Wei-Shun Chang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

82 papers	7,031 citations	38 h-index	83 g-index
84 ext. papers	7,798 ext. citations	11.2 avg, IF	5.82 L-index

#	Paper	IF	Citations
82	Acoustic Vibrations and Energy Dissipation Mechanisms for Lithographically Fabricated Plasmonic Nanostructures Revealed by Single-Particle Transient Extinction Spectroscopy. *Journal of Physical Chemistry C*, **2021**, 125, 1621-1636	3.8	5
81	Polarized evanescent waves reveal trochoidal dichroism. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 16143-16148	11.5	8
80	Synthesis and Multipole Plasmon Resonances of Spherical Aluminum Nanoparticles. *Journal of Physical Chemistry Letters*, **2020**, 11, 5836-5843	6.4	7
79	Acoustic Vibrations of Al Nanocrystals: Size, Shape, and Crystallinity Revealed by Single-Particle Transient Extinction Spectroscopy. *Journal of Physical Chemistry A*, **2020**, 124, 3924-3934	2.8	9
78	Laser-induced plasmonic heating in copper nanowire fabric as a photothermal catalytic reactor. *Chemical Engineering Journal*, **2020**, 379, 122285	14.7	15
77	Anti-Stokes Emission from Hot Carriers in Gold Nanorods. *Nano Letters*, **2019**, 19, 1067-1073	11.5	38
76	Ultrafast Electron Dynamics in Single Aluminum Nanostructures. *Nano Letters*, **2019**, 19, 3091-3097	11.5	28
75	Gold Nanotetrapods with Unique Topological Structure and Ultranarrow Plasmonic Band as Multifunctional Therapeutic Agents. *Journal of Physical Chemistry Letters*, **2019**, 10, 4505-4510	6.4	18
74	Active Far-Field Control of the Thermal Near-Field Plasmon Hybridization. *ACS Nano*, **2019**, 13, 9655-9663	16.7	15
73	Nanoelectrode-emitter spectral overlap amplifies surface enhanced electrogenerated chemiluminescence. *Journal of Chemical Physics*, **2019**, 151, 144712	3.9	7
72	Hot Holes Assist Plasmonic Nanoelectrode Dissolution. *Nano Letters*, **2019**, 19, 1301-1306	11.5	46
71	Snapshot Hyperspectral Imaging (SHI) for Revealing Irreversible and Heterogeneous Plasmonic Processes. *Journal of Physical Chemistry C*, **2018**, 122, 6865-6875	3.8	19
70	Photoluminescence of Gold Nanorods: Purcell Effect Enhanced Emission from Hot Carriers. *ACS Nano*, **2018**, 12, 976-985	16.7	79
69	Scattering Properties of Individual Hedgehog Particles. *Journal of Physical Chemistry C*, **2018**, 122, 12015-12021	3.8	10
68	Polycrystallinity of Lithographically Fabricated Plasmonic Nanostructures Dominates Their Acoustic Vibrational Damping. *Nano Letters*, **2018**, 18, 3494-3501	11.5	25
67	Environmental Symmetry Breaking Promotes Plasmon Mode Splitting in Gold Nanotriangles. *Journal of Physical Chemistry C*, **2018**, 122, 13259-13266	3.8	26
66	Using Particle Lithography to Tailor the Architecture of Au Nanoparticle Plasmonic Nanoring Arrays. *Journal of Physical Chemistry B*, **2018**, 122, 730-736	3.4	9

