Martin Moskovits

List of Publications by Year
in descending order

117 papers	20,800 citations	36691 53 h-index	25230 113 g-index
121 all docs	121 docs citations	121 times ranked	22097 citing authors

#	Article	IF	Citations
1	Surface-enhanced spectroscopy. Reviews of Modern Physics, 1985, 57, 783-826.	16.4	4,950
2	Present and Future of Surface-Enhanced Raman Scattering. ACS Nano, 2020, 14, 28-117.	7.3	2,153
3	Surface-enhanced Raman spectroscopy: a brief retrospective. Journal of Raman Spectroscopy, 2005, 36, 485-496.	1.2	1,538
4	An autonomous photosynthetic device in which all charge carriers derive from surface plasmons. Nature Nanotechnology, 2013, 8, 247-251.	15.6	1,050
5	Electromagnetic theories of surface-enhanced Raman spectroscopy. Chemical Society Reviews, 2017, 46, 4042-4076.	18.7	1,020
6	CHEMICAL SENSING AND CATALYSIS BY ONE-DIMENSIONAL METAL-OXIDE NANOSTRUCTURES. Annual Review of Materials Research, 2004, 34, 151-180.	4.3	999
7	Electrochemical Fabrication of CdS Nanowire Arrays in Porous Anodic Aluminum Oxide Templates. The Journal of Physical Chemistry, 1996, 100, 14037-14047.	2.9	641
8	Plasmonic Photoanodes for Solar Water Splitting with Visible Light. Nano Letters, 2012, 12, 5014-5019.	4.5	491
9	Anisotropic Growth of TiO₂ onto Gold Nanorods for Plasmon-Enhanced Hydrogen Production from Water Reduction. Journal of the American Chemical Society, 2016, 138, 1114-1117.	6.6	422
10	Plasmonic Photosensitization of a Wide Band Gap Semiconductor: Converting Plasmons to Charge Carriers. Nano Letters, 2011, 11, 5548-5552.	4.5	385
11	Surface-Enhanced Raman Spectroscopy for DNA Detection by Nanoparticle Assembly onto Smooth Metal Films. Journal of the American Chemical Society, 2007, 129, 6378-6379.	6.6	302
12	Persistent misconceptions regarding SERS. Physical Chemistry Chemical Physics, 2013, 15, 5301.	1.3	261
13	Enhanced Raman scattering by fractal clusters: Scale-invariant theory. Physical Review B, 1992, 46, 2821-2830.	1.1	260
14	Plasmonic Properties of Gold Nanoparticles Separated from a Gold Mirror by an Ultrathin Oxide. Nano Letters, 2012, 12, 2088-2094.	4.5	256
15	Surface-Enhanced Raman Spectroscopy and Nanogeometry:â€‰ The Plasmonic Origin of SERS. Journal of Physical Chemistry C, 2007, 111, 17985-17988.	1.5	248
16	Photon scanning tunneling microscopy images of optical excitations of fractal metal colloid clusters. Physical Review Letters, 1994, 72, 4149-4152.	2.9	235
17	Nanowires formed in anodic oxide nanotemplates. Journal of Materials Research, 1994, 9, 1014-1018.	1.2	233
18	Hot Charge Carrier Transmission from Plasmonic Nanostructures. Annual Review of Physical Chemistry, 2017, 68, 379-398.	4.8	218

