Xiao Xia Han

List of Publications by Year
in descending order

100 papers	4,640 citations	101496 36 h-index	110317 64 g-index
103 all docs	103 docs citations	103 times ranked	4950 citing authors

#	Article	IF	Citations
1	Surface-enhanced Raman scattering for protein detection. Analytical and Bioanalytical Chemistry, 2009, 394, 1719-1727.	1.9	317
2	Semiconductor-enhanced Raman scattering: active nanomaterials and applications. Nanoscale, 2017, 9, 4847-4861.	2.8	289
3	Detection of Pesticide Residues in Food Using Surface-Enhanced Raman Spectroscopy: A Review. Journal of Agricultural and Food Chemistry, 2017, 65, 6719-6726.	2.4	252
4	Label-Free Highly Sensitive Detection of Proteins in Aqueous Solutions Using Surface-Enhanced Raman Scattering. Analytical Chemistry, 2009, 81, 3329-3333.	3.2	203
5	Surface-enhanced Raman spectroscopy. Nature Reviews Methods Primers, 2021, 1, .	11.8	183
6	Analytical Technique for Label-Free Multi-Protein Detection Based on Western Blot and Surface-Enhanced Raman Scattering. Analytical Chemistry, 2008, 80, 2799-2804.	3.2	150
7	Metalâ€“semiconductor heterostructures for surface-enhanced Raman scattering: synergistic contribution of plasmons and charge transfer. Materials Horizons, 2021, 8, 370-382.	6.4	124
8	Sensing of polycyclic aromatic hydrocarbons with cyclodextrin inclusion complexes on silver nanoparticles by surface-enhanced Raman scattering. Analyst, The, 2010, 135, 1389.	1.7	118
9	Protein-Mediated Sandwich Strategy for Surface-Enhanced Raman Scattering: Application to Versatile Protein Detection. Analytical Chemistry, 2009, 81, 3350-3355.	3.2	112
10	Surface-enhanced Raman scattering: realization of localized surface plasmon resonance using unique substrates and methods. Analytical and Bioanalytical Chemistry, 2009, 394, 1747-1760.	1.9	107
11	Label-free detection in biological applications of surface-enhanced Raman scattering. TrAC - Trends in Analytical Chemistry, 2012, 38, 67-78.	5.8	100
12	Fluorescein Isothiocyanate Linked Immunoabsorbent Assay Based on Surface-Enhanced Resonance Raman Scattering. Analytical Chemistry, 2008, 80, 3020-3024.	3.2	92
13	Highly Sensitive and Selective Determination of Iodide and Thiocyanate Concentrations Using Surface-Enhanced Raman Scattering of Starch-Reduced Gold Nanoparticles. Analytical Chemistry, 2011, 83, 3655-3662.	3.2	92
14	Semiconductor-driven â€œturn-offâ€• surface-enhanced Raman scattering spectroscopy: application in selective determination of chromium(<scp>vi</scp>) in water. Chemical Science, 2015, 6, 342-348.	3.7	92
15	Multiplex Immunochips for High-Accuracy Detection of AFP-L3% Based on Surface-Enhanced Raman Scattering: Implications for Early Liver Cancer Diagnosis. Analytical Chemistry, 2017, 89, 8877-8883.	3.2	88
16	Simplified Protocol for Detection of Proteinâˆ’Ligand Interactions via Surface-Enhanced Resonance Raman Scattering and Surface-Enhanced Fluorescence. Analytical Chemistry, 2008, 80, 6567-6572.	3.2	79
17	Magnetic Silver Hybrid Nanoparticles for Surface-Enhanced Resonance Raman Spectroscopic Detection and Decontamination of Small Toxic Molecules. ACS Nano, 2013, 7, 3212-3220.	7.3	71
18	Recyclable Auâ€“TiO₂ nanocomposite SERS-active substrates contributed by synergistic charge-transfer effect. Physical Chemistry Chemical Physics, 2017, 19, 11212-11219.	1.3	67

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19	Selective SERS detection of each polycyclic aromatic hydrocarbon (PAH) in a mixture of five kinds of PAHs. Journal of Raman Spectroscopy, 2011, 42, 945-950.	1.2	63
