Eric C Le Ru

List of Publications by Year
in descending order

82 papers	7,005 citations	126907 33 h-index	62596 80 g-index
84 all docs	84 docs citations	84 times ranked	7720 citing authors

#	Article	IF	Citations
1	Comparison of dynamic corrections to the quasistatic polarizability and optical properties of small spheroidal particles. Journal of Chemical Physics, 2022, 156, 104110.	3.0	4
2	Coadsorbed Species with Halide Ligands on Silver Nanoparticles with Different Binding Affinities. Journal of Physical Chemistry C, 2022, 126, 8692-8702.	3.1	10
3	Effect of Molecular Position and Orientation on Adsorbate-Induced Shifts of Plasmon Resonances. Journal of Physical Chemistry C, 2022, 126, 10129-10138.	3.1	4
4	Analytical solutions for the surfaceâ€•and orientationâ€averaged SERS enhancement factor of small plasmonic particles. Journal of Raman Spectroscopy, 2021, 52, 285-295.	2.5	7
5	Definition and properties of logopoles of all degrees and orders. Physical Review E, 2021, 103, 013311.	2.1	0
6	Refined effective-medium model for the optical properties of nanoparticles coated with anisotropic molecules. Physical Review B, 2021, 103, .	3.2	6
7	Mean path length inside nonscattering refractive objects. Physical Review A, 2021, 103, .	2.5	8
8	Quantitative theory of integrating sphere throughput: comparison with experiments. Applied Optics, 2021, 60, 5335.	1.8	3
9	Thin-shell approximation of Mie theory for a thin anisotropic layer spaced away from a spherical core: Application to dye-coated nanostructures. Physical Review A, 2021, 104, .	2.5	5
10	Direct radiative effects of airborne microplastics. Nature, 2021, 598, 462-467.	27.8	152
11	Practical Implementation of Accurate Finite-Element Calculations for Electromagnetic Scattering by Nanoparticles. Plasmonics, 2020, 15, 109-121.	3.4	15
12	Present and Future of Surface-Enhanced Raman Scattering. ACS Nano, 2020, 14, 28-117.	14.6	2,153
13	Whispering-Gallery Mode Lasing in Perovskite Nanocrystals Chemically Bound to Silicon Dioxide Microspheres. Journal of Physical Chemistry Letters, 2020, 11, 7009-7014.	4.6	16
14	Anionâ€regulatedbinding selectivity of Cr(III) in collagen. Biopolymers, 2020, 111, e23406.	2.4	7
15	Extinction-to-Absorption Ratio for Sensitive Determination of the Size and Dielectric Function of Gold Nanoparticles. ACS Nano, 2020, 14, 17597-17605.	14.6	14
16	Reexamination of Surface-Enhanced Raman Scattering from Gold Nanorods as a Function of Aspect Ratio and Shape. Journal of Physical Chemistry C, 2020, 124, 10647-10658.	3.1	38
17	Numerically stable formulation of Mie theory for an emitter close to a sphere. Applied Optics, 2020, 59, 1293.	1.8	12
18	Combined Extinction and Absorption UVâ€“Visible Spectroscopy as a Method for Revealing Shape Imperfections of Metallic Nanoparticles. Analytical Chemistry, 2019, 91, 14639-14648.	6.5	26