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19	Templated Synthesis of Highly Ordered Mesostructured Nanowires and Nanowire Arrays. Nano Letters, 2004, 4, 2337-2342.	4.5	205
20	SERS and the Single Molecule. , 2002, , 215-227.		177
21	Rapid Identification by Surface-Enhanced Raman Spectroscopy of Cancer Cells at Low Concentrations Flowing in a Microfluidic Channel. ACS Nano, 2015, 9, 4328-4336.	7.3	177
22	Rapid Detection of Drugs of Abuse in Saliva Using Surface Enhanced Raman Spectroscopy and Microfluidics. ACS Nano, 2013, 7, 7157-7164.	7.3	174
23	Polarized Surface Enhanced Raman Scattering from Aligned Silver Nanowire Rafts. Journal of Physical Chemistry B, 2004, 108, 12724-12728.	1.2	166
24	Generalized Approach to SERS-Active Nanomaterials via Controlled Nanoparticle Linking, Polymer Encapsulation, and Small-Molecule Infusion. Journal of Physical Chemistry C, 2009, 113, 13622-13629.	1.5	160
25	Nanoscale Electroless Metal Deposition in Aligned Carbon Nanotubes. Chemistry of Materials, 1998, 10, 1963-1967.	3.2	157
26	On the Plasmonic Photovoltaic. ACS Nano, 2014, 8, 6066-6073.	7.3	152
27	Mapping Local pH in Live Cells Using Encapsulated Fluorescent SERS Nanotags. Small, 2010, 6, 618-622.	5.2	151
28	The case for plasmon-derived hot carrier devices. Nature Nanotechnology, 2015, 10, 6-8.	15.6	142
29	Large Format Surface-Enhanced Raman Spectroscopy Substrate Optimized for Enhancement and Uniformity. ACS Nano, 2016, 10, 7566-7571.	7.3	131
30	Disentangling charge carrier from photothermal effects in plasmonic metal nanostructures. Nature Communications, 2019, 10, 2671.	5.8	119
31	Aptamer-Mediated Surface-Enhanced Raman Spectroscopy Intensity Amplification. Nano Letters, 2010, 10, 4181-4185.	4.5	110
32	Polarized Raman scattering from singleGaNnanowires. Physical Review B, 2006, 74, .	1.1	107
33	Visualizing Chromatographic Separation of Metal Ions on a Surface-Enhanced Raman Active Medium. Nano Letters, 2011, 11, 145-150.	4.5	105
34	Smart SERS Hot Spots: Single Molecules Can Be Positioned in a Plasmonic Nanojunction Using Hostâ€“Guest Chemistry. Journal of the American Chemical Society, 2018, 140, 4705-4711.	6.6	102
35	Rapid, Solution-Based Characterization of Optimized SERS Nanoparticle Substrates. Journal of the American Chemical Society, 2009, 131, 162-169.	6.6	100
36	Tin-Oxide-Nanowire-Based Electronic Nose Using Heterogeneous Catalysis as a Functionalization Strategy. ACS Nano, 2010, 4, 3117-3122.	7.3	99

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37	Free-Surface Microfluidics/Surface-Enhanced Raman Spectroscopy for Real-Time Trace Vapor Detection of Explosives. Analytical Chemistry, 2012, 84, 9700-9705.	3.2	96
38	Topotactic Thermal Oxidation of Sn Nanowires:â€‰ Intermediate Suboxides and Coreâ^'Shell Metastable Structures. Nano Letters, 2003, 3, 1125-1129.	4.5	87
39	Panchromatic Photoproduction of H₂ with Surface Plasmons. Nano Letters, 2015, 15, 2132-2136.	4.5	80
40	Hot Electrons Cross Boundaries. Science, 2011, 332, 676-677.	6.0	76
41	Reversible Tuning of SERS Hot Spots with Aptamers. Advanced Materials, 2011, 23, 4152-4156.	11.1	75
42	Adsorbate Photochemistry on a Colloid Surface:Â Phthalazine on Silver. The Journal of Physical Chemistry, 1996, 100, 805-813.	2.9	70
43	Silica-based ceramics toward electromagnetic microwave absorption. Journal of the European Ceramic Society, 2021, 41, 7381-7403.	2.8	70
44	Interfacial Construction of Plasmonic Nanostructures for the Utilization of the Plasmon-Excited Electrons and Holes. Journal of the American Chemical Society, 2019, 141, 8053-8057.	6.6	68
45	Dual-reporter SERS-based biomolecular assay with reduced false-positive signals. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9056-9061.	3.3	67
46	Optimization of Surface-Enhanced Raman Spectroscopy Conditions for Implementation into a Microfluidic Device for Drug Detection. Analytical Chemistry, 2016, 88, 10513-10522.	3.2	65
47	Recent Progress and Prospects in Plasmon-Mediated Chemical Reaction. Matter, 2020, 3, 42-56.	5.0	65
48	Quantitative ratiometric discrimination between noncancerous and cancerous prostate cells based on neuropilin-1 overexpression. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16559-16564.	3.3	60
49	Detection of low concentrations of ampicillin in milk. Analyst, The, 2015, 140, 5003-5005.	1.7	59
50	SERS â€“ facts, figures and the future. Chemical Society Reviews, 2017, 46, 3864-3865.	18.7	59
51	Nanostructure-Dependent Metalâ^'Insulator Transitions in Vanadium-Oxide Nanowires. Journal of Physical Chemistry C, 2008, 112, 13328-13331.	1.5	58
52	Hot Carrier Filtering in Solution Processed Heterostructures: A Paradigm for Improving Thermoelectric Efficiency. Advanced Materials, 2014, 26, 2755-2761.	11.1	58
53	Stackable bipolar pouch cells with corrosion-resistant current collectors enable high-power aqueous electrochemical energy storage. Energy and Environmental Science, 2018, 11, 2865-2875.	15.6	58
54	Template-grown high-density nanocapacitor arrays. Applied Physics Letters, 2000, 77, 1722-1724.	1.5	54