65	Optical Characterization of Gold Nanoblock Dimers: From Capacitive Coupling to Charge Transfer Plasmons and Rod Modes. *Journal of Physical Chemistry C*, **2018**, 122, 18005-18011	3.8	9
64	Au@CdSe heteroepitaxial nanorods: An example of metal nanorods fully covered by a semiconductor shell with strong photo-induced interfacial charge transfer effects. *Journal of Colloid and Interface Science*, **2018**, 532, 143-152	9.3	10
63	Exploring the Relationship between Plasmon Damping and Luminescence in Lithographically Prepared Gold Nanorods. *ACS Photonics*, **2018**, 5, 3541-3549	6.3	20
62	Imaging and Spectroscopy of Single Metal Nanostructure Absorption. *Langmuir*, **2018**, 34, 3775-3786	4	13
61	Exploiting Evanescent Field Polarization for Giant Chiroptical Modulation from Achiral Gold Half-Rings. *ACS Nano*, **2018**, 12, 11657-11663	16.7	12
60	Plasmonic Sensing and Control of Single-Nanoparticle Electrochemistry. *CheM*, **2018**, 4, 1560-1585	16.2	67
59	Spectral Response of Plasmonic Gold Nanoparticles to Capacitive Charging: Morphology Effects. *Journal of Physical Chemistry Letters*, **2017**, 8, 2681-2688	6.4	27
58	Optical characterization of chiral plasmonic nanostructures. *Journal of Photochemistry and Photobiology C: Photochemistry Reviews*, **2017**, 32, 40-57	16.4	23
57	Optomechanics of Single Aluminum Nanodisks. *Nano Letters*, **2017**, 17, 2575-2583	11.5	42
56	Optimization of Spectral and Spatial Conditions to Improve Super-Resolution Imaging of Plasmonic Nanoparticles. *Journal of Physical Chemistry Letters*, **2017**, 8, 299-306	6.4	19
55	Vibrational coupling in plasmonic molecules. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11621-11626	11.5	37
54	Correlated Absorption and Scattering Spectroscopy of Individual Platinum-Decorated Gold Nanorods Reveals Strong Excitation Enhancement in the Nonplasmonic Metal. *ACS Nano*, **2017**, 11, 12346-12357	16.7	43
53	Single-Particle Plasmon Voltammetry (spPV) for Detecting Anion Adsorption. *Nano Letters*, **2016**, 16, 2314-21	11.5	60
52	Laser-Induced Spectral Hole-Burning through a Broadband Distribution of Au Nanorods. *Journal of Physical Chemistry C*, **2016**, 120, 20518-20524	3.8	21
51	Spectroelectrochemistry of Halide Anion Adsorption and Dissolution of Single Gold Nanorods. *Journal of Physical Chemistry C*, **2016**, 120, 20604-20612	3.8	35
50	Chiral and Achiral Nanodumbbell Dimers: The Effect of Geometry on Plasmonic Properties. *ACS Nano*, **2016**, 10, 6180-8	16.7	64
49	Absorption Spectroscopy of an Individual Fano Cluster. *Nano Letters*, **2016**, 16, 6497-6503	11.5	32
48	Photoluminescence of a Plasmonic Molecule. *ACS Nano*, **2015**, 9, 7072-9	16.7	63

47	Tuning the acoustic frequency of a gold nanodisk through its adhesion layer. *Nature Communications*, **2015**, 6, 7022	17.4	48
46	Single-particle absorption spectroscopy by photothermal contrast. *Nano Letters*, **2015**, 15, 3041-7	11.5	66
45	Circular Differential Scattering of Single Chiral Self-Assembled Gold Nanorod Dimers. *ACS Photonics* , **2015**, 2, 1602-1610	6.3	75
44	Single quantum dot controls a plasmonic cavity's scattering and anisotropy. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 12288-92	11.5	40
43	Chiral templating of self-assembling nanostructures by circularly polarized light. *Nature Materials*, **2015**, 14, 66-72	27	251
42	Optical characterization of single plasmonic nanoparticles. *Chemical Society Reviews*, **2015**, 44, 40-57	58.5	258
41	Single-Crystalline Copper Nano-Octahedra. *Chemistry of Materials*, **2015**, 27, 8185-8188	9.6	34
40	From tunable core-shell nanoparticles to plasmonic drawbridges: Active control of nanoparticle optical properties. *Science Advances*, **2015**, 1, e1500988	14.3	127
39	Influence of cross sectional geometry on surface plasmon polariton propagation in gold nanowires. *ACS Nano*, **2014**, 8, 572-80	16.7	34
38	Impurity-induced plasmon damping in individual cobalt-doped hollow Au nanoshells. *Journal of Physical Chemistry B*, **2014**, 118, 14056-61	3.4	19
37	Dye-assisted gain of strongly confined surface plasmon polaritons in silver nanowires. *Nano Letters*, **2014**, 14, 3628-33	11.5	30
36	Vivid, full-color aluminum plasmonic pixels. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 14348-53	11.5	243
35	Single-particle spectroscopy reveals heterogeneity in electrochemical tuning of the localized surface plasmon. *Journal of Physical Chemistry B*, **2014**, 118, 14047-55	3.4	93
34	Comparison of chemical compositions and osteoprotective effects of different sections of velvet antler. *Journal of Ethnopharmacology*, **2014**, 151, 352-60	5	27
33	Detailed mechanism for the orthogonal polarization switching of gold nanorod plasmons. *Physical Chemistry Chemical Physics*, **2013**, 15, 4195-204	3.6	5
32	Using the plasmon linewidth to calculate the time and efficiency of electron transfer between gold nanorods and graphene. *ACS Nano*, **2013**, 7, 11209-17	16.7	158
31	Extending single molecule fluorescence observation time by amplitude-modulated excitation. *Methods and Applications in Fluorescence*, **2013**, 1, 037001-37001	3.1	11
30	Turning the corner: efficient energy transfer in bent plasmonic nanoparticle chain waveguides. *Nano Letters*, **2013**, 13, 4779-84	11.5	46