20	Potentialâ€Dependent Surfaceâ€Enhanced Resonance Raman Spectroscopy at Nanostructured TiO₂: A Case Study on Cytochrome b₅. Small, 2013, 9, 4175-4181.	5.2	63
21	High sensitive detection of penicillin G residues in milk by surface-enhanced Raman scattering. Talanta, 2017, 167, 236-241.	2.9	61
22	Highly Sensitive Protein Concentration Assay over a Wide Range via Surface-Enhanced Raman Scattering of Coomassie Brilliant Blue. Analytical Chemistry, 2010, 82, 4325-4328.	3.2	58
23	Magnetic Titanium Dioxide Nanocomposites for Surfaceâ€Enhanced Resonance Raman Spectroscopic Determination and Degradation of Toxic Anilines and Phenols. Angewandte Chemie - International Edition, 2014, 53, 2481-2484.	7.2	57
24	Coupling Reaction-Based Ultrasensitive Detection of Phenolic Estrogens Using Surface-Enhanced Resonance Raman Scattering. Analytical Chemistry, 2011, 83, 8582-8588.	3.2	56
25	Siteâ€specific deposition of Ag nanoparticles on ZnO nanorod arrays via galvanic reduction and their SERS applications. Journal of Raman Spectroscopy, 2010, 41, 907-913.	1.2	54
26	SERS strategy based on the modified Au nanoparticles for highly sensitive detection of bisphenol A residues in milk. Talanta, 2018, 179, 37-42.	2.9	53
27	A Ag synchronously deposited and doped TiO₂ hybrid as an ultrasensitive SERS substrate: a multifunctional platform for SERS detection and photocatalytic degradation. Physical Chemistry Chemical Physics, 2018, 20, 15149-15157.	1.3	52
28	Coomassie Brilliant Dyes as Surface-Enhanced Raman Scattering Probes for Proteinâˆ'Ligand Recognitions. Analytical Chemistry, 2010, 82, 4102-4106.	3.2	50
29	Micrometer-sized gold nanoplates: starch-mediated photochemical reduction synthesis and possibility of application to tip-enhanced Raman scattering (TERS). Physical Chemistry Chemical Physics, 2012, 14, 9636.	1.3	49
30	Detection of proteins on Silicaâ€"Silver Coreâ€"Shell substrates by surface-enhanced Raman spectroscopy. Journal of Colloid and Interface Science, 2011, 360, 482-487.	5.0	45
31	Investigation of Charge Transfer in Ag/N719/TiO2 Interface by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 13078-13086.	1.5	43
32	Surface-enhanced Raman spectroscopy and density functional theory study on 4,4â€²-bipyridine molecule. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2007, 67, 509-516.	2.0	41
33	Structural Features of DNA G-Quadruplexes Revealed by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2018, 9, 3245-3252.	2.1	41
34	Preparation and SERS study of triangular silver nanoparticle selfâ€assembled films. Journal of Raman Spectroscopy, 2008, 39, 1673-1678.	1.2	39
35	Label-Free Detection of Tetramolecular i-Motifs by Surface-Enhanced Raman Spectroscopy. Analytical Chemistry, 2018, 90, 2996-3000.	3.2	39
36	Surface-Enhanced Raman Scattering for Direct Protein Function Investigation: Controlled Immobilization and Orientation. Analytical Chemistry, 2019, 91, 8767-8771.	3.2	37

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37	An ionic surfactant-mediated Langmuirâ€"Blodgett method to construct gold nanoparticle films for surface-enhanced Raman scattering. Physical Chemistry Chemical Physics, 2012, 14, 10132.	1.3	36
38	An enhanced degree of charge transfer in dye-sensitized solar cells with a ZnO-TiO₂/N3/Ag structure as revealed by surface-enhanced Raman scattering. Nanoscale, 2017, 9, 15303-15313.	2.8	36
39	Direct Approach toward Label-Free DNA Detection by Surface-Enhanced Raman Spectroscopy: Discrimination of a Single-Base Mutation in 50 Base-Paired Double Helixes. Analytical Chemistry, 2019, 91, 7980-7984.	3.2	36
