

# Steven Baldelli

## List of Publications by Year in descending order

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90  
papers

5,181  
citations

101543

36  
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85541

71  
g-index

92  
all docs

92  
docs citations

92  
times ranked

5839  
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient solar water-splitting using a nanocrystalline CoO photocatalyst. <i>Nature Nanotechnology</i> , 2014, 9, 69-73.	31.5	764
2	Surface Structure at the Ionic Liquidâ€”Electrified Metal Interface. <i>Accounts of Chemical Research</i> , 2008, 41, 421-431.	15.6	482
3	Influence of Water on the Surface of Hydrophilic and Hydrophobic Room-Temperature Ionic Liquids. <i>Journal of the American Chemical Society</i> , 2004, 126, 11788-11789.	13.7	213
4	Influence of Water on the Orientation of Cations at the Surface of a Room-Temperature Ionic Liquid: A Sum Frequency Generation Vibrational Spectroscopic Study. <i>Journal of Physical Chemistry B</i> , 2003, 107, 6148-6152.	2.6	170
5	Surface Characterization of 1-Butyl-3-methylimidazolium Br <sup>-</sup> , I <sup>-</sup> , PF <sub>6</sub> <sup>-</sup> , BF <sub>4</sub> <sup>-</sup> , (CF <sub>3</sub> SO <sub>2</sub> ) <sub>2</sub> N <sup>-</sup> , SCN <sup>-</sup> , CH <sub>3</sub> SO <sub>3</sub> <sup>-</sup> , CH <sub>3</sub> SO <sub>4</sub> <sup>-</sup> , and (CN) <sub>2</sub> N <sup>-</sup> Ionic Liquids by Sum Frequency Generation. <i>Journal of Physical Chemistry B</i> , 2006, 110, 4756-4765.	2.6	169
6	Interaction of Organic Cation with Water Molecule in Perovskite MAPbI <sub>3</sub> : From Dynamic Orientational Disorder to Hydrogen Bonding. <i>Chemistry of Materials</i> , 2016, 28, 7385-7393.	6.7	169
7	Probing Electric Fields at the Ionic Liquidâ€”Electrode Interface Using Sum Frequency Generation Spectroscopy and Electrochemistry. <i>Journal of Physical Chemistry B</i> , 2005, 109, 13049-13051.	2.6	164
8	Surface chemistry of room-temperature ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 3683.	2.8	147
9	Surface Spectroscopy of Room-temperature Ionic Liquids on a Platinum Electrode: A Sum Frequency Generation Study. <i>Journal of Physical Chemistry B</i> , 2004, 108, 15133-15140.	2.6	145
10	Sum Frequency Generation Study of the Room-Temperature Ionic Liquids/Quartz Interface. <i>Journal of Physical Chemistry B</i> , 2006, 110, 6213-6223.	2.6	131
11	Nanoscale Friction Varied by Isotopic Shifting of Surface Vibrational Frequencies. <i>Science</i> , 2007, 318, 780-783.	12.6	125
12	Alkyl Chain Interaction at the Surface of Room Temperature Ionic Liquids: Systematic Variation of Alkyl Chain Length (R = C <sub>1</sub> , C <sub>4</sub> , C <sub>8</sub> ) in both Cation and Anion of [RMIM][OSO <sub>3</sub> ] by Sum Frequency Generation and Surface Tension. <i>Journal of Physical Chemistry B</i> , 2009, 113, 923-933.	2.6	123
13	Vibrational Sum Frequency Spectroscopy Studies of the Influence of Solutes and Phospholipids at Vapor/Water Interfaces Relevant to Biological and Environmental Systems. <i>Chemical Reviews</i> , 2014, 114, 8416-8446.	47.7	120
14	Gasâ€”liquid interface of room-temperature ionic liquids. <i>Chemical Society Reviews</i> , 2010, 39, 2136.	38.1	110
15	Interfacial Structure of Room-Temperature Ionic Liquids at the Solidâ€”Liquid Interface as Probed by Sum Frequency Generation Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 244-252.	4.6	110
16	Sum Frequency Generation Spectroscopy and Double-Layer Capacitance Studies of the 1-Butyl-3-Methylimidazolium Dicyanamideâ€”Platinum Interface. <i>Journal of Physical Chemistry B</i> , 2006, 110, 18481-18491.	2.6	88
17	Surface Orientation of 1-Methyl-, 1-Ethyl-, and 1-Butyl-3-methylimidazolium Methyl Sulfate as Probed by Sum-Frequency Generation Vibrational Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2007, 111, 4715-4723.	2.6	88
18	Sum frequency generation study on the orientation of room-temperature ionic liquid at the grapheneâ€”ionic liquid interface. <i>Chemical Physics Letters</i> , 2011, 516, 171-173.	2.6	77