29	Mechanistic study of bleach-imaged plasmon propagation (BlIPP). *Journal of Physical Chemistry B*, **2013**, 117, 4611-7	3.4	9
28	Chiral plasmonics of self-assembled nanorod dimers. *Scientific Reports*, **2013**, 3, 1934	4.9	165
27	Enhancing the Sensitivity of Single-Particle Photothermal Imaging with Thermotropic Liquid Crystals. *Journal of Physical Chemistry Letters*, **2012**, 3, 1393-9	6.4	46
26	Identification of higher order long-propagation-length surface plasmon polariton modes in chemically prepared gold nanowires. *ACS Nano*, **2012**, 6, 8105-13	16.7	53
25	A plasmonic Fano switch. *Nano Letters*, **2012**, 12, 4977-82	11.5	291
24	Plasmonic Materials: A Plethora of Plasmonics from the Laboratory for Nanophotonics at Rice University (Adv. Mater. 36/2012). *Advanced Materials*, **2012**, 24, 4774-4774	24	4
23	Plasmon emission quantum yield of single gold nanorods as a function of aspect ratio. *ACS Nano*, **2012**, 6, 7177-84	16.7	156
22	Electromagnetic energy transport in nanoparticle chains via dark plasmon modes. *Nano Letters*, **2012**, 12, 1349-53	11.5	121
21	Toward plasmonic polymers. *Nano Letters*, **2012**, 12, 3967-72	11.5	82
20	Radiative and nonradiative properties of single plasmonic nanoparticles and their assemblies. *Accounts of Chemical Research*, **2012**, 45, 1936-45	24.3	59
19	A plethora of plasmonics from the laboratory for nanophotonics at Rice University. *Advanced Materials*, **2012**, 24, 4842-77, 4774	24	76
18	Low absorption losses of strongly coupled surface plasmons in nanoparticle assemblies. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 19879-84	11.5	49
17	One-Photon Plasmon Luminescence and Its Application to Correlation Spectroscopy as a Probe for Rotational and Translational Dynamics of Gold Nanorods. *Journal of Physical Chemistry C*, **2011**, 115, 15938-15949	3.8	174
16	Active modulation of nanorod plasmons. *Nano Letters*, **2011**, 11, 3797-802	11.5	106
15	Plasmons in strongly coupled metallic nanostructures. *Chemical Reviews*, **2011**, 111, 3913-61	68.1	2348
14	Seeing double: coupling between substrate image charges and collective plasmon modes in self-assembled nanoparticle superstructures. *ACS Nano*, **2011**, 5, 4892-901	16.7	21
13	Characterizing Plasmons in Nanoparticles and Their Assemblies with Single Particle Spectroscopy. *Journal of Physical Chemistry Letters*, **2011**, 2, 2015-2023	6.4	70
12	Plasmonic nanorod absorbers as orientation sensors. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 2781-6	11.5	222

11	Wide-field four-channel fluorescence imager for biological applications. *Journal of Biomedical Optics*, **2010**, 15, 026016	3.5	
10	Bleach-imaged plasmon propagation (BlIPP) in single gold nanowires. *Nano Letters*, **2010**, 10, 3482-5	11.5	66
9	Single-Particle Spectroscopy of Gold Nanorods beyond the Quasi-Static Limit: Varying the Width at Constant Aspect Ratio. *Journal of Physical Chemistry C*, **2010**, 114, 4934-4938	3.8	88
8	Plasmonic Nanoparticles–Liquid Crystal Composites. *Journal of Physical Chemistry C*, **2010**, 114, 7251-7257	3.8	98
7	One-dimensional coupling of gold nanoparticle plasmons in self-assembled ring superstructures. *Nano Letters*, **2009**, 9, 1152-7	11.5	90
6	Detailed single-molecule spectroelectrochemical studies of the oxidation of conjugated polymers. *Journal of Physical Chemistry B*, **2009**, 113, 14619-28	3.4	22
5	Single molecule spectroscopy of conjugated polymer chains in an electric field-aligned liquid crystal. *Journal of Physical Chemistry B*, **2008**, 112, 448-53	3.4	15
4	Structure and dynamics of conjugated polymers in liquid crystalline solvents. *Annual Review of Physical Chemistry*, **2007**, 58, 565-84	15.7	30
3	Orthogonal orientations for solvation of polymer molecules in smectic solvents. *Physical Review Letters*, **2006**, 96, 017801	7.4	14
2	Anisotropic diffusion of elongated and aligned polymer chains in a nematic solvent. *Journal of Physical Chemistry B*, **2006**, 110, 19799-803	3.4	7
1	Nematic solvation of segmented polymer chains. *Nano Letters*, **2005**, 5, 1757-60	11.5	21