40	Revealing interfacial charge transfer in TiO2/reduced graphene oxide nanocomposite by surface-enhanced Raman scattering (SERS): Simultaneous a superior SERS-active substrate. Applied Surface Science, 2019, 487, 938-944.	3.1	36
41	Labelâ€Free Indirect Immunoassay Using an Avidinâ€Induced Surfaceâ€Enhanced Raman Scattering Substrate. Small, 2011, 7, 316-320.	5.2	35
42	Mesoporous semiconducting TiO₂ with rich active sites as a remarkable substrate for surface-enhanced Raman scattering. Physical Chemistry Chemical Physics, 2017, 19, 18731-18738.	1.3	35
43	Direct detection of fluoride ions in aquatic samples by surface-enhanced Raman scattering. Talanta, 2018, 178, 9-14.	2.9	34
44	pH-Dependent SERS by Semiconductor-Controlled Charge-Transfer Contribution. Journal of Physical Chemistry C, 2012, 116, 24829-24836.	1.5	32
45	Surface-enhanced Raman scattering (SERS) as a probe for detection of charge-transfer between TiO₂ and CdS nanoparticles. New Journal of Chemistry, 2019, 43, 230-237.	1.4	32
46	Redoxâ€Stateâ€Mediated Regulation of Cytochromeâ€…c Release in Apoptosis Revealed by Surfaceâ€Enhanced Raman Scattering on Nickel Substrates. Angewandte Chemie - International Edition, 2019, 58, 16499-16503.	7.2	31
47	Density functional theory calculation of vibrational spectroscopy of trans-1,2-bis(4-pyridyl)-ethylene. Vibrational Spectroscopy, 2007, 43, 306-312.	1.2	30
48	Indirect glyphosate detection based on ninhydrin reaction and surface-enhanced Raman scattering spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 197, 78-82.	2.0	30
49	Surface-enhanced Raman scattering on organicâ€"inorganic hybrid perovskites. Chemical Communications, 2018, 54, 2134-2137.	2.2	30
50	Charge-Transfer-Induced Enantiomer Selective Discrimination of Chiral Alcohols by SERS. Journal of Physical Chemistry C, 2016, 120, 29374-29381.	1.5	28
51	Optical properties of Ag/CdTe nanocomposite self-organized by electrostatic interaction. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 64, 101-105.	2.0	27
52	Highly-dispersed TiO₂ nanoparticles with abundant active sites induced by surfactants as a prominent substrate for SERS: charge transfer contribution. Physical Chemistry Chemical Physics, 2017, 19, 22302-22308.	1.3	27
53	Frequency Shifts in Surface-Enhanced Raman Spectroscopy-Based Immunoassays: Mechanistic Insights and Application in Protein Carbonylation Detection. Analytical Chemistry, 2019, 91, 9376-9381.	3.2	27
54	Labelâ€free detection of binary mixtures of proteins using surfaceâ€enhanced Raman scattering. Journal of Raman Spectroscopy, 2012, 43, 706-711.	1.2	26

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55	Investigation of charge transfer at the TiO₂â€“MBAâ€“Au interface based on surface-enhanced Raman scattering: SPR contribution. Physical Chemistry Chemical Physics, 2018, 20, 5666-5673.	1.3	25
56	Comprehensive Strategy for Sample Preparation for the Analysis of Food Contaminants and Residues by GCâ€“MS/MS: A Review of Recent Research Trends. Foods, 2021, 10, 2473.	1.9	25
57	Mercury species induced frequency-shift of molecular orientational transformation based on SERS. Analyst, The, 2016, 141, 4782-4788.	1.7	24
58	Nickel Nanowires Combined with Surface-Enhanced Raman Spectroscopy: Application in Label-Free Detection of Cytochrome c-Mediated Apoptosis. Analytical Chemistry, 2019, 91, 1213-1216.	3.2	24
59	Label-Free and Highly Sensitive Detection of Native Proteins by Ag IANPs via Surface-Enhanced Raman Spectroscopy. Analytical Chemistry, 2020, 92, 14325-14329.	3.2	24
60	Anatase TiO₂ nanoparticles with controllable crystallinity as a substrate for SERS: improved charge-transfer contribution. RSC Advances, 2015, 5, 80269-80275.	1.7	23
