b>2012</b> , 50, 284-287	0.4	1
12	Carbon dioxide and ethanol release from champagne glasses, under standard tasting conditions. <i>Advances in Food and Nutrition Research</i> , <b>2012</b> , 67, 289-340	6	1
11	A first step towards the mapping of gas-phase CO <sub>2</sub> in the headspace of champagne glasses. <i>Infrared Physics and Technology</i> , <b>2020</b> , 109, 103437	2.7	1
10	Toward In Silico Prediction of CO <sub>2</sub> Diffusion in Champagne Wines. <i>ACS Omega</i> , <b>2021</b> , 6, 11231-11239	3.9	1
9	Recent Progress in the Analytical Chemistry of Champagne and Sparkling Wines. <i>Annual Review of Analytical Chemistry</i> , <b>2021</b> , 14, 21-46	12.5	1

8	Three-dimensional modeling of complex swirling flows in champagne glasses: CFD and flow visualization. <i>Acta Mechanica</i> , <b>2019</b> , 230, 213-224	2.1	1
7	How Does Gas-Phase CO Evolve in the Headspace of Champagne Glasses?. <i>Journal of Agricultural and Food Chemistry</i> , <b>2021</b> , 69, 2262-2270	5.7	1
6	The science of bubbly. Scientists study the nose-tickling effervescence of champagne--an alluring and unmistakable aspect of its appeal. <i>Scientific American</i> , <b>2003</b> , 288, 80-5	0.5	1
5	Unsteady evolution of the two-phase flow in sparkling wine tasting and the subsequent role of glass shape. <i>Experiments in Fluids</i> , <b>2019</b> , 60, 1	2.5	0
4	INSTABILITIES AND TOPOLOGICAL BEHAVIOR OF FLOW INSIDE CHAMPAGNE GLASSES. <i>Journal of Flow Visualization and Image Processing</i> , <b>2015</b> , 22, 97-115	0.8	0
3	Temperature Dependence of CO <sub>2</sub> and Ethanol Diffusion in Champagne Wines: A Joint Molecular Dynamics and <sup>13</sup> C NMR Study. <i>ACS Symposium Series</i> , <b>2015</b> , 69-83	0.4	
2	Hétéro-nucléation de cristaux de neige carbonique au débouchage d'une bouteille de champagne <b>2019</b> , 32-35	0.1	
1	CO <sub>2</sub> and Bubbles in Sparkling Waters <b>2020</b> , 37-62		