Siva Umapathy

List of Publications by Year
in descending order

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94	2,801	201385	205818
papers	citations	27	48
		h-index	g-index

96	96	96	3611
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Review of multidimensional data processing approaches for Raman and infrared spectroscopy. EPJ Techniques and Instrumentation, 2015, 2, .	0.5	418
2	Challenges in application of Raman spectroscopy to biology and materials. RSC Advances, 2018, 8, 25888-25908.	1.7	179
3	Ordered Mesoporous C₃N₅ with a Combined Triazole and Triazine Framework and Its Graphene Hybrids for the Oxygen Reduction Reaction (ORR). Angewandte Chemie - International Edition, 2018, 57, 17135-17140.	7.2	155
4	Raman and infra-red microspectroscopy: towards quantitative evaluation for clinical research by ratiometric analysis. Chemical Society Reviews, 2016, 45, 1879-1900.	18.7	104
5	Potential of Raman spectroscopic techniques to study proteins. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 258, 119712.	2.0	84
6	Early time dynamics of trans-azobenzene isomerization in solution from resonance Raman intensity analysis. Journal of Chemical Physics, 1997, 107, 7849-7858.	1.2	67
7	Ordered Mesoporous C₃N₅ with a Combined Triazole and Triazine Framework and Its Graphene Hybrids for the Oxygen Reduction Reaction (ORR). Angewandte Chemie, 2018, 130, 17381-17386.	1.6	64
8	Sulfur-Doped Mesoporous Carbon Nitride with an Ordered Porous Structure for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2019, 11, 27192-27199.	4.0	63
9	Effect of defects on quantum yield in blue emitting photoluminescent nitrogen doped graphene quantum dots. Journal of Applied Physics, 2017, 122, .	1.1	56
10	Time-Resolved Resonance Raman Spectroscopy: Exploring Reactive Intermediates. Applied Spectroscopy, 2011, 65, 1087-1115.	1.2	53
11	Thermodynamically Stable Mesoporous C₃N₇ and C₃N₆ with Ordered Structure and Their Excellent Performance for Oxygen Reduction Reaction. Small, 2020, 16, e1903572.	5.2	53
12	Time-Resolved Resonance Raman Spectroscopic Studies on the Radical Anions of Menaquinone and Naphthoquinone. The Journal of Physical Chemistry, 1996, 100, 16472-16478.	2.9	52
13	Direct Detection of Bacteria Using Positively Charged Ag/Au Bimetallic Nanoparticles: A Label-free Surface-Enhanced Raman Scattering Study Coupled with Multivariate Analysis. Journal of Physical Chemistry C, 2020, 124, 861-869.	1.5	51
14	Ultrafast Raman loss spectroscopy. Journal of Raman Spectroscopy, 2009, 40, 235-237.	1.2	50
15	Is Chemically Synthesized Graphene â€˜Reallyâ€™ a Unique Substrate for SERS and Fluorescence Quenching?. Scientific Reports, 2013, 3, 3336.	1.6	48
16	Design of P-Doped Mesoporous Carbon Nitrides as High-Performance Anode Materials for Li-Ion Battery. ACS Applied Materials & Interfaces, 2020, 12, 24007-24018.	4.0	44
17	Different Phases of Breast Cancer Cells: Raman Study of Immortalized, Transformed, and Invasive Cells. Biosensors, 2016, 6, 57.	2.3	42
18	Energy funneling and macromolecular conformational dynamics: a 2D Raman correlation study of PEG melting. Polymer Journal, 2014, 46, 330-336.	1.3	40