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55	Light-induced kinetic effects in solids. Physical Review B, 1996, 53, 11388-11402.	1.1	53
56	CdSe Nanorods Dominate Photocurrent of Hybrid CdSeâ˜P3HT Photovoltaic Cell. ACS Nano, 2010, 4, 6132-6136.	7.3	50
57	Biotags Based on Surface-Enhanced Raman Can Be as Bright as Fluorescence Tags. Nano Letters, 2015, 15, 6745-6750.	4.5	49
58	Plasmon-Mediated Reduction of Aqueous Platinum Ions: The Competing Roles of Field Enhancement and Hot Charge Carriers. Journal of Physical Chemistry C, 2016, 120, 6750-6755.	1.5	49
59	Aptatagâ€Based Multiplexed Assay for Protein Detection by Surfaceâ€Enhanced Raman Spectroscopy. Small, 2010, 6, 1550-1557.	5.2	48
60	High-yield TiO2 nanowire synthesis and single nanowire field-effect transistor fabrication. Applied Physics Letters, 2008, 92, .	1.5	47
61	Fe Nanowires in Nanoporous Alumina:â€‰ Geometric Effect versus Influence of Pore Walls. Journal of Physical Chemistry C, 2008, 112, 2252-2255.	1.5	46
62	Effect of Surface Geometry on the Photochemical Reaction of 1,10-Phenanthroline Adsorbed on Silver Colloid Surfaces. Journal of Physical Chemistry B, 1997, 101, 8279-8285.	1.2	45
63	Protecting the Nanoscale Properties of Ag Nanowires with a Solution-Grown SnO₂ Monolayer as Corrosion Inhibitor. Journal of the American Chemical Society, 2019, 141, 13977-13986.	6.6	45
64	Robust SERS Enhancement Factor Statistics Using Rotational Correlation Spectroscopy. Nano Letters, 2012, 12, 2912-2917.	4.5	44
65	Insight into the Raman shifts and optical absorption changes upon annealing polymer/fullerene solar cells. Applied Physics Letters, 2008, 92, 251912.	1.5	43
66	Critical Role of Adsorption Equilibria on the Determination of Surface-Enhanced Raman Enhancement. ACS Nano, 2015, 9, 584-593.	7.3	43
67	Plasmonic nanoreactors regulating selective oxidation by energetic electrons and nanoconfined thermal fields. Science Advances, 2021, 7, .	4.7	43
68	Surface-enhanced Raman spectroscopy: Substrates and materials for research and applications. MRS Bulletin, 2013, 38, 607-611.	1.7	41
69	Dielectrophoretic Nanoparticle Aggregation for On-Demand Surface Enhanced Raman Spectroscopy Analysis. Analytical Chemistry, 2018, 90, 7930-7936.	3.2	40
70	A surface enhanced Raman study of carbon dioxide coadsorption with oxygen and alkali metals on silver surfaces. Journal of Chemical Physics, 1989, 90, 6668-6679.	1.2	38
71	Gateâ€Tunable Surface Processes on a Singleâ€Nanowire Fieldâ€Effect Transistor. Advanced Materials, 2011, 23, 2306-2312.	11.1	37
72	Photochemical decomposition at colloid surfaces. The Journal of Physical Chemistry, 1993, 97, 1678-1683.	2.9	36