61	SERS investigation and detection of levofloxacin drug molecules on semiconductor TiO2: Charge transfer contribution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 508, 142-149.	2.3	23
62	Laser heating effect on Raman spectra of styreneâ€“butadiene rubber/multiwalled carbon nanotube nanocomposites. Chemical Physics Letters, 2012, 523, 87-91.	1.2	22
63	Antibody-Free Discrimination of Protein Biomarkers in Human Serum Based on Surface-Enhanced Raman Spectroscopy. Analytical Chemistry, 2018, 90, 12342-12346.	3.2	22
64	In-situ fingerprinting phosphorylated proteins via surface-enhanced Raman spectroscopy: Single-site discrimination of Tau biomarkers in Alzheimer's disease. Biosensors and Bioelectronics, 2021, 171, 112748.	5.3	22
65	A rapid and ultrasensitive SERRS assay for histidine and tyrosine based on azo coupling. Talanta, 2016, 159, 208-214.	2.9	20
66	Charge-Transfer Effect on Surface-Enhanced Raman Spectroscopy in Ag/PTCA: Herzbergâ€“Teller Selection Rules. Journal of Physical Chemistry C, 2017, 121, 25788-25794.	1.5	20
67	One plus one greater than Two: Ultrasensitive Surface-Enhanced Raman scattering by TiO2/ZnO heterojunctions based on Electron-Hole separation. Applied Surface Science, 2022, 584, 152609.	3.1	20
68	Base-Pair Contents and Sequences of DNA Double Helices Differentiated by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 3013-3018.	2.1	19
69	Nickel electrodes as a cheap and versatile platform for studying structure and function of immobilized redox proteins. Analytica Chimica Acta, 2016, 941, 35-40.	2.6	17
70	Double Metal Co-Doping of TiO₂ Nanoparticles for Improvement of their SERS Activity and Ultrasensitive Detection of Enrofloxacin: Regulation Strategy of Energy Levels. ChemistrySelect, 2017, 2, 3099-3105.	0.7	17
71	Surface-Enhanced Raman Scattering (SERS) Active Gold Nanoparticles Decorated on a Porous Polymer Filter. Applied Spectroscopy, 2017, 71, 1543-1550.	1.2	17
72	SERS investigation and high sensitive detection of carbenicillin disodium drug on the Ag substrate. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 204, 241-247.	2.0	17

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73	Metal-free SERS substrate based on rGOâ€“TiO₂â€“Fe₃O₄ nanohybrid: contribution from interfacial charge transfer and magnetic controllability. Physical Chemistry Chemical Physics, 2019, 21, 12850-12858.	1.3	16
74	Direct Dynamic Evidence of Charge Separation in a Dyeâ€Sensitized Solar Cell Obtained under Operando Conditions by Raman Spectroscopy. Angewandte Chemie - International Edition, 2020, 59, 10780-10784.	7.2	16
75	Electron Transfer of Cytochromeâ€…<i>c</i> on Surfaceâ€Enhanced Raman Scatteringâ€“Active Substrates: Material Dependence and Biocompatibility. Chemistry - A European Journal, 2017, 23, 9034-9038.	1.7	15
76	Biomagnetic glass beads for protein separation and detection based on surface-enhanced Raman scattering. Analytical Methods, 2012, 4, 1643.	1.3	14
77	Investigation of the binding sites and orientation of Norfloxacin on bovine serum albumin by surface enhanced Raman scattering and molecular docking. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 207, 307-312.	2.0	14
78	Ultrasensitive detection of thyrotropin-releasing hormone based on azo coupling and surface-enhanced resonance Raman spectroscopy. Analyst, The, 2016, 141, 5181-5188.	1.7	13
79	Reduced Charge-Transfer Threshold in Dye-Sensitized Solar Cells with an Au@Ag/N3/<i>n</i>-TiO₂ Structure As Revealed by Surface-Enhanced Raman Scattering. Journal of Physical Chemistry C, 2018, 122, 12748-12760.	1.5	13