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19	Snapshots of vibrating molecules. Nature, 2019, 568, 36-37.	27.8	2
20	Quasistatic limit of the electric-magnetic coupling blocks of the T-matrix for spheroids. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 225, 16-24.	2.3	5
21	Approximate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>T</mml:mi></mml:math> matrix and optical properties of spheroidal particles to third order with respect to size parameter. Physical Review A, 2019, 99, .	2.5	13
22	Electromagnetic interactions of dye molecules surrounding a nanosphere. Nanoscale, 2019, 11, 12177-12187.	5.6	15
23	New class of solutions to Laplace equation: Regularized multipoles of negative orders. Physical Review Research, 2019, 1, .	3.6	1
24	Mind the gap: testing the Rayleigh hypothesis in T-matrix calculations with adjacent spheroids. Optics Express, 2019, 27, 35750.	3.4	17
25	Modeling Molecular Orientation Effects in Dye-Coated Nanostructures Using a Thin-Shell Approximation of Mie Theory for Radially Anisotropic Media. ACS Photonics, 2018, 5, 5002-5009.	6.6	10
26	Realistic ports in integrating spheres: reflectance, transmittance, and angular redirection. Applied Optics, 2018, 57, 1581.	1.8	9
27	Optical Absorption of Dye Molecules in a Spherical Shell Geometry. Journal of Physical Chemistry C, 2018, 122, 19110-19115.	3.1	12
28	Accurate Modeling of the Polarizability of Dyes for Electromagnetic Calculations. ACS Omega, 2017, 2, 1804-1811.	3.5	27
29	Spheroidal harmonic expansions for the solution of Laplace's equation for a point source near a sphere. Physical Review E, 2017, 95, 033307.	2.1	9
30	Electrostatic limit of the T-matrix for electromagnetic scattering: Exact results for spheroidal particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 200, 50-58.	2.3	9
31	Numerical investigation of the Rayleigh hypothesis for electromagnetic scattering by a particle. Journal of Optics (United Kingdom), 2016, 18, 075007.	2.2	18
32	Modified optical absorption of molecules on metallic nanoparticles at sub-monolayer coverage. Nature Photonics, 2016, 10, 40-45.	31.4	115
33	Cristobalite in the 2011â€“2012 CordÃ³n Caulle eruption (Chile). Bulletin of Volcanology, 2015, 77, 1.	3.0	38
34	Co-ordinated detection of microparticles using tunable resistive pulse sensing and fluorescence spectroscopy. Biomicrofluidics, 2015, 9, 014110.	2.4	13
35	Convergence of Mie theory series: criteria for far-field and near-field properties. Applied Optics, 2014, 53, 7224.	2.1	24
36	Polypeptide Multilayer Self-Assembly Studied by Ellipsometry. Journal of Drug Delivery, 2014, 2014, 1-5.	2.5	7

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37	Competition between Molecular Adsorption and Diffusion: Dramatic Consequences for SERS in Colloidal Solutions. Journal of the American Chemical Society, 2014, 136, 10965-10973.	13.7	71
38	Single-molecule surface-enhanced Raman spectroscopy with nanowatt excitation. Physical Chemistry Chemical Physics, 2014, 16, 23895-23899.	2.8	21
39	Quantifying SERS enhancements. MRS Bulletin, 2013, 38, 631-640.	3.5	214
40	Radiative correction in approximate treatments of electromagnetic scattering by point and body scatterers. Physical Review A, 2013, 87, .	2.5	43
41	Strong Correlation between Molecular Configurations and Charge-Transfer Processes Probed at the Single-Molecule Level by Surface-Enhanced Raman Scattering. Journal of the American Chemical Society, 2013, 135, 2809-2815.	13.7	68
42	CW measurements of resonance Raman profiles, lineâ€widths, and crossâ€sections of fluorescent dyes: application to Nile Blue A in water and ethanol. Journal of Raman Spectroscopy, 2013, 44, 573-581.	2.5	17
43	Simple accurate approximations for the optical properties of metallic nanospheres and nanoshells. Physical Chemistry Chemical Physics, 2013, 15, 4233.	2.8	41
44	Direct Measurement of Resonance Raman Spectra and Cross Sections by a Polarization Difference Technique. Analytical Chemistry, 2012, 84, 5074-5079.	6.5	43
45	Single-molecule SERS detection of C60. Physical Chemistry Chemical Physics, 2012, 14, 3219.	2.8	26
46	Distribution of the SERS enhancement factor on the surface of metallic nano-particles. , 2012, , .		0
47	Tiny Peaks vs Mega Backgrounds: A General Spectroscopic Method with Applications in Resonant Raman Scattering and Atmospheric Absorptions. Analytical Chemistry, 2012, 84, 7938-7945.	6.5	14
48	Silver Nanoparticle Aggregates as Highly Efficient Plasmonic Antennas for Fluorescence Enhancement. Journal of Physical Chemistry C, 2012, 116, 16687-16693.	3.1	77
49	Single-Molecule Surface-Enhanced Raman Spectroscopy. Annual Review of Physical Chemistry, 2012, 63, 65-87.	10.8	632
50	Combined SPR and SERS Microscopy in the Kretschmann Configuration. Journal of Physical Chemistry A, 2012, 116, 1000-1007.	2.5	43
51	Temperature Dependence of the Homogeneous Broadening of Resonant Raman Peaks Measured by Single-Molecule Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2011, 2, 3002-3005.	4.6	36
52	Experimental demonstration of surface selection rules for SERS on flat metallic surfaces. Chemical Communications, 2011, 47, 3903.	4.1	104
53	A Scheme for Detecting Every Single Target Molecule with Surface-Enhanced Raman Spectroscopy. Nano Letters, 2011, 11, 5013-5019.	9.1	173
54	Fluorescence enhancement at hot-spots: the case of Ag nanoparticle aggregates. Physical Chemistry Chemical Physics, 2011, 13, 16366.	2.8	64