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73	Spot the hotspot. Nature, 2011, 469, 307-308.	13.7	33
74	Stabilizing inorganic photoelectrodes for efficient solar-to-chemical energy conversion. Energy and Environmental Science, 2013, 6, 1633.	15.6	32
75	Plasmonâ€Mediated Photocatalytic Decomposition of Formic Acid on Palladium Nanostructures. Advanced Optical Materials, 2016, 4, 1041-1046.	3.6	32
76	Rational Component and Structure Design of Nobleâ€Metal Composites for Optical and Catalytic Applications. Small Structures, 2021, 2, 2000138.	6.9	31
77	Highâ€Efficiency Panchromatic Hybrid Schottky Solar Cells. Advanced Materials, 2013, 25, 256-260.	11.1	29
78	Microfluidic analysis of fentanyl-laced heroin samples by surface-enhanced Raman spectroscopy in a hydrophobic medium. Analyst, The, 2019, 144, 3080-3087.	1.7	29
79	Doping and interface engineering in a sandwich Ti₃C₂T_x/MoS_{2â^'x}P_x heterostructure for efficient hydrogen evolution. Journal of Materials Chemistry C, 2022, 10, 4140-4147.	2.7	26
80	Photodecomposition of Diazanaphthalenes Adsorbed on Silver Colloid Surfaces. Journal of Physical Chemistry B, 2000, 104, 3594-3600.	1.2	25
81	Growth direction determination of a single RuO2 nanowire by polarized Raman spectroscopy. Applied Physics Letters, 2010, 96, 213108.	1.5	25
82	How the localized surface plasmon became linked with surface-enhanced Raman spectroscopy. Notes and Records of the Royal Society, 2012, 66, 195-203.	0.1	25
83	Dynamics of a piezoelectric tuning fork/optical fiber assembly in a near-field scanning optical microscope. Review of Scientific Instruments, 2000, 71, 437-443.	0.6	24
84	Properly Structured, Any Metal Can Produce Intense Surface Enhanced Raman Spectra. Journal of Physical Chemistry C, 2017, 121, 14269-14273.	1.5	23
85	Photochemical Desorption of 4-Vinylbenzoic Acid Adsorbed on Silver Colloid Surfaces. Journal of Physical Chemistry B, 1997, 101, 1649-1654.	1.2	20
86	Merely Measuring the UVâ€“Visible Spectrum of Gold Nanoparticles Can Change Their Charge State. Nano Letters, 2018, 18, 669-674.	4.5	19
87	Coupling of ultrasmall and small Co P nanoparticles confined in porous SiO2 matrix for a robust oxygen evolution reaction. Nano Materials Science, 2022, 4, 393-399.	3.9	18
88	Photochemical Reactions of Phenazine and Acridine Adsorbed on Silver Colloid Surfaces. Journal of Physical Chemistry B, 2000, 104, 7462-7467.	1.2	16
89	Detection of Papaverine for the Possible Identification of Illicit Opium Cultivation. Analytical Chemistry, 2017, 89, 1684-1688.	3.2	16
90	Interference effects in surface enhanced Raman scattering by thin adsorbed layers. Journal of Chemical Physics, 1990, 92, 4600-4608.	1.2	15