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19	Influence of Water on the Surface of the Water-Miscible Ionic Liquid 1-Butyl-3-methylimidazolium Tetrafluoroborate: A Sum Frequency Generation Analysis. <i>Journal of Physical Chemistry B</i> , 2006, 110, 15499-15505.	2.6	69
20	Sum Frequency Generation Microscopy of Microcontact-Printed Mixed Self-Assembled Monolayers. <i>Journal of Physical Chemistry B</i> , 2006, 110, 1807-1813.	2.6	67
21	Ions at the Surface of a Room-Temperature Ionic Liquid. <i>Journal of Physical Chemistry C</i> , 2007, 111, 7682-7691.	3.1	58
22	Chemical Microscopy of Surfaces by Sum Frequency Generation Imaging. <i>Journal of Physical Chemistry C</i> , 2009, 113, 16575-16588.	3.1	58
23	Orientation of 1-Butyl-3-methylimidazolium Based Ionic Liquids at a Hydrophobic Quartz Interface Using Sum Frequency Generation Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2007, 111, 240-247.	3.1	55
24	A Sum Frequency Generation Study of the Room-Temperature Ionic Liquid-Titanium Dioxide Interface. <i>Journal of Physical Chemistry C</i> , 2008, 112, 3064-3072.	3.1	54
25	Sum Frequency Generation Spectroscopy of Dicyanamide Based Room-Temperature Ionic Liquids. Orientation of the Cation and the Anion at the Gas-Liquid Interface. <i>Journal of Physical Chemistry B</i> , 2007, 111, 9733-9740.	2.6	50
26	On the Arrangement of Ions in Imidazolium-Based Room Temperature Ionic Liquids at the Gas-Liquid Interface, Using Sum Frequency Generation, Surface Potential, and Surface Tension Measurements. <i>Journal of Physical Chemistry C</i> , 2010, 114, 11564-11575.	3.1	49
27	Sum Frequency Generation Studies of Ammonium and Pyrrolidinium Ionic Liquids Based on the Bis-trifluoromethanesulfonimide Anion. <i>Journal of Physical Chemistry B</i> , 2008, 112, 1676-1684.	2.6	44
28	Molecular Response of 1-Butyl-3-Methylimidazolium Dicyanamide Ionic Liquid at the Graphene Electrode Interface Investigated by Sum Frequency Generation Spectroscopy and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry C</i> , 2015, 119, 26009-26019.	3.1	44
29	Chemical Imaging of Corrosion: Sum Frequency Generation Imaging Microscopy of Cyanide on Gold at the Solid-Liquid Interface. <i>Journal of the American Chemical Society</i> , 2008, 130, 8030-8037.	13.7	43
30	Remote Droplet Manipulation on Self-Healing Thermally Activated Magnetic Slippery Surfaces. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700009.	3.7	43
31	Preparation of Alkanethiol Monolayers on Mild Steel Surfaces Studied with Sum Frequency Generation and Electrochemistry. <i>Journal of Physical Chemistry B</i> , 2005, 109, 15520-15530.	2.6	42
32	Sum Frequency Generation Imaging Microscopy of CO on Platinum. <i>Journal of the American Chemical Society</i> , 2006, 128, 16016-16017.	13.7	42
33	Quantitative Orientation Analysis by Sum Frequency Generation in the Presence of Near-Resonant Background Signal: Acetonitrile on Rutile TiO <sub>2</sub> (110). <i>Journal of Physical Chemistry A</i> , 2013, 117, 6288-6302.	2.5	42
34	Initial Oxidation of Alkanethiol-Covered Copper Studied by Vibrational Sum Frequency Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2011, 115, 23871-23879.	3.1	41
35	Structure of Confined Films of Chain Alcohols. <i>Journal of Physical Chemistry B</i> , 2000, 104, 3140-3144.	2.6	40
36	Surface characterization of imidazolium-based ionic liquids with cyano-functionalized anions at the gas-liquid interface using sum frequency generation spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 5122.	2.8	39