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55	Simplified expressions of the T-matrix integrals for electromagnetic scattering. Optics Letters, 2011, 36, 3482.	3.3	17
56	Bi-analyte single molecule SERS technique with simultaneous spatial resolution. Physical Chemistry Chemical Physics, 2011, 13, 4500.	2.8	31
57	Combining Surface Plasmon Resonance (SPR) Spectroscopy with Surface-Enhanced Raman Scattering (SERS). Analytical Chemistry, 2011, 83, 2337-2344.	6.5	109
58	Quantifying Resonant Raman Cross Sections With SERS. , 2010, , .		3
59	Estimating the Raman Cross Sections of Single Carbon Nanotubes. ACS Nano, 2010, 4, 3466-3470.	14.6	33
60	Quantifying Resonant Raman Cross Sections with SERS. Journal of Physical Chemistry A, 2010, 114, 5515-5519.	2.5	75
61	A Statistical Criterion for Evaluating the Single-Molecule Character of SERS Signals. Journal of Physical Chemistry C, 2010, 114, 7330-7335.	3.1	21
62	Resolving Single Molecules in Surface-Enhanced Raman Scattering within the Inhomogeneous Broadening of Raman Peaks. Analytical Chemistry, 2010, 82, 2888-2892.	6.5	81
63	Monitoring the Electrochemistry of Single Molecules by Surface-Enhanced Raman Spectroscopy. Journal of the American Chemical Society, 2010, 132, 18034-18037.	13.7	121
64	Electrochemical Modulation for Signal Discrimination in Surface Enhanced Raman Scattering (SERS). Analytical Chemistry, 2010, 82, 6919-6925.	6.5	29
65	Phenomenological local field enhancement factor distributions around electromagnetic hot spots. Journal of Chemical Physics, 2009, 130, 181101.	3.0	55
66	Evidence of Natural Isotopic Distribution from Single-Molecule SERS. Journal of the American Chemical Society, 2009, 131, 2713-2716.	13.7	61
67	Ultrafast Nonradiative Decay Rates on Metallic Surfaces by Comparing Surface-Enhanced Raman and Fluorescence Signals of Single Molecules. Physical Review Letters, 2009, 103, 063003.	7.8	114
68	Single-Molecule Surface-Enhanced Raman Spectroscopy of Nonresonant Molecules. Journal of the American Chemical Society, 2009, 131, 14466-14472.	13.7	426
69	Investigation of particle shape and size effects in SERS using T-matrix calculations. Physical Chemistry Chemical Physics, 2009, 11, 7398.	2.8	95
70	Advanced aspects of electromagnetic SERS enhancement factors at a hot spot. Journal of Raman Spectroscopy, 2008, 39, 1127-1134.	2.5	166
71	Surface enhanced Raman spectroscopy on nanolithography-prepared substrates. Current Applied Physics, 2008, 8, 467-470.	2.4	87
72	Surface-enhanced Raman scattering at a planar dielectric interface beyond critical angle. Optics Express, 2008, 16, 20117.	3.4	4

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73	SERS assertions addressed. Physics Today, 2008, 61, 13-14.	0.3	3
74	On the connection between optical absorption/extinction and SERS enhancements. Physical Chemistry Chemical Physics, 2006, 8, 3083.	2.8	121
75	Vibrational pumping and heating under SERS conditions: fact or myth?. Faraday Discussions, 2006, 132, 63-75.	3.2	33
76	Rigorous justification of the |E|4 enhancement factor in Surface Enhanced Raman Spectroscopy. Chemical Physics Letters, 2006, 423, 63-66.	2.6	349
77	Enhancement factor distribution around a single surface-enhanced Raman scattering hot spot and its relation to single molecule detection. Journal of Chemical Physics, 2006, 125, 204701.	3.0	334
78	Sub-wavelength localization of hot-spots in SERS. Chemical Physics Letters, 2004, 396, 393-397.	2.6	56
79	Influence of spin conservation on the carrier dynamics in InAs/GaAs quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 1201-1204.	0.8	1
80	Strain engineered InAs/GaAs quantum dots for 1.5 Î¼m emitters. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 1221-1224.	0.8	15
81	Photoluminescence characterization of InAs/GaAs quantum dot bilayers. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2002, 88, 164-167.	3.5	2
82	Mode structure and ray dynamics of a parabolic dome microcavity. Physical Review E, 2000, 62, 8677-8699.	2.1	18