John R Lombardi

List of Publications by Year
in descending order

105 papers	8,279 citations	57758 44 h-index	45317 90 g-index
109 all docs	109 docs citations	109 times ranked	7078 citing authors

#	Article	IF	Citations
1	A Unified Approach to Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2008, 112, 5605-5617.	3.1	750
2	A Unified View of Surface-Enhanced Raman Scattering. Accounts of Chemical Research, 2009, 42, 734-742.	15.6	678
3	Chargeâ€transfer theory of surface enhanced Raman spectroscopy: Herzbergâ€“Teller contributions. Journal of Chemical Physics, 1986, 84, 4174-4180.	3.0	625
4	Enhanced Raman Scattering with Dielectrics. Chemical Reviews, 2016, 116, 14921-14981.	47.7	492
5	Theory of Surface-Enhanced Raman Scattering in Semiconductors. Journal of Physical Chemistry C, 2014, 118, 11120-11130.	3.1	368
6	DFT, SERS, and Single-Molecule SERS of Crystal Violet. Journal of Physical Chemistry C, 2008, 112, 20295-20300.	3.1	305
7	Periodic Properties of Force Constants of Small Transition-Metal and Lanthanide Clusters. Chemical Reviews, 2002, 102, 2431-2460.	47.7	295
8	Raman Investigation of Nanosized TiO₂: Effect of Crystallite Size and Quantum Confinement. Journal of Physical Chemistry C, 2012, 116, 8792-8797.	3.1	269
9	Direct observation of surfaceâ€enhanced Raman scattering in ZnO nanocrystals. Journal of Raman Spectroscopy, 2009, 40, 1072-1077.	2.5	220
10	Raman scattering study of molecules adsorbed on ZnS nanocrystals. Journal of Raman Spectroscopy, 2007, 38, 34-38.	2.5	190
11	A Novel Ultraâ€Sensitive Semiconductor SERS Substrate Boosted by the Coupled Resonance Effect. Advanced Science, 2019, 6, 1900310.	11.2	183
12	Ultrahigh Raman Enhancement on Monolayer MoS₂. ACS Photonics, 2016, 3, 1164-1169.	6.6	167
13	The effect of molecular structure on voltage induced shifts of charge transfer excitation in surface enhanced Raman scattering. Chemical Physics Letters, 1984, 104, 240-247.	2.6	137
14	Charge-Transfer Resonance and Electromagnetic Enhancement Synergistically Enabling MXenes with Excellent SERS Sensitivity for SARS-CoV-2 S Protein Detection. Nano-Micro Letters, 2021, 13, 52.	27.0	137
15	Electrochromic semiconductors as colorimetric SERS substrates with high reproducibility and renewability. Nature Communications, 2019, 10, 678.	12.8	131
16	Detection and Quantitation of Trace Fentanyl in Heroin by Surface-Enhanced Raman Spectroscopy. Analytical Chemistry, 2018, 90, 12678-12685.	6.5	120
17	Time-dependent picture of the charge-transfer contributions to surface enhanced Raman spectroscopy. Journal of Chemical Physics, 2007, 126, 244709.	3.0	117
18	Nanoparticle Metalâ^'Semiconductor Charge Transfer in ZnO/PATP/Ag Assemblies by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2008, 112, 6093-6098.	3.1	117

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19	The theory of surface-enhanced Raman scattering. Journal of Chemical Physics, 2012, 136, 144704.	3.0	116
20	Laser-Induced Growth of Monodisperse Silver Nanoparticles with Tunable Surface Plasmon Resonance Properties and a Wavelength Self-Limiting Effect. Journal of Physical Chemistry C, 2007, 111, 14962-14967.	3.1	114
21	Human ACE2-Functionalized Gold â€œVirus-Trapâ€•Nanostructures for Accurate Capture of SARS-CoV-2 and Single-Virus SERS Detection. Nano-Micro Letters, 2021, 13, 109.	27.0	112
