Y Ron Shen

List of Publications by Year in Descending Order

106 papers	8,949 citations	38 h-index	94 g-index
114 ext. papers	9,636 ext. citations	6.7 avg, IF	6.47 L-index

#	Paper	IF	Citations
106	Elastic ice microfibers. *Science*, **2021**, 373, 187-192	33.3	10
105	Revisiting the basic theory of sum-frequency generation. *Journal of Chemical Physics*, **2020**, 153, 180901	3.9	7
104	Response to "Comment on PPhase-sensitive sum frequency vibrational spectroscopic study of air/water interfaces: HO, DO, and diluted isotopic mixturesP" [J. Chem. Phys. 152, 237101 (2020)]. *Journal of Chemical Physics*, **2020**, 152, 237102	3.9	10
103	Gate-Controlled Sum-Frequency Vibrational Spectroscopy for Probing Charged Oxide/Water Interfaces. *Journal of Physical Chemistry Letters*, **2019**, 10, 5943-5948	6.4	15
102	Phase-sensitive sum frequency vibrational spectroscopic study of air/water interfaces: HO, DO, and diluted isotopic mixtures. *Journal of Chemical Physics*, **2019**, 150, 144701	3.9	24
101	Mapping Dynamical Magnetic Responses of Ultrathin Micron-Size Superconducting Films Using Nitrogen-Vacancy Centers in Diamond. *Nano Letters*, **2019**, 19, 5697-5702	11.5	9
100	Nucleation and dissociation of methane clathrate embryo at the gas-water interface. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 23410-23415	11.5	10
99	Sharing of Na+ by Three □COO□Groups at Deprotonated Carboxyl-Terminated Self-Assembled Monolayer-Charged Aqueous Interface. *Journal of Physical Chemistry C*, **2018**, 122, 9111-9116	3.8	3
98	Facet-specific interaction between methanol and TiO probed by sum-frequency vibrational spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E3888-E3894	11.5	17
97	Structural definition of the BIL and DL: a new universal methodology to rationalize non-linear □ SFG signals at charged interfaces, including □contributions. *Physical Chemistry Chemical Physics*, **2018**, 20, 5190-5199	3.6	72
96	Theoretical analysis and simulation of pulsed laser heating at interface. *Journal of Applied Physics*, **2018**, 123, 025301	2.5	10
95	What the Diffuse Layer (DL) Reveals in Non-Linear SFG Spectroscopy. *Minerals (Basel, Switzerland)*, **2018**, 8, 305	2.4	22
94	Mechanism of Electric Power Generation from Ionic Droplet Motion on Polymer Supported Graphene. *Journal of the American Chemical Society*, **2018**, 140, 13746-13752	16.4	42
93	Gate-tunable third-order nonlinear optical response of massless Dirac fermions in graphene. *Nature Photonics*, **2018**, 12, 430-436	33.9	129
92	Absence of detectable MOKE signals from spin Hall effect in metals. *Applied Physics Letters*, **2017**, 110, 042401	3.4	9
91	Surface and bulk contributions to the second-harmonic generation in Bi2Se3. *Physical Review B*, **2016**, 94,	3.3	4
90	Response to "Comment on PPhase reference in phase-sensitive sum-frequency vibrational spectroscopy"P[J. Chem. Phys. 145, 167101 (2016)]. *Journal of Chemical Physics*, **2016**, 145, 167102	3.9	10