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19	Ascorbate Protects Neurons against Oxidative Stress: A Raman Microspectroscopic Study. ACS Chemical Neuroscience, 2015, 6, 1794-1801.	1.7	39
20	Ultrafast Raman loss spectroscopy (URLS): instrumentation and principle. Journal of Raman Spectroscopy, 2011, 42, 1883-1890.	1.2	38
21	Resonance Raman study of the solvent dynamics for ultrafast charge transfer transition in 4-nitro-4â€²-dimethylamino-azobenzene. Journal of Chemical Physics, 2003, 118, 5526-5536.	1.2	36
22	Understanding solvent effects on structure and reactivity of organic intermediates: a Raman study. Faraday Discussions, 0, 145, 443-466.	1.6	34
23	Study of solvent effects on the molecular structure and the reorganization energies of 4-nitro-4?-dimethylaminoazobenzene using resonance Raman intensities. Journal of Raman Spectroscopy, 2001, 32, 471-480.	1.2	32
24	Loss and gain signals in broadband stimulated-Raman spectra: Theoretical analysis. Physical Review A, 2013, 88, .	1.0	32
25	Raman Spectroscopic Studies on Screening of Myopathies. Analytical Chemistry, 2015, 87, 2187-2194.	3.2	32
26	Raman spectroscopy explores molecular structural signatures of hidden materials in depth: Universal Multiple Angle Raman Spectroscopy. Scientific Reports, 2014, 4, 5308.	1.6	32
27	Mode specific excited state dynamics study of bis(phenylethynyl)benzene from ultrafast Raman loss spectroscopy. Journal of Chemical Physics, 2017, 146, 064303.	1.2	31
28	Femtosecond coherent nuclear dynamics of excited tetraphenylethylene: Ultrafast transient absorption and ultrafast Raman loss spectroscopic studies. Journal of Chemical Physics, 2018, 148, 024301.	1.2	30
29	Density Functional Theoretical Modeling, Electrostatic Surface Potential and Surface Enhanced Raman Spectroscopic Studies on Biosynthesized Silver Nanoparticles: Observation of 400 pM Sensitivity to Explosives. Journal of Physical Chemistry A, 2014, 118, 2904-2914.	1.1	29
30	Partitioning of the total reorganization energy into its vibrational and solvent (inertial and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td 181-190.	1.2	28
31	Understanding Ultrafast Dynamics of Conformation Specific Photo-Excitation: A Femtosecond Transient Absorption and Ultrafast Raman Loss Study. Journal of Physical Chemistry A, 2017, 121, 6538-6546.	1.1	28
32	Intermolecular Hydrogen Bonding Controlled Intersystem Crossing Rates of Benzophenone. Journal of Physical Chemistry Letters, 2018, 9, 1642-1648.	2.1	27
33	Potential of Raman spectroscopy towards understanding structures of carbon-based materials and perovskites. Emergent Materials, 2019, 2, 417-439.	3.2	27
34	Impact of cesium in methylammonium lead bromide perovskites: insights into the microstructures, stability and photophysical properties. Nanoscale, 2019, 11, 10292-10305.	2.8	27
35	Influence of Solvent on Photoinduced Electron-Transfer Reaction: Time-Resolved Resonance Raman Study. Journal of Physical Chemistry A, 2009, 113, 6904-6909.	1.1	26
36	Rapid detection of bacterial infection and viability assessment with high specificity and sensitivity using Raman microspectroscopy. Analytical and Bioanalytical Chemistry, 2020, 412, 2505-2516.	1.9	26

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37	Identification of Early Biomarkers during Acetaminophen-Induced Hepatotoxicity by Fourier Transform Infrared Microspectroscopy. PLoS ONE, 2012, 7, e45521.	1.1	25
38	Linking carbon metabolism to carotenoid production in mycobacteria using Raman spectroscopy. FEMS Microbiology Letters, 2015, 362, 1-6.	0.7	24
39	Profiling antibiotic resistance in <scp>Escherichia coli</scp> strains displaying differential antibiotic susceptibilities using Raman spectroscopy. Journal of Biophotonics, 2021, 14, e202000231.	1.1	24
40	Time-Resolved Resonance Raman and Density Functional Studies on the Ground State and Short-Lived Intermediates of Tetrabromo-p-benzoquinone. Journal of Physical Chemistry A, 2001, 105, 10562-10569.	1.1	23
41	Direct Observation of Thermal Equilibrium of Excited Triplet States of 9,10-Phenanthrenequinone. A Time-Resolved Resonance Raman Study. Journal of Physical Chemistry A, 2015, 119, 10147-10157.	1.1	22
42	Understanding the effects of culture conditions in bacterial growth: A biochemical perspective using Raman microscopy. Journal of Biophotonics, 2020, 13, e201900233.	1.1	22
43	Molecular dynamics and simulations study on the vibrational and electronic solvatochromism of benzophenone. Journal of Chemical Physics, 2016, 144, 064302.	1.2	21
44	Enriched Photophysical Properties and Thermal Stability of Tin(II) Substituted Lead-Based Perovskite Nanocrystals with Mixed Organicâ€“Inorganic Cations. Journal of Physical Chemistry C, 2020, 124, 9611-9621.	1.5	21
45	Molecular profiling of sepsis in mice using Fourier Transform Infrared Microspectroscopy. Journal of Biophotonics, 2016, 9, 67-82.	1.1	20
46	Investigation of Short-Time Isomerization Dynamics inp-Nitroazobenzene from Resonance Raman Intensity Analysis. Journal of Physical Chemistry A, 2002, 106, 9397-9406.	1.1	19
47	Synthesis and characterization of monometallic rhenium(<scp>i</scp>) complexes and their application as selective sensors for copper(<scp>ii</scp>) ions. RSC Advances, 2015, 5, 38479-38488.	1.7	19
48	Ultra-sensitive, reusable, and superhydrophobic Ag/ZnO/Ag 3D hybrid surface enhanced Raman scattering substrate for hemoglobin detection. Journal of Applied Physics, 2020, 127, .	1.1	19
49	Pathogenic Escherichia coli (E. coli) detection through tuned nanoparticles enhancement study. Biotechnology Letters, 2020, 42, 853-863.	1.1	19
50	Experimentally validated Raman Monte Carlo simulation for a cuboid object to obtain Raman spectroscopic signatures for hidden material. Journal of Raman Spectroscopy, 2015, 46, 669-676.	1.2	18
51	Synthesis and luminescence of ceria decorated graphene quantum dots (GQDs): Evolution of band gap. Integrated Ferroelectrics, 2017, 184, 114-123.	0.3	18
52	High-performance pseudocapacitor electrode materials: cobalt (II) chlorideâ€“GQDs electrodes. Emerging Materials Research, 2017, 6, 227-233.	0.4	17
53	Solvatochromism of 9,10-phenanthrenequinone: An electronic and resonance Raman spectroscopic study. Journal of Chemical Physics, 2015, 142, 024305.	1.2	14
54	Raman spectroscopy and artificial intelligence open up accurate detection of pathogens from DNAâ€based subâ€species level classification. Journal of Raman Spectroscopy, 2021, 52, 2648-2659.	1.2	14

