

Renee R Frontiera

List of Publications by Year in descending order

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53
papers

5,452
citations

201385

27
h-index

174990

52
g-index

54
all docs

54
docs citations

54
times ranked

7465
citing authors

#	ARTICLE	IF	CITATIONS
1	SERS: Materials, applications, and the future. <i>Materials Today</i> , 2012, 15, 16-25.	8.3	1,914
2	Creating, characterizing, and controlling chemistry with SERS hot spots. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 21-36.	1.3	621
3	Mapping GFP structure evolution during proton transfer with femtosecond Raman spectroscopy. <i>Nature</i> , 2009, 462, 200-204.	13.7	410
4	High-performance SERS substrates: Advances and challenges. <i>MRS Bulletin</i> , 2013, 38, 615-624.	1.7	267
5	Stimulated Raman Scattering: From Bulk to Nano. <i>Chemical Reviews</i> , 2017, 117, 5070-5094.	23.0	202
6	Ultrafast excited-state isomerization in phytochrome revealed by femtosecond stimulated Raman spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 1784-1789.	3.3	190
7	Excited-State Structure and Dynamics of <i>cis</i> - and <i>trans</i> -Azobenzene from Resonance Raman Intensity Analysis. <i>Journal of Physical Chemistry A</i> , 2007, 111, 12072-12080.	1.1	162
8	Ultrafast and nonlinear surface-enhanced Raman spectroscopy. <i>Chemical Society Reviews</i> , 2016, 45, 2263-2290.	18.7	143
9	Surface-Enhanced Femtosecond Stimulated Raman Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 1199-1203.	2.1	131
10	Toward Label-Free Super-Resolution Microscopy. <i>ACS Photonics</i> , 2016, 3, 79-86.	3.2	110
11	Ultrafast Nanoscale Raman Thermometry Proves Heating Is Not a Primary Mechanism for Plasmon-Driven Photocatalysis. <i>ACS Nano</i> , 2018, 12, 5848-5855.	7.3	110
12	Ultrafast Surface-Enhanced Raman Probing of the Role of Hot Electrons in Plasmon-Driven Chemistry. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3179-3185.	2.1	89
13	Femtosecond stimulated Raman spectroscopy. <i>Laser and Photonics Reviews</i> , 2011, 5, 102-113.	4.4	86
14	Probing Interfacial Electron Transfer in Coumarin 343 Sensitized TiO ₂ Nanoparticles with Femtosecond Stimulated Raman. <i>Journal of the American Chemical Society</i> , 2009, 131, 15630-15632.	6.6	75
15	Origin of negative and dispersive features in anti-Stokes and resonance femtosecond stimulated Raman spectroscopy. <i>Journal of Chemical Physics</i> , 2008, 129, 064507.	1.2	71
16	Probing structural evolution along multidimensional reaction coordinates with femtosecond stimulated Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 405-414.	1.3	65
17	Femtosecond stimulated Raman evidence for charge-transfer character in pentacene singlet fission. <i>Chemical Science</i> , 2018, 9, 1242-1250.	3.7	64
18	Fano-Like Resonances Arising from Long-Lived Molecule-Plasmon Interactions in Colloidal Nanoantennas. <i>Nano Letters</i> , 2012, 12, 5989-5994.	4.5	61