89	Unveiling Microscopic Structures of Charged Water Interfaces by Surface-Specific Vibrational Spectroscopy. *Physical Review Letters*, **2016**, 116, 016101	7.4	181
88	Fundamentals of Sum-Frequency Spectroscopy **2016**,		88
87	Surface pH and Ion Affinity at the Alcohol-Monolayer/Water Interface Studied by Sum-Frequency Spectroscopy. *Journal of Physical Chemistry C*, **2016**, 120, 15224-15229	3.8	29
86	Phase reference in phase-sensitive sum-frequency vibrational spectroscopy. *Journal of Chemical Physics*, **2016**, 144, 244711	3.9	56
85	Surface sum-frequency vibrational spectroscopy of nonpolar media. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 5883-7	11.5	27
84	Polymer Adsorption on Graphite and CVD Graphene Surfaces Studied by Surface-Specific Vibrational Spectroscopy. *Nano Letters*, **2015**, 15, 6501-5	11.5	33
83	Graphene-doped polymer nanofibers for low-threshold nonlinear optical waveguiding. *Light: Science and Applications*, **2015**, 4, e348-e348	16.7	33
82	Structure of the submonolayer of ethanol adsorption on a vapor/fused silica interface studied with sum frequency vibrational spectroscopy. *Journal of Physical Chemistry A*, **2015**, 119, 4573-80	2.8	25
81	Theory and Applications of Sum-Frequency Generations. *Journal of the Chinese Chemical Society*, **2014**, 61, 77-92	1.5	8
80	Valley and band structure engineering of folded MoS(2) bilayers. *Nature Nanotechnology*, **2014**, 9, 825-9	28.7	219
79	Phase-sensitive sum-frequency spectroscopy. *Annual Review of Physical Chemistry*, **2013**, 64, 129-50	15.7	193
78	SFG Studies of Oxide□Water Interfaces: Protonation States, Water Polar Orientations, and Comparison with Structure Results from X-Ray Scattering **2013**, 48-84		2
77	Basic Theory of Surface Sum-Frequency Generation. *Journal of Physical Chemistry C*, **2012**, 116, 15505-15509	3.8	150
76	Effect of pH on the Water/□Al2O3 (11 02) Interface Structure Studied by Sum-Frequency Vibrational Spectroscopy. *Journal of Physical Chemistry C*, **2011**, 115, 13887-13893	3.8	47
75	Surface-Induced Anisotropic Orientations of Interfacial Ethanol Molecules at Air/Sapphire(11 02) and Ethanol/Sapphire(11 02) Interfaces. *Journal of Physical Chemistry Letters*, **2011**, 2, 1831-1835	6.4	14
74	Surface Propensities of Atmospherically Relevant Ions in Salt Solutions Revealed by Phase-Sensitive Sum Frequency Vibrational Spectroscopy. *Journal of Physical Chemistry Letters*, **2011**, 2, 1946-1949	6.4	101
73	NONLINEAR OPTICAL SPECTROSCOPY FOR INTERFACES. *Advanced Series in Applied Physics*, **2010**, 19-25		
72	Structure and charging of hydrophobic material/water interfaces studied by phase-sensitive sum-frequency vibrational spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 15148-53	11.5	239

71	Nonlinear optical spectroscopy of photonic metamaterials. *Physical Review B*, **2008**, 78,	3.3	74
70	Sum-frequency phonon spectroscopy on □quartz. *Physical Review B*, **2008**, 78,	3.3	14
69	Surface vibrational modes of alpha-quartz(0001) probed by sum-frequency spectroscopy. *Physical Review Letters*, **2008**, 101, 016101	7.4	35
68	Competitive Molecular Adsorption at Liquid/Solid Interfaces: A Study by Sum-Frequency Vibrational Spectroscopy. *Journal of Physical Chemistry C*, **2007**, 111, 2069-2076	3.8	36
67	New information on water interfacial structure revealed by phase-sensitive surface spectroscopy. *Physical Review Letters*, **2005**, 94, 046102	7.4	337
66	Non-linear optical spectroscopy as a novel probe for molecular chirality. *International Reviews in Physical Chemistry*, **2005**, 24, 257-299	7	95
65	Probing the charge-transfer state of CO on Pt(111) by two-dimensional infrared-visible sum frequency generation spectroscopy. *Physical Review B*, **2004**, 69,	3.3	52
64	Nonlinear Optical Spectroscopic Studies of Polymer Surfaces for Liquid Crystal Alignment: Photo-Irradiated Polyimide and Rubbed Polystyrene Surfaces. *Molecular Crystals and Liquid Crystals*, **2004**, 412, 339-349	0.5	
63	Linear and nonlinear wave propagation in negative refraction metamaterials. *Physical Review B*, **2004**, 69,	3.3	259
62	Applications of Molecular Theory of Sum-Frequency Generations To Study Molecular Chirality□ *Journal of Physical Chemistry A*, **2004**, 108, 8058-8076	2.8	23
61	Sum-Frequency Vibrational Spectroscopic Study of Surface Glass Transition of Poly(vinyl alcohol). *Macromolecules*, **2003**, 36, 3303-3306	5.5	25
60	Bulk contribution from isotropic media in surface sum-frequency generation. *Physical Review B*, **2002**, 66,	3.3	66
59	Vibrational Spectroscopy of Rubbed Polymer Surfaces. *Molecular Crystals and Liquid Crystals*, **2001**, 358, 103-108		
58	Exploring new opportunities with sum-frequency nonlinear optical spectroscopy. *Pure and Applied Chemistry*, **2001**, 73, 1589-1598	2.1	40
57	Surface vibrational spectroscopic study of surface melting of ice. *Physical Review Letters*, **2001**, 86, 1554-	7.4	234
56	Evaluation of Surface vs Bulk Contributions in Sum-Frequency Vibrational Spectroscopy Using Reflection and Transmission Geometries□*Journal of Physical Chemistry B*, **2000**, 104, 3349-3354	3.4	123
55	Liquid Interfaces: A Study by Sum-Frequency Vibrational Spectroscopy. *Journal of Physical Chemistry B*, **1999**, 103, 3292-3307	3.4	527
54	Mapping molecular orientation and conformation at interfaces by surface nonlinear optics. *Physical Review B*, **1999**, 59, 12632-12640	3.3	694