22	Identification of berberine in ancient and historical textiles by surface-enhanced Raman scattering. Journal of Raman Spectroscopy, 2007, 38, 853-858.	2.5	100
23	Raman and surface-enhanced Raman spectra of flavone and several hydroxy derivatives. Journal of Raman Spectroscopy, 2007, 38, 802-818.	2.5	99
24	Mercaptopyridine Surface-Functionalized CdTe Quantum Dots with Enhanced Raman Scattering Properties. Journal of Physical Chemistry C, 2008, 112, 996-1000.	3.1	94
25	The theory of surface-enhanced Raman scattering on semiconductor nanoparticles; toward the optimization of SERS sensors. Faraday Discussions, 2017, 205, 105-120.	3.2	85
26	Ab Initio Frequency Calculations of Pyridine Adsorbed on an Adatom Model of a SERS Active Site of a Silver Surface. Journal of Physical Chemistry B, 2003, 107, 5547-5557.	2.6	84
27	Surfactantâ€Free Shape Control of Gold Nanoparticles Enabled by Unified Theoretical Framework of Nanocrystal Synthesis. Advanced Materials, 2017, 29, 1605622.	21.0	77
28	Transition Metal Dimer Internuclear Distances from Measured Force Constants. Journal of Physical Chemistry A, 2003, 107, 1268-1273.	2.5	71
29	OODR spectroscopy of BaO. II. New observations of aâ€‰3Î and Aâ€²â€‰1Î and reâ€examination of the Parkinson band system. Journal of Chemical Physics, 1978, 68, 4110-4122.	3.0	68
30	TLCâ€SERS study of Syrian rue (Peganum harmala) and its main alkaloid constituents. Journal of Raman Spectroscopy, 2013, 44, 102-107.	2.5	68
31	Determination of the Degree of Chargeâ€Transfer Contributions to Surfaceâ€Enhanced Raman Spectroscopy. ChemPhysChem, 2008, 9, 1617-1623.	2.1	67
32	Metalâ€“Semiconductor Contacts Induce the Charge-Transfer Mechanism of Surface-Enhanced Raman Scattering. Journal of Physical Chemistry C, 2011, 115, 18378-18383.	3.1	67
33	Surface enhanced raman spectrum of pyrazine. Observation of forbidden lines at the electrode surface. Chemical Physics Letters, 1980, 69, 495-498.	2.6	66
34	A charge-transfer surface enhanced Raman scattering model from time-dependent density functional theory calculations on a Ag10-pyridine complex. Journal of Chemical Physics, 2010, 132, 214707.	3.0	64
35	Single Molecule SERS Spectral Blinking and Vibronic Coupling. Journal of Physical Chemistry C, 2011, 115, 4540-4545.	3.1	64
36	Surface-Enhanced Raman Scattering on a Chemically Etched ZnSe Surface. Journal of Physical Chemistry C, 2013, 117, 23372-23377.	3.1	64

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37	Size and Wavelength Dependence of the Charge-Transfer Contributions to Surface-Enhanced Raman Spectroscopy in Ag/PATP/ZnO Junctions. Journal of Physical Chemistry C, 2010, 114, 1610-1614.	3.1	63
38	Surface Enhanced Raman Spectroscopy of Pyridine on CdSe/ZnBeSe Quantum Dots Grown by Molecular Beam Epitaxy. Journal of Physical Chemistry C, 2010, 114, 17460-17464.	3.1	59
39	<scp>SERS</scp>, <scp>Raman</scp>, and <scp>DFT</scp> analyses of fentanyl and carfentanil: Toward detection of trace samples. Journal of Raman Spectroscopy, 2017, 48, 1323-1329.	2.5	58
40	Adsorption study of 4â€MBA on TiO₂ nanoparticles by surfaceâ€enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2009, 40, 2004-2008.	2.5	54
41	Improved surfaceâ€enhanced Raman scattering properties of TiO₂ nanoparticles by Zn dopant. Journal of Raman Spectroscopy, 2010, 41, 721-726.	2.5	50