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91	Synthesis of Au nanoclusters supported upon a TiO2 nanotube array. Journal of Materials Research, 2005, 20, 1093-1096.	1.2	15
92	A brief history of surfaceâ€enhanced Raman spectroscopy and the localized surface plasmon Dedicated to the memory of Richard Van Duyne (1945â€“2019). Journal of Raman Spectroscopy, 2021, 52, 279-284.	1.2	15
93	Progress and challenges of ceramics for supercapacitors. Journal of Materiomics, 2021, 7, 1198-1224.	2.8	15
94	Quantitative surface-enhanced Raman spectroscopy chemical analysis using citrate as an in situ calibrant. Analyst, The, 2019, 144, 1818-1824.	1.7	13
95	Direct and roughness-induced indirect transitions in photoemission from silver films. Surface Science, 1993, 297, L84-L90.	0.8	10
96	Polarized Raman Scattering from a Single, Segmented SnO₂ Wire. Journal of Physical Chemistry C, 2011, 115, 17270-17277.	1.5	9
97	Screening for canine transitional cell carcinoma (TCC) by SERS-based quantitative urine cytology. Nanomedicine: Nanotechnology, Biology, and Medicine, 2018, 14, 1279-1287.	1.7	8
98	Microwaveâ€Assisted Synthesis of Ultrastable Cu@TiO₂ Coreâ€Shell Nanowires with Tunable Diameters via a Redoxâ€Hydrolysis Synergetic Process. ChemNanoMat, 2018, 4, 914-918.	1.5	8
99	Changes in the structure of electrodeposited manganese oxide water oxidation catalysts revealed by in-operando Raman spectroscopy. Journal of Catalysis, 2019, 371, 287-290.	3.1	8
100	A surface plasmon enabled liquid-junction photovoltaic cell. Faraday Discussions, 2015, 178, 413-420.	1.6	7
101	A plasmonic liquid junction photovoltaic cell with greatly improved power conversion efficiency. Chemical Communications, 2016, 52, 13460-13462.	2.2	5
102	Surface enhanced Raman spectroscopy of carbon nanotubules deposited on a silver self-affine fractal surface. Journal of Applied Physics, 2002, 92, 3517-3523.	1.1	4
103	Accurately Predicting the Radiation Enhancement Factor in Plasmonic Optical Antenna Emitters. Journal of Physical Chemistry Letters, 2020, 11, 1947-1953.	2.1	4
104	Angle-dependent light scattering by highly uniform colloidal rod-shaped microparticles: Experiment and simulation. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1889-1895.	2.4	3
105	Criterion for determining resolving power in the optical near field. Journal of Nanophotonics, 2017, 11, 1.	0.4	3
106	Electrochemical Fabrication of the Nano-Wire Arrays: Template, Materials And Applications. Materials Research Society Symposia Proceedings, 1996, 451, 367.	0.1	2
107	SERS Biotags (SBTs) for the Quantitative Ratiometric Discrimination between Noncancerous and Cancerous Prostate Cells. Materials Research Society Symposia Proceedings, 2012, 1468, 19.	0.1	2
108	Phosphorus stimulated unidirectional growth of TiO2 nanostructures. Journal of Materials Chemistry A, 2013, 1, 6091.	5.2	2

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109	Progressive transition from resonant to diffuse reflection in anisotropic colloidal films. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 611-617.	2.4	2
110	Preface to the special issue dedicated to Professor Richard P. Van Duyne (1945â€“2019). Journal of Raman Spectroscopy, 2021, 52, 263-267.	1.2	2
111	Mark Stockman: Evangelist for Plasmonics. ACS Photonics, 2021, 8, 683-698.	3.2	2
112	Engineering Nanostructures for Single-Molecule Surface-Enhanced Raman Spectroscopy. Israel Journal of Chemistry, 2006, 46, 283-291.	1.0	1
113	Transforming SERS into a dependable platform for ultra-sensitive molecular sensing. , 2010, , .		1
114	Reply to â€œComment on Highâ€Efficiency Panchromatic Hybrid Schottky Solar Cellsâ€• Advanced Materials, 2013, 25, 4826-4827.	11.1	1
115	Low Cost Integrated Sensors Utilizing Patterned Nano-Structured Titania Arrays Fabricated Using a Simple Process. Materials Research Society Symposia Proceedings, 2004, 828, 313.	0.1	0
116	Catalysis and Alternatives to Liquid Fuels. Topics in Catalysis, 2009, 52, 988-992.	1.3	0
117	Canadaâ€™s early contributions to plasmonics. Canadian Journal of Chemistry, 2019, 97, 483-487.	0.6	0