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19	Plasma-driven solution electrolysis. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	58
20	Direct Observation of Anharmonic Coupling in the Time Domain with Femtosecond Stimulated Raman Scattering. <i>Physical Review Letters</i> , 2006, 96, 238303.	2.9	55
21	Plasmon-Enhanced Chemical Conversion Using Copper Selenide Nanoparticles. <i>Nano Letters</i> , 2019, 19, 2384-2388.	4.5	53
22	Femtosecond Raman Microscopy Reveals Structural Dynamics Leading to Triplet Separation in Rubrene Singlet Fission. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 5929-5934.	2.1	45
23	Ultrafast surface-enhanced Raman spectroscopy. <i>Analyst, The</i> , 2015, 140, 4922-4931.	1.7	44
24	Determination of Resonance Raman Cross-Sections for Use in Biological SERS Sensing with Femtosecond Stimulated Raman Spectroscopy. <i>Analytical Chemistry</i> , 2014, 86, 7782-7787.	3.2	39
25	Competition between Reaction and Degradation Pathways in Plasmon-Driven Photochemistry. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20869-20876.	1.5	38
26	Toward a mechanistic understanding of plasmon-mediated photocatalysis. <i>Nanophotonics</i> , 2018, 7, 1697-1724.	2.9	37
27	Decoding Chemical and Physical Processes Driving Plasmonic Photocatalysis Using Surface-Enhanced Raman Spectroscopies. <i>Accounts of Chemical Research</i> , 2021, 54, 2457-2466.	7.6	33
28	Excited state structural evolution during charge-transfer reactions in betaine-30. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 20290-20297.	1.3	27
29	New Insights into Quinine's DNA Binding Using Raman Spectroscopy and Molecular Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2018, 122, 9840-9851.	1.2	25
30	Far-Field Super-Resolution Vibrational Spectroscopy. <i>Analytical Chemistry</i> , 2019, 91, 8723-8731.	3.2	24
31	Polarization dependence of vibrational coupling signals in femtosecond stimulated Raman spectroscopy. <i>Journal of Chemical Physics</i> , 2007, 127, 124501.	1.2	21
32	Quinine copolymer reporters promote efficient intracellular DNA delivery and illuminate a protein-induced unpackaging mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 32919-32928.	3.3	20
33	Monitoring Charge Density Delocalization upon Plasmon Excitation with Ultrafast Surface-Enhanced Raman Spectroscopy. <i>ACS Photonics</i> , 2017, 4, 1033-1039.	3.2	15
34	Carborane RAFT agents as tunable and functional molecular probes for polymer materials. <i>Polymer Chemistry</i> , 2019, 10, 1660-1667.	1.9	14
35	Label-Free Super-Resolution Imaging Techniques. <i>Annual Review of Analytical Chemistry</i> , 2022, 15, 37-55.	2.8	13
36	Advances in Singlet Fission Chromophore Design Enabled by Vibrational Spectroscopies. <i>Journal of Physical Chemistry C</i> , 2020, 124, 25163-25174.	1.5	11

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37	Intermolecular Forces Dictate Vibrational Energy Transfer in Plasmonic-Molecule Systems. <i>ACS Nano</i> , 2022, 16, 847-854.	7.3	11
38	Effect of Silica Supports on Plasmonic Heating of Molecular Adsorbates as Measured by Ultrafast Surface-Enhanced Raman Thermometry. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 40577-40584.	4.0	10
39	Plasmon-Driven C-N Bond Cleavage Across a Series of Viologen Derivatives. <i>Journal of Physical Chemistry C</i> , 2019, 123, 29306-29313.	1.5	10
40	Spatially Offset Femtosecond Stimulated Raman Spectroscopy: Observing Exciton Transport through a Vibrational Lens. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4337-4344.	2.1	10
41	Femtosecond stimulated Raman spectro-microscopy for probing chemical reaction dynamics in solid-state materials. <i>Journal of Chemical Physics</i> , 2020, 153, 030901.	1.2	9
42	Plasmon-Mediated Intramolecular Methyl Migration with Nanoscale Spatial Control. <i>ACS Nano</i> , 2020, 14, 17194-17202.	7.3	9
43	Uncovering the Functional Role of Coherent Phonons during the Photoinduced Phase Transition in a Molecular Crystal. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 7502-7509.	2.1	8
44	Facile Background Discrimination in Femtosecond Stimulated Raman Spectroscopy Using a Dual-Frequency Raman Pump Technique. <i>Journal of Physical Chemistry A</i> , 2019, 123, 7932-7939.	1.1	7
45	Probing the coupling of butterfly wing photonic crystals to plasmon resonances with surface-enhanced Raman spectroscopy. <i>Journal of Materials Chemistry C</i> , 2019, 7, 13887-13895.	2.7	7
46	Stimulated Raman imaging below the diffraction limit with a MHz laser. <i>Journal of Raman Spectroscopy</i> , 2021, 52, 404-411.	1.2	6
47	Vibronic Coupling and Exciton Chirality: Electronic and Structural Rearrangement between Helical to Zero Momentum Molecular Exciton States. <i>Journal of Physical Chemistry C</i> , 2021, 125, 21511-21520.	1.5	6
48	Orientation and Polarization Dependence of Ground- and Excited-State FSRS in Crystalline Betaine-30. <i>Journal of Physical Chemistry C</i> , 2019, 123, 12563-12572.	1.5	5
49	Redox Non-Innocent Behavior of a Terminal Iridium Hydrazido(2-) Triple Bond. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 13169-13173.	7.2	4
50	Beyond single crystals: Imaging rubrene polymorphism across crystalline batches through lattice phonon Raman microscopy. <i>Journal of Chemical Physics</i> , 2021, 155, 234703.	1.2	4
51	Femtosecond stimulated Raman spectroscopy-guided library mining leads to efficient singlet fission in rubrene derivatives. <i>Chemical Science</i> , 2021, 12, 13825-13835.	3.7	2
52	Richard P. Van Duyne, plasmonics pioneer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 22891-22893.	3.3	1
53	Mapping GFP Structural Evolution during Excited-State Proton Transfer with Femtosecond Stimulated Raman. , 2010, , .		0