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37	Gas-Liquid Interface of Hydrophobic and Hydrophilic Room-Temperature Ionic Liquids and Benzene: Sum Frequency Generation and Surface Tension Studies. <i>Journal of Physical Chemistry C</i> , 2008, 112, 11459-11467.	3.1	35
38	Spatially Resolved Surface Analysis of an Octadecanethiol Self-Assembled Monolayer on Mild Steel Using Sum Frequency Generation Imaging Microscopy. <i>Journal of Physical Chemistry C</i> , 2007, 111, 7137-7143.	3.1	34
39	Alkanethiol Monolayers at Reduced and Oxidized Zinc Surfaces with Corrosion Protection: A Sum Frequency Generation and Electrochemistry Investigation. <i>Journal of Physical Chemistry B</i> , 2006, 110, 24062-24069.	2.6	33
40	Compressive Broad-Band Hyperspectral Sum Frequency Generation Microscopy to Study Functionalized Surfaces. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1781-1787.	4.6	33
41	In Situ Vibrational Study of the Reductive Desorption of Alkanethiol Monolayers on Gold by Sum Frequency Generation Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2014, 118, 29126-29134.	3.1	32
42	Sum Frequency Generation Spectroscopy of Imidazolium-Based Ionic Liquids with Cyano-Functionalized Anions at the Solid Salt-Liquid Interface. <i>Journal of Physical Chemistry B</i> , 2013, 117, 5939-5949.	2.6	30
43	Sum Frequency Generation Spectroscopy Study of an Ionic Liquid at a Graphene-BaF <sub>2</sub> (111) Interface. <i>Journal of Physical Chemistry B</i> , 2014, 118, 5203-5210.	2.6	30
44	Sum Frequency Generation Imaging of Microcontact-Printed Monolayers Derived from Aliphatic Dithiocarboxylic Acids: Contrast Based on Terminal-Group Orientation. <i>Journal of Physical Chemistry C</i> , 2007, 111, 11751-11755.	3.1	29
45	Adsorption and Structure of Octadecanethiol on Zinc Surfaces As Probed by Sum Frequency Generation Spectroscopy, Imaging, and Electrochemical Techniques. <i>Journal of Physical Chemistry C</i> , 2007, 111, 17587-17596.	3.1	29
46	Surface structure of a non-amphiphilic protic ionic liquid. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 5106.	2.8	29
47	Observation of Charge Inversion of an Ionic Liquid at the Solid Salt-Liquid Interface by Sum Frequency Generation Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 844-847.	4.6	28
48	Surface Barrier Properties of Self-Assembled Monolayers as Deduced by Sum Frequency Generation Spectroscopy and Electrochemistry. <i>Journal of Physical Chemistry C</i> , 2011, 115, 19178-19189.	3.1	27
49	Chemical Imaging of Surfaces with Sum Frequency Generation Vibrational Spectroscopy. <i>Accounts of Chemical Research</i> , 2020, 53, 1139-1150.	15.6	25
50	Sum Frequency Generation Imaging Microscopy of Patterned Self-Assembled Monolayers with Terminal -CH <sub>3</sub> , -OCH <sub>3</sub> , -CF <sub>2</sub> CF <sub>3</sub> , -C≡C-, -Phenyl, and -Cyclopropyl Groups. <i>Journal of Physical Chemistry C</i> , 2008, 112, 14529-14537.	3.1	24
51	Structure of the glycerol liquid/vapor interface studied by sum-frequency vibrational spectroscopy. <i>Applied Physics Letters</i> , 2004, 84, 4965-4967.	3.3	23
52	Infrared image upconversion. <i>Nature Photonics</i> , 2011, 5, 75-76.	31.4	23
53	Sum frequency generation-compressive sensing microscope. <i>Journal of Chemical Physics</i> , 2011, 135, 194202.	3.0	23
54	Image Contrast in Sum Frequency Generation Microscopy Based on Monolayer Order and Coverage. <i>Journal of Physical Chemistry C</i> , 2013, 117, 15192-15202.	3.1	23