53	Surface Studies of Polymer Blends by Sum Frequency Vibrational Spectroscopy, Atomic Force Microscopy, and Contact Angle Goniometry. *Journal of Physical Chemistry B*, **1998**, 102, 6225-6230	3.4	51
52	Correlation of Structure and Mechanical Properties of Polyolefin Surfaces by Ir + Visible Sum Frequency Generation Vibrational Spectroscopy and Atomic Force Microscopy. *Materials Research Society Symposia Proceedings*, **1998**, 522, 175		1
51	Dye-Induced Enhancement of Optical Nonlinearity in Liquid Crystals and Ordinary Liquids. *Molecular Crystals and Liquid Crystals*, **1998**, 321, 165-175		0
50	Environment-Induced Surface Structural Changes of a Polymer: An in Situ IR + Visible Sum-Frequency Spectroscopic Study. *Journal of Physical Chemistry B*, **1997**, 101, 9060-9064	3.4	102
49	OPTICAL PHYSICS: Enhanced: Solitons Made Simple. *Science*, **1997**, 276, 1520-1520	33.3	38
48	A few selected applications of surface nonlinear optical spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 12104-11	11.5	79
47	Multiphoton Excitation Studies on GaN with PS Pulses. *Materials Research Society Symposia Proceedings*, **1996**, 449, 621		1
46	Second-harmonic generation from C60 thin films at 1.064 microm. *Physical Review B*, **1995**, 51, 10057-10067	3.3	44
45	Dependence of Liquid Crystal Bulk Alignment on Its Surface Monolayer. *Molecular Crystals and Liquid Crystals*, **1995**, 262, 35-43		2
44	SUM-FREQUENCY GENERATION AS A SURFACE PROBE. *Advanced Series in Physical Chemistry*, **1995**, 5-53		8
43	Pretransitional Surface Phenomena in Ferroelectric Liquid Crystals. *Molecular Crystals and Liquid Crystals*, **1993**, 225, 55-65		7
42	Picosecond, narrow-band, widely tunable optical parametric oscillator using a temperature-tuned lithium borate crystal. *Applied Physics Letters*, **1993**, 62, 1457-1459	3.4	29
41	Optical Studies of Pretransitional Surface Ordering and Disordering in Liquid Crystals. *Molecular Crystals and Liquid Crystals*, **1992**, 223, 85-92		
40	Probing the Mechanisms for Surface-Induced Alignment of Liquid Crystals. *Molecular Crystals and Liquid Crystals*, **1991**, 207, 77-85		9
39	Optical parametric amplification in a lithium triborate crystal tunable from 0.65 to 2.5 μm. *Applied Physics Letters*, **1991**, 59, 2805-2807	3.4	59
38	Surface-Induced Ordering in a Homologous Series of Liquid Crystals: Orientational Wetting. *Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics*, **1990**, 179, 419-424		3
37	Progress in Linear Optics, Non-Linear Optics and Surface Alignment of Liquid Crystals. *Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics*, **1990**, 179, 365-375		
36	Surface photon echoes in the infrared range. *Applied Physics B, Photophysics and Laser Chemistry*, **1990**, 50, 535-539		20