42	Raman spectra of massâ€selected cobalt dimers in argon matrices. Journal of Chemical Physics, 1994, 101, 9280-9282.	3.0	49
43	Spectroscopy of mass-selected rhodium dimers in argon matrices. Journal of Chemical Physics, 1997, 106, 2101-2104.	3.0	49
44	Surfaceâ€enhanced Raman scattering of molecules adsorbed on Coâ€doped ZnO nanoparticles. Journal of Raman Spectroscopy, 2012, 43, 61-64.	2.5	48
45	Optical and Raman spectroscopy of massâ€selected tungsten dimers in argon matrices. Journal of Chemical Physics, 1992, 97, 8811-8812.	3.0	44
46	Surface-enhanced Raman scattering of piperidine. The effect of electrode potential on intensity. The Journal of Physical Chemistry, 1984, 88, 1762-1766.	2.9	40
47	Interfacial Charge-Transfer Effects in Semiconductorâ€“Moleculeâ€“Metal Structures: Influence of Contact Variation. Journal of Physical Chemistry C, 2012, 116, 14701-14710.	3.1	40
48	Waveguide-Enhanced Surface Plasmons for Ultrasensitive SERS Detection. Journal of Physical Chemistry Letters, 2013, 4, 3153-3157.	4.6	39
49	Statistical methods and library search approaches for fast and reliable identification of dyes using surface-enhanced Raman spectroscopy (SERS). Analytical Methods, 2013, 5, 4205.	2.7	38
50	Raman spectra of massâ€selected nickel dimers in argon matrices. Journal of Chemical Physics, 1996, 104, 3420-3422.	3.0	37
51	Multiphonon Resonant Raman Scattering and Photoinduced Charge-Transfer Effects at ZnOâ€“Molecule Interfaces. Journal of Physical Chemistry C, 2012, 116, 26908-26918.	3.1	37
52	Size controlled synthesis of monodisperse PbTe quantum dots: using oleylamine as the capping ligand. Journal of Materials Chemistry, 2012, 22, 23593.	6.7	37
53	Absorption and Raman spectroscopy of massâ€selected tantalum tetramers in argon matrices. Journal of Chemical Physics, 1995, 103, 3289-3292.	3.0	34
54	A complete Raman study of common acid red dyes: application to the identification of artistic materials in polychrome prints. Journal of Raman Spectroscopy, 2017, 48, 601-609.	2.5	34

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55	Enhanced by organic surfaces. Nature Materials, 2017, 16, 878-880.	27.5	34
56	Spectroscopy of massâ€selected niobium trimers in argon matrices. Journal of Chemical Physics, 1996, 105, 5355-5357.	3.0	30
57	Tracking photoâ€degradation of triarylmethane dyes with surfaceâ€enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2017, 48, 418-424.	2.5	29
58	Resonance Raman spectrum and excitation profile of massâ€selected zirconium trimers. Journal of Chemical Physics, 1995, 103, 9527-9529.	3.0	27
59	Definitive evidence for linked resonances in surface-enhanced Raman scattering: Excitation profile of Cu phthalocyanine. Applied Physics Letters, 2013, 102, .	3.3	27
60	Stark effect on the 580 nm S1â†S0 transition of isobacteriochlorin using photochemical holeâ€burning spectroscopy. Journal of Chemical Physics, 1987, 86, 4335-4340.	3.0	26
61	A Long-Range Surface Plasmon Resonance/Probe/Silver Nanoparticle (LRSPR-P-NP) Nanoantenna Configuration for Surface-Enhanced Raman Scattering. Journal of Physical Chemistry Letters, 2012, 3, 2773-2778.	4.6	25
62	The surface-enhanced resonance Raman scattering of dye molecules adsorbed on two-dimensional titanium carbide Ti₃C₂T_x (MXene) film. Materials Advances, 2020, 1, 146-152.	5.4	25