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55	Grain Structures and Boundaries on Microcrystalline Copper Covered with an Octadecanethiol Monolayer Revealed by Sum Frequency Generation Microscopy. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1454-1460.	4.6	23
56	Initial Atmospheric Corrosion of Zinc Exposed to Formic Acid, Investigated by in Situ Vibrational Sum Frequency Spectroscopy and Density Functional Theory Calculations. <i>Journal of Physical Chemistry C</i> , 2009, 113, 2088-2095.	3.1	22
57	Surface-Induced Heterogeneity Analysis of an Alkanethiol Monolayer on Microcrystalline Copper Surface Using Sum Frequency Generation Imaging Microscopy. <i>Journal of Physical Chemistry C</i> , 2017, 121, 1591-1601.	3.1	22
58	Chemical Imaging and Distribution Analysis of Mono-, Bi-, and Tridentate Alkanethiol Self-Assembled Monolayers on Gold by Sum Frequency Generation Imaging Microscopy. <i>Journal of Physical Chemistry C</i> , 2011, 115, 4688-4695.	3.1	21
59	Monitoring Localized Initial Atmospheric Corrosion of Alkanethiol-Covered Copper Using Sum Frequency Generation Imaging Microscopy: Relation between Monolayer Properties and Cu <sub>2</sub> O Formation. <i>Journal of Physical Chemistry C</i> , 2013, 117, 17591-17602.	3.1	19
60	Chemical Imaging of Self-Assembled Monolayers on Copper Using Compressive Hyperspectral Sum Frequency Generation Microscopy. <i>Journal of Physical Chemistry B</i> , 2018, 122, 464-471.	2.6	17
61	Molecular Structural Information of the Atmospheric Corrosion of Zinc Studied by Vibrational Spectroscopy Techniques. <i>Journal of the Electrochemical Society</i> , 2010, 157, C363.	2.9	16
62	Sum frequency generation spectroscopy of tetraalkylphosphonium ionic liquids at the air-liquid interface. <i>Journal of Chemical Physics</i> , 2018, 148, 193841.	3.0	16
63	Roles of oxygen for methanol adsorption on polycrystalline copper surface revealed by sum frequency generation imaging microscopy. <i>Surface Science</i> , 2016, 648, 35-41.	1.9	15
64	Chemical Imaging of Monolayers on Metal Surfaces: Applications in Corrosion, Catalysis, and Self-Assembled Monolayers. <i>ChemPhysChem</i> , 2008, 9, 2291-2298.	2.1	14
65	Evidence for the Molecular Basis of Corrosion of Zinc Induced by Formic Acid using Sum Frequency Generation Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1679-1682.	4.6	14
66	Characterization of SAMs Derived from Octadecyloxyphenylethanethiols by Sum Frequency Generation. <i>Journal of Physical Chemistry C</i> , 2013, 117, 9355-9365.	3.1	14
67	Initial Atmospheric Corrosion of Zn: Influence of Humidity on the Adsorption of Formic Acid Studied by Vibrational Sum Frequency Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2009, 113, 6169-6173.	3.1	13
68	Adsorption of Dimethyldodecylamine Oxide and Its Mixtures with Triton X-100 at the Hydrophilic Silica/Water Interface Studied Using Total Internal Reflection Raman Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2016, 120, 12346-12357.	2.6	12
69	Surface Dipoles Induce Uniform Orientation in Contacting Polar Liquids. <i>Chemistry of Materials</i> , 2020, 32, 7832-7841.	6.7	12
70	Molecular Structural Information of the Atmospheric Corrosion of Zinc Studied by Vibrational Spectroscopy Techniques. <i>Journal of the Electrochemical Society</i> , 2010, 157, C357.	2.9	11
71	Scale Dependence of the Orientation and Conformation Distribution Analysis of a Molecular Monolayer Using Sum Frequency Generation Imaging Microscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 25874-25887.	3.1	11
72	Structural Study at the Gas-Liquid Interface of 1-Alkyl-3-Methylimidazolium Alkylsulfates Using Surface Potential Measurements. <i>ChemPhysChem</i> , 2012, 13, 1818-1824.	2.1	11