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55	Assessment of Radiation Resistance and Therapeutic Targeting of Cancer Stem Cells: A Raman Spectroscopic Study of Glioblastoma. Analytical Chemistry, 2018, 90, 12067-12074.	3.2	13
56	Molecular-Level Insights into the Microstructure of a Hydrated and Nanoconfined Deep Eutectic Solvent. Journal of Physical Chemistry B, 2019, 123, 3359-3371.	1.2	13
57	Simultaneous Detection of Two Triplets: A Time-Resolved Resonance Raman Study. Journal of Physical Chemistry A, 2012, 116, 8484-8489.	1.1	12
58	Solvent effects on the structure of the triplet excited state of xanthone: a time-resolved resonance Raman study. Journal of Raman Spectroscopy, 2016, 47, 1220-1230.	1.2	12
59	Raman spectroscopy reveals distinct differences between two closely related bacterial strains, Mycobacterium indicus pranii and Mycobacterium intracellulare. Analytical and Bioanalytical Chemistry, 2019, 411, 7997-8009.	1.9	12
60	Structure of the triplet excited state of bromanil from time-resolved resonance Raman spectra and simulation. Journal of Chemical Physics, 2001, 115, 6106-6114.	1.2	11
61	Noble Metal Ion Embedded Nanocomposite Glass Materials for Optical Functionality of UVâ€“Visible Surface Plasmon Resonance (SPR) Surface-Enhanced Raman Scattering (SERS) X-ray and Electron Microscopic Studies: An Overview. Plasmonics, 2021, 16, 1461-1493.	1.8	11
62	Structure of the triplet excited state of tetrabromo-p-benzoquinone from time-resolved resonance Raman spectra and ab initio calculations. Chemical Physics Letters, 2001, 337, 224-230.	1.2	10
63	Time-Resolved Resonance Raman Spectroscopic Studies on the Radical Anions of Methyl-1,4-benzoquinone and 2,6-Dimethyl-1,4-benzoquinone. Journal of Physical Chemistry A, 2002, 106, 4513-4518.	1.1	10
64	Probing the effect of solvation on photoexcited 2-(2â€²-hydroxyphenyl)benzothiazole via ultrafast Raman loss spectroscopic studies. Journal of Chemical Physics, 2018, 149, 044310.	1.2	10
65	Resonance de-enhancement in the 21 A g state oftrans-azobenzene. Pramana - Journal of Physics, 1997, 48, 937-950.	0.9	9
66	Effect of chlorine substitution on triplet state structure of thioxanthone: A timeâ€resolved resonance Raman study. Journal of Raman Spectroscopy, 2013, 44, 270-276.	1.2	9
67	Applications of Raman and Infrared Microscopy to Materials and Biology. , 2018, , 117-146.		9
68	Ultrafast Raman Loss Spectroscopy Unravels the Dynamics in Entangled Singlet and Triplet States in Thioxanthone. Journal of Physical Chemistry A, 2018, 122, 6048-6054.	1.1	9
69	Understanding phase transition and vibrational mode coupling in ammonium nitrate using 2D correlation Raman spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 254, 119581.	2.0	9
70	Manifestation of conical intersections in resonance Raman intensities. Journal of Raman Spectroscopy, 2010, 41, 310-319.	1.2	8
71	Solvent-induced changes on the polarity of the triplet excited state of 2-chlorothioxanthone: From time-resolved absorption and resonance Raman spectroscopies. Chemical Physics, 2014, 428, 175-180.	0.9	8
72	Biofilms of the non-tuberculous Mycobacterium chelonae form an extracellular matrix and display distinct expression patterns. Cell Surface, 2020, 6, 100043.	1.5	8