63	Two-Dimensional Array of Silica Particles as a SERS Substrate. Journal of Physical Chemistry C, 2014, 118, 9114-9118.	3.1	24
64	Excitation Profiles and the Continuum in SERS: Identification of Fano Line Shapes. Journal of Physical Chemistry C, 2010, 114, 7812-7815.	3.1	21
65	Detection of fentanyl in binary mixtures with cocaine by use of surface-enhanced Raman spectroscopy. Spectroscopy Letters, 2019, 52, 462-472.	1.0	21
66	Surface Enhanced Raman Spectroscopy. Advances in Chemistry Series, 1982, , 69-107.	0.6	20
67	Absorption, excitation, and resonance Raman spectra of Ce2, Pr2, and Nd2. Journal of Chemical Physics, 2000, 113, 2233-2237.	3.0	20
68	In situmicroanalysis of organic colorants by inkjet colloid deposition surface-enhanced Raman scattering. Journal of Raman Spectroscopy, 2014, 45, 123-127.	2.5	19
69	Raman, SERS, and DFT Analysis of the Main Alkaloids Contained in Syrian Rue. Journal of Physical Chemistry C, 2019, 123, 9262-9271.	3.1	19
70	Exploring the Chemical Enhancement of Surface-Enhanced Raman Scattering with a Designed Silver/Silica Cavity Substrate. Journal of Physical Chemistry C, 2013, 117, 556-563.	3.1	18
71	A compact optical parametric oscillator Raman microscope for wavelengthâ€tunable multianalytic microanalysis. Journal of Raman Spectroscopy, 2013, 44, 131-135.	2.5	16
72	Absorption, resonance Raman, and Raman excitation spectra of hafnium trimers. Journal of Chemical Physics, 1997, 106, 8339-8343.	3.0	15

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73	Spectroscopy of mass-selected gadolinium dimers in argon matrices. Journal of Chemical Physics, 2000, 112, 9780-9782.	3.0	15
74	Surfaceâ€enhanced Raman spectroscopy of indanthrone and flavanthrone. Journal of Raman Spectroscopy, 2009, 40, 1557-1563.	2.5	15
75	Active Plasmonic Nanoantennas for Controlling Fluorescence Beams. Journal of Physical Chemistry C, 2013, 117, 19154-19159.	3.1	15
76	Simultaneous enhancement of phonons modes with molecular vibrations due to Mg doping of a TiO2 substrate. RSC Advances, 2013, 3, 20891.	3.6	15
77	A correlated one parameter momentum space function for the ground state of helium. Journal of Chemical Physics, 1983, 78, 2476-2479.	3.0	14
78	Resonance Raman Spectroscopy of Mass Selected Chromium Trimers in an Argon Matrix. Journal of Physical Chemistry A, 2001, 105, 9375-9378.	2.5	14
79	TDDFT Study of Charge-Transfer Raman Spectra of 4-Mercaptopyridine on Various ZnSe Nanoclusters as a Model for the SERS of 4-Mpy on Semiconductors. Journal of Physical Chemistry C, 2018, 122, 4908-4927.	3.1	13
80	Relative contributions of Franckâ€“Condon to Herzbergâ€“Teller terms in charge transfer surface-enhanced Raman scattering spectroscopy. Journal of Chemical Physics, 2020, 152, 224107.	3.0	13
81	Raman and absorption spectrum of mass-selected lutetium dimers in argon matrices. Journal of Chemical Physics, 2000, 113, 10202-10206.	3.0	12
82	Photochemical growth of silver nanoparticles with mixed-light irradiation. Colloid and Polymer Science, 2016, 294, 911-916.	2.1	12
83	Raman spectrum of monobromoindigo. Journal of Raman Spectroscopy, 2012, 43, 520-525.	2.5	11
84	Active-Tuned Plasmonic Angle Modulator of Light Beams for Potential Application of 3D Display. ACS Photonics, 2014, 1, 677-682.	6.6	11