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73	Adsorption of the Cationic Surfactant Benzyltrimethylhexadecylammonium Chloride at the Silica/Water Interface and Metal Salt Effects on the Adsorption Kinetics. <i>Journal of Physical Chemistry B</i> , 2013, 117, 259-272.	2.6	11
74	Study of the Wetting of Paraffin Films on the Metal Surface in the Dynamic Dip-Coating Process Using Compressive-Sensing Sum-Frequency Generation Microscopy. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26543-26553.	3.1	11
75	Sum Frequency Generation Imaging Microscopy of Self-Assembled Monolayers on Metal Surfaces: Factor Analysis of Mixed Monolayers. <i>Analytical Chemistry</i> , 2019, 91, 1269-1276.	6.5	11
76	Potential-Dependent Sum Frequency Generation Study of 5-Methylbenzotriazole on Polycrystalline Copper, Platinum, and Gold. <i>Journal of Physical Chemistry B</i> , 2006, 110, 11936-11943.	2.6	10
77	From Micelles to Vesicle and Membrane Structures of Double-Strand Ionic Liquids in Water: Molecular Dynamics Simulation. <i>Langmuir</i> , 2019, 35, 2780-2791.	3.5	9
78	Adsorption of Benzyltrimethylhexadecylammonium Chloride at the Hydrophobic Silica/Water Interface Studied by Total Internal Reflection Raman Spectroscopy: Effects of Silica Surface Properties and Metal Salt Addition. <i>Journal of Physical Chemistry B</i> , 2013, 117, 9882-9894.	2.6	8
79	Distortion Correction for a Brewster Angle Microscope Using an Optical Grating. <i>Analytical Chemistry</i> , 2017, 89, 2186-2190.	6.5	8
80	Burying the Inverted Surface Dipole: Self-Assembled Monolayers Derived from Alkyl-Terminated Partially Fluorinated Alkanethiols. <i>Chemistry of Materials</i> , 2020, 32, 953-968.	6.7	8
81	Influence of Microcrystallinity on the CO/Pt(poly) Electrode Surface Using Sum Frequency Generation Microscopy Combined With Electrochemistry. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13560-13571.	3.1	7
82	Multicolor Chemical Imaging by Sum Frequency Generation Imaging Microscopy of Monolayers on Metal Surfaces. <i>Journal of Physical Chemistry C</i> , 2020, 124, 16908-16917.	3.1	6
83	Distortion Correction for an Imaging Ellipsometer. <i>Journal of Physical Chemistry A</i> , 2020, 124, 2708-2713.	2.5	4
84	Direct imaging of electric field behavior in 2,7-diphenyl[1]benzothieno[3,2- <i>b</i> ][1]benzothiophene organic field-effect transistors by sum-frequency generation imaging microscopy. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 4944-4950.	2.8	4
85	Spectroscopic imaging of surfaces—Sum frequency generation microscopy (SFGM) combined with compressive sensing (CS) technique. <i>Journal of Chemical Physics</i> , 2020, 153, 190901.	3.0	3
86	Electroreductive Desorption of Alkanethiols on Gold and UPD Copper/Gold Surfaces Using In Situ Second Harmonic Generation. <i>Journal of the Electrochemical Society</i> , 2020, 167, 166519.	2.9	3
87	Surface alignment of the N-octadecylazatriquinacenium cation as determined by sum frequency generation on the surface of H <sub>2</sub> O and D <sub>2</sub> O. <i>Chemical Physics Letters</i> , 2006, 427, 72-75.	2.6	2
88	In situ quantitative study of the phase transition in surfactant adsorption layers at the silica/water interface using total internal reflection Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 21701-21713.	2.8	1
89	Sum Frequency Generation Spectroscopy and Electrochemical Analysis of the 1-Butyl-3-methylimidazolium Bis{(trifluoromethyl)sulfonyl}amide Double Layer Structure on the Platinum Electrode. <i>ACS Symposium Series</i> , 2010, , 291-304.	0.5	0
90	Cooperative Adsorption of Nonionic Triton X-100 and Dodecyltrimethylamine Oxide Surfactant Mixtures at the Hydrophilic Silica/Water Interface Studied by Total Internal Reflection Raman Spectroscopy and Multivariate Curve Resolution. <i>Journal of Physical Chemistry B</i> , 2021, 125, 13928-13936.	2.6	0