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73	Identification of a resonance Raman marker for cytochrome to monitor stress responses in Escherichia coli. Analytical and Bioanalytical Chemistry, 2020, 412, 5379-5388.	1.9	8
74	Structure and Dynamics from Time Resolved Absorption and Raman Spectroscopy. NATO Science for Peace and Security Series A: Chemistry and Biology, 2014, , 25-41.	0.5	8
75	Triplet excited electronic state switching induced by hydrogen bonding: A transient absorption spectroscopy and time-dependent DFT study. Journal of Chemical Physics, 2016, 144, 114301.	1.2	7
76	A Combined Experimental and Theoretical Approach to Understand the Structure and Properties of Nâ€Methylpyrrolidoneâ€Based Protic Ionic Liquids. ChemPhysChem, 2017, 18, 3416-3428.	1.0	7
77	Signal Enhancement from Tunable SERS Substrates: Design and Demonstration of Multiple Regimes of Enhancement. Journal of Physical Chemistry C, 2018, 122, 9134-9140.	1.5	7
78	Probing the Stepwise Unfolding of Bovine Serum Albumin Using 2D Correlation Raman Spectroscopic Analysis. Analytical Chemistry, 2020, 92, 13509-13517.	3.2	7
79	Spectroscopic and computational insights into the ionâ€“solvent interactions in hydrated aprotic and protic ionic liquids. Physical Chemistry Chemical Physics, 2019, 21, 20791-20804.	1.3	6
80	Oxygen Reduction Reaction: Thermodynamically Stable Mesoporous C₃N₇ and C₃N₆ with Ordered Structure and Their Excellent Performance for Oxygen Reduction Reaction (Small 12/2020). Small, 2020, 16, 2070064.	5.2	6
81	Effect of SDS on human hair: Study on the molecular structure and morphology. Journal of Biophotonics, 2011, 4, 315-323.	1.1	5
82	Ultrananocrystalline diamondâ€like carbon (UNâ€ÐLC) assembled on epitaxial ZnO film by PLD technique and SIMS Raman Rutherford spectroscopic fingerprint investigation. Journal of Raman Spectroscopy, 2021, 52, 1838.	1.2	5
83	Unraveling structural dynamics in isoenergetic excited S₁ and multi-excitonic ¹(TT) states of 9,10-bis(phenylethynyl)anthracene (BPEA) in solution via ultrafast Raman loss spectroscopy. Physical Chemistry Chemical Physics, 2019, 21, 14341-14349.	1.3	4
84	Cell-free hemoglobin is a marker of systemic inflammation in mouse models of sepsis: a Raman spectroscopic study. Analyst, The, 2021, 146, 4022-4032.	1.7	3
85	In situ monitoring of photostriction in chalcogenide glass film using fiber Bragg grating sensors. International Journal of Optomechatronics, 2017, 11, 27-35.	3.3	2
86	Infrared Microspectroscopy With Multivariate Analysis to Differentiate Oral Hyperplasia From Squamous Cell Carcinoma: A Proof of Concept for Early Diagnosis. Lasers in Surgery and Medicine, 2021, 53, 1435-1445.	1.1	2
87	Understanding Solvent Effect on Thioxanthone Using Time Resolved Resonance Raman Spectroscopy. , 2010, , .		1
88	Editorial on the special issue of JRS on International Year of Light (IYL). Journal of Raman Spectroscopy, 2016, 47, 7-8.	1.2	1
89	Hydrophobic mediated growth of galvanic-nanobuds from germanium nanowires for a highly tunable SERS substrate. New Journal of Chemistry, 2018, 42, 20061-20068.	1.4	1
90	Raman and Infrared Spectroscopic Studies to Understand the Efficacy of HDAC Inhibitor Drugs. , 2010, , .		0

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91	Raman Spectroscopic Study of Muscles Related Disorders using Drosophila Melanogaster as a Model System. , 2010, , .		0
92	Exploring the Resonance Excitation Wavelength Dependence of Raman Lineshapes in Ultrafast Raman Loss Spectroscopy. , 2010, , .		0
93	Ultrafast Raman Loss Study of Excited State Evolution of Î± -terthiophene. , 2010, , .		0
94	Raman Spectroscopic Studies of Temperature Dependent Conformational Changes in Fatty Acids. , 2010, , .		0