85	Stark effect on the S1â†S0 transition of 1,4â€dihydroxyanthraquinone. Journal of Chemical Physics, 1987, 86, 3048-3050.	3.0	10
86	Raman spectra of rhodium trimers in argon matrices. Journal of Chemical Physics, 2000, 113, 7178-7181.	3.0	10
87	Enhancement of surface phonon modes in the Raman spectrum of ZnSe nanoparticles on adsorption of 4-mercaptopyridine. Journal of Chemical Physics, 2014, 140, 074701.	3.0	10
88	Investigation of radical ions with time-resolved surface enhanced Raman spectroscopy. Molecular Engineering, 1994, 4, 277-310.	0.2	9
89	The theory of surface-enhanced Raman spectroscopy on organic semiconductors: J-aggregates. Chemical Physics Letters, 2020, 751, 137553.	2.6	9
90	An antigen-targeting assay for Lyme disease: Combining aptamers and SERS to detect the OspA protein. Nanomedicine: Nanotechnology, Biology, and Medicine, 2022, 41, 102528.	3.3	9

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91	Competitive Binding Investigations and Quantitation in Surface-Enhanced Raman Spectra of Binary Dye Mixtures. Applied Spectroscopy, 2018, 72, 60-68.	2.2	8
92	DFT and TD-DFT Investigation of a Charge Transfer Surface Resonance Raman Model of N3 Dye Bound to a Small TiO2 Nanoparticle. Nanomaterials, 2021, 11, 1491.	4.1	7
93	Contribution of Raman and Surface Enhanced Raman Spectroscopy (SERS) to the analysis of vehicle headlights: Dye(s) characterization. Forensic Science International, 2018, 287, 98-107.	2.2	5
94	Stark Hole-Burning Spectroscopy of Cresylviolet Perchlorate in Amorphous Hosts. Spectroscopy Letters, 1999, 32, 125-137.	1.0	4
95	Raman Spectrum of Mass-Selected Terbium Dimers in Argon Matrixes. Journal of Physical Chemistry A, 2000, 104, 9153-9155.	2.5	4
96	Spectroscopy of mass-selected VCo and VFe in argon matrices. Journal of Chemical Physics, 2003, 118, 9704-9709.	3.0	4
97	The Yukawa potential in momentum space: Analytic behavior of the eigenfunctions. Journal of Chemical Physics, 1986, 85, 949-952.	3.0	3
98	Surfaceâ€enhanced Raman spectroscopy of 4â€tertâ€butylpyridine on a silver electrode. Journal of Raman Spectroscopy, 2011, 42, 1945-1948.	2.5	3
99	10 Years of Surface-Enhanced Raman Spectroscopy in Art and Archaeology. Microscopy and Microanalysis, 2014, 20, 2006-2007.	0.4	3
100	Mechanism and Prediction of Laser Wet Cleaning of Marble Encrustation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2008, 130, .	2.2	2
101	Gold Nanoparticles: Surfactantâ€Free Shape Control of Gold Nanoparticles Enabled by Unified Theoretical Framework of Nanocrystal Synthesis (Adv. Mater. 21/2017). Advanced Materials, 2017, 29, .	21.0	2
102	Surfaceâ€Enhanced Raman Scattering: A Novel Ultraâ€Sensitive Semiconductor SERS Substrate Boosted by the Coupled Resonance Effect (Adv. Sci. 12/2019). Advanced Science, 2019, 6, 1970070.	11.2	2
103	Excitation, Hole-Burning, and Stark Spectroscopy of Free Base Isobacteriochlorin in ann-Octane Matrix at Liquid Helium Temperatures. Journal of Physical Chemistry A, 2001, 105, 6581-6585.	2.5	1
104	A Unified Theory Of Surface Enhanced Raman Scattering. , 2010, , .		0
105	Surface Plasmons: Propagating and Localized Surface Plasmons in Hierarchical Metallic Structures for Surface-Enhanced Raman Scattering (Small 11/2013). Small, 2013, 9, 1894-1894.	10.0	0