80	Crocein Orange G mediated detection and modulation of amyloid fibrillation revealed by surface-enhanced Raman spectroscopy. Biosensors and Bioelectronics, 2020, 148, 111816.	5.3	13
81	Electron transfer between cytochrome c and microsomal monooxygenase generates reactive oxygen species that accelerates apoptosis. Redox Biology, 2022, 53, 102340.	3.9	12
82	The mechanism of an enzymatic reaction-induced SERS transformation for the study of enzymeâ€“molecule interfacial interactions. Physical Chemistry Chemical Physics, 2016, 18, 31787-31795.	1.3	11
83	Charge Transfer at the TiO₂/N3/Ag Interface Monitored by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 5145-5153.	1.5	11
84	Enhanced Raman spectroscopic analysis of protein post-translational modifications. TrAC - Trends in Analytical Chemistry, 2020, 131, 116019.	5.8	11
85	High-efficiency charge transfer on SERS-active semiconducting K2Ti6O13 nanowires enables direct transition of photoinduced electrons to protein redox centers. Biosensors and Bioelectronics, 2021, 191, 113452.	5.3	11
86	In situ semi-quantitative assessment of single-cell viability by resonance Raman spectroscopy. Chemical Communications, 2018, 54, 7135-7138.	2.2	10
87	Interfacial Charge Transfer in TiO2/PTCA/Ag Revealed by Surface-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 15208-15213.	1.5	10
88	Multiple weak interactionâ€assisted SERS detection platform for triadimefon. Journal of Raman Spectroscopy, 2015, 46, 54-58.	1.2	8
89	Quantitative Determination of Total Amino Acids Based on Surface-Enhanced Raman Scattering and Ninhydrin Derivatization. Analytical Sciences, 2017, 33, 53-57.	0.8	8
90	Biological Applications of SERS Using Functional Nanoparticles. ACS Symposium Series, 2012, , 181-234.	0.5	7

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91	Molecular form-specific immunoassays for neutrophil gelatinase-associated lipocalin by surface-enhanced Raman spectroscopy. Sensors and Actuators B: Chemical, 2019, 297, 126742.	4.0	6
92	Role of 2â€'13C Isotopic Glyphosate Adsorption on Silver Nanoparticles Based on Ninhydrin Reaction: A Study Based on Surfaceâ€"Enhanced Raman Spectroscopy. Nanomaterials, 2020, 10, 2539.	1.9	6
93	Ferrous cytochrome c-nitric oxide oxidation for quantification of protein S-nitrosylation probed by resonance Raman spectroscopy. Sensors and Actuators B: Chemical, 2020, 308, 127706.	4.0	6
94	Surface-enhanced Raman scattering (SERS) and applications. , 2020, , 349-386.		5
95	Direct Dynamic Evidence of Charge Separation in a Dyeâ€Sensitized Solar Cell Obtained under Operando Conditions by Raman Spectroscopy. Angewandte Chemie, 2020, 132, 10872-10876.	1.6	5
96	A Turn-On Resonance Raman Scattering (BCS/Cu+) Sensor for Quantitative Determination of Proteins. Applied Spectroscopy, 2016, 70, 355-362.	1.2	4
97	Label-Free Analysis of Cell Membrane Proteins via Evanescent Field Excited Surface-Enhanced Raman Scattering. Journal of Physical Chemistry Letters, 2021, 12, 10720-10727.	2.1	2
98	An investigation of the effect of high-pressure on charge transfer in dye-sensitized solar cells based on surface-enhanced Raman spectroscopy. Nanoscale, 2022, 14, 373-381.	2.8	2
99	Redoxâ€Stateâ€Mediated Regulation of Cytochromeâ€…c Release in Apoptosis Revealed by Surfaceâ€Enhanced Raman Scattering on Nickel Substrates. Angewandte Chemie, 2019, 131, 16651-16655.	1.6	0
100	Innentitelbild: Direct Dynamic Evidence of Charge Separation in a Dyeâ€Sensitized Solar Cell Obtained under Operando Conditions by Raman Spectroscopy (Angew. Chem. 27/2020). Angewandte Chemie, 2020, 132, 10758-10758.	1.6	0