35	LASER STUDIES OF POLARITONS. *Modern Physics Letters B*, **1990**, 04, 159-162	1.6	
34	Invited Lecture. Studies of liquid crystal monolayers and films by optical second harmonic generation. *Liquid Crystals*, **1989**, 5, 635-643	2.3	44
33	Surface properties probed by second-harmonic and sum-frequency generation. *Nature*, **1989**, 337, 519-525	38.4	1924
32	Optical Second Harmonic Generation at Interfaces. *Annual Review of Physical Chemistry*, **1989**, 40, 327-350	15.7	636
31	Surface Adsorption Studied by Optical SHG: Soluble Monolayers at the Air/Water Interface. *Materials Research Society Symposia Proceedings*, **1989**, 177, 363		
30	LASER STUDIES OF POLARITONS **1989**, 158-164		
29	Bulk contribution in surface second-harmonic generation. *Physical Review B*, **1988**, 38, 7985-7989	3.3	218
28	Vibrational and electronic spectroscopy of pyridine and benzene adsorbed on the Rh(111) crystal surface. *Journal of Chemical Physics*, **1988**, 88, 441-450	3.9	42
27	Interface Studies with Nonlinear Optics. *MRS Bulletin*, **1988**, 13, 28-30	3.2	1
26	Local and nonlocal surface nonlinearities for surface optical second-harmonic generation. *Physical Review B*, **1987**, 35, 4420-4426	3.3	132
25	Probing Liquid Crystals with Nonlinear Optical Processes. *Molecular Crystals and Liquid Crystals*, **1987**, 143, 1-6		4
24	The Effect of Conjugation Length and Electron Donor Groups on the Second Order Nonlinear Polarizability of Cyano Substituted Aromatic Molecules. *Molecular Crystals and Liquid Crystals Incorporating Nonlinear Optics*, **1987**, 150, 607-616		4
23	Collective Rotation of the Molecules of a Nematic Liquid Crystal Driven by the Angular Momentum of Light. *Molecular Crystals and Liquid Crystals*, **1987**, 143, 89-100		7
22	General considerations on optical second-harmonic generation from surfaces and interfaces. *Physical Review B*, **1986**, 33, 8254-8263	3.3	374
21	Study of monolayer polymerization using nonlinear optics. *Journal of Chemical Physics*, **1986**, 85, 7374-7376	3.9	35
20	Nonlinear Optics And Surface Science. *Materials Research Society Symposia Proceedings*, **1985**, 51, 39		2
19	A note on two-phonon coherent anti-stokes Raman scattering. *Journal of Raman Spectroscopy*, **1981**, 10, 110-112	2.3	2
18	Local Refractive Index Measurement on a Cholesteric Liquid Crystal Using the Surface Plasmon Technique. *Molecular Crystals and Liquid Crystals*, **1981**, 67, 261-275		13

17	Measurement of Refractive Indices and Study of Isotropic-Nematic Phase Transition by the Surface Plasmon Technique. *Molecular Crystals and Liquid Crystals*, **1980**, 59, 97-108		37
16	Measurements of dc Kerr Constants for a Homologous Series of Nematic Compounds. *Molecular Crystals and Liquid Crystals*, **1977**, 43, 287-294		14
15	Studies of Multiphoton Dissociation of Polyatomic Molecules with Crossed Laser and Molecular Beams. *ACS Symposium Series*, **1977**, 72-82	0.4	
14	Domain pattern excited by surface acoustic waves in a nematic film. *Applied Physics Letters*, **1976**, 28, 473-475	3.4	26
13	Refractive Indices and Optical Anisotropy of Homologous Liquid Crystals. *Molecular Crystals and Liquid Crystals*, **1976**, 36, 193-207		100
12	Wavelength Modulation Spectra and Electronic Band Structure of SnS2 and SnSe2. *Physica Status Solidi (B): Basic Research*, **1976**, 75, 303-314	1.3	36
11	Ultrasonic waves in sandwiched fluid film. *Applied Physics Letters*, **1976**, 28, 699-701	3.4	5
10	Absorption, Photoluminescence, and Resonant Raman Scattering in BiI3. *Physica Status Solidi (B): Basic Research*, **1974**, 61, 419-427	1.3	23
9	Phase-matched far-infrared generation by optical mixing of dye laser beams. *Applied Physics Letters* , **1973**, 23, 669-671	3.4	52
8	Coherent phonon generation by optical mixing in a one-dimensional superlattice. *Journal of Applied Physics*, **1973**, 44, 1417-1419	2.5	11
7	Brillouin Scattering in a Cholesteric Liquid Crystal Near the Cholesteric-Isotropic Transition. *Molecular Crystals and Liquid Crystals*, **1972**, 18, 285-296		5
6	Raman Scattering from Nematic Liquid-Crystalline Azoxybenzenes. *Journal of Chemical Physics*, **1972**, 56, 2654-2664	3.9	36
5	Generation of Far-Infrared Radiation by Picosecond Light Pulses in LiNbO3. *Applied Physics Letters*, **1971**, 19, 320-323	3.4	174
4	Correlation between Backward Stimulated Raman Pulse and Moving Focus in Liquids. *Applied Physics Letters*, **1971**, 19, 285-287	3.4	21
3	Simultaneous Q-Switching of Two Independent Ruby Lasers. *Review of Scientific Instruments*, **1970**, 41, 216-218	1.7	3
2	MEASUREMENTS OF SUBNANOSECOND □□FILAMENTR□PULSES USING THE CONVOLUTION TECHNIQUE. *Applied Physics Letters*, **1969**, 14, 380-382	3.4	5
1	Scattering of Light by Magnons. *Journal of Applied Physics*, **1967**, 38, 1490-1495	2.5	13