

Lai-Kwan Chau

List of Publications by Year in descending order

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109
papers

3,533
citations

117625

34
h-index

149698

56
g-index

111
all docs

111
docs citations

111
times ranked

3661
citing authors

#	ARTICLE	IF	CITATIONS
1	Colloidal Gold-Modified Optical Fiber for Chemical and Biochemical Sensing. <i>Analytical Chemistry</i> , 2003, 75, 16-21.	6.5	285
2	Sensing capability of the localized surface plasmon resonance of gold nanorods. <i>Biosensors and Bioelectronics</i> , 2007, 22, 926-932.	10.1	231
3	Fiber-optic chemical and biochemical probes based on localized surface plasmon resonance. <i>Sensors and Actuators B: Chemical</i> , 2006, 113, 100-105.	7.8	200
4	Fiber-optic biochemical sensing with a colloidal gold-modified long period fiber grating. <i>Sensors and Actuators B: Chemical</i> , 2006, 119, 105-109.	7.8	116
5	Direct detection of orchid viruses using nanorod-based fiber optic particle plasmon resonance immunosensor. <i>Biosensors and Bioelectronics</i> , 2014, 51, 371-378.	10.1	113
6	On-line SERS Detection of Single Bacterium Using Novel SERS Nanoprobes and A Microfluidic Dielectrophoresis Device. <i>Small</i> , 2014, 10, 4700-4710.	10.0	100
7	Nickel hexacyanoferrate multilayers on functionalized mesoporous silica supports for selective sorption and sensing of cesium. <i>Microporous and Mesoporous Materials</i> , 2008, 109, 505-512.	4.4	87
8	Novel Amphiphilic Phthalocyanines: Formation of Langmuir-Blodgett and Cast Thin Films. <i>Langmuir</i> , 1996, 12, 4784-4796.	3.5	86
9	Organic/inorganic-molecular beam epitaxy: formation of an ordered phthalocyanine/tin(IV) sulfide heterojunction. <i>Chemistry of Materials</i> , 1991, 3, 829-838.	6.7	83
10	Nanoaggregate-Embedded Beads as Novel Raman Labels for Biodetection. <i>Advanced Functional Materials</i> , 2009, 19, 242-248.	14.9	83
11	Novel Sol-Gel-Derived Material for Separation and Optical Sensing of Metal Ions: Propyl-ethylenediamine Triacetate Functionalized Silica. <i>Chemistry of Materials</i> , 1999, 11, 2141-2147.	6.7	65
12	Fiber-optic particle plasmon resonance sensor for detection of interleukin-1 β in synovial fluids. <i>Biosensors and Bioelectronics</i> , 2010, 26, 1036-1042.	10.1	65
13	Sol-gel encapsulation of lactate dehydrogenase for optical sensing of γ -lactate. <i>Biosensors and Bioelectronics</i> , 2002, 17, 323-330.	10.1	63
14	Silica encapsulated SERS nanoprobe conjugated to the bacteriophage tailspike protein for targeted detection of <i>Salmonella</i> . <i>Chemical Communications</i> , 2012, 48, 1024-1026.	4.1	63
15	Single-Domain Antibody-Conjugated Nanoaggregate-Embedded Beads for Targeted Detection of Pathogenic Bacteria. <i>Chemistry - A European Journal</i> , 2009, 15, 9330-9334.	3.3	60
16	Spectroscopic and Electrochemical Characterization of Langmuir-Blodgett Films of (2,3,9,10,16,17,23,24-Octakis((2-benzoyloxy)ethoxy)phthalocyaninato)copper and Its Metal-free Analogue. <i>Langmuir</i> , 1997, 13, 6568-6576.	3.5	58
17	Fiber optic nanogold-linked immunosorbent assay for rapid detection of procalcitonin at femtomolar concentration level. <i>Biosensors and Bioelectronics</i> , 2020, 151, 111871.	10.1	58
18	Integration of fiber optic-particle plasmon resonance biosensor with microfluidic chip. <i>Analytica Chimica Acta</i> , 2011, 697, 75-82.	5.4	57

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19	Silanization of solid surfaces via mercaptopropylsilatrane: a new approach of constructing gold colloid monolayers. <i>RSC Advances</i> , 2014, 4, 46527-46535.	3.6	55
20	Quantification of tumor necrosis factor- α and matrix metalloproteinases-3 in synovial fluid by a fiber-optic particle plasmon resonance sensor. <i>Analyst</i> , 2013, 138, 4599.	3.5	51
21	Detection of antinuclear antibodies by a colloidal gold modified optical fiber: comparison with ELISA. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 388, 901-907.	3.7	48
22	Preparation of colloidal gold multilayers with 3-(mercaptopropyl)-trimethoxysilane as a linker molecule. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2001, 182, 239-245.	4.7	47
23	Surface isoelectric point of evaporated silver films: Determination by contact angle titration. <i>Journal of Colloid and Interface Science</i> , 1991, 145, 283-286.	9.4	46
24	Reduction of dirhodium(II) complexes of the type $[\text{Rh}_2(\text{O}_2\text{CCH}_3)_3(\text{L})]^+$. An ESR investigation. <i>Inorganic Chemistry</i> , 1986, 25, 1514-1516.	4.0	44
25	Functional Biointerfaces Based on Mixed Zwitterionic Self-Assembled Monolayers for Biosensing Applications. <i>Langmuir</i> , 2019, 35, 1652-1661.	3.5	44
26	Using A Fiber Optic Particle Plasmon Resonance Biosensor To Determine Kinetic Constants of Antigen-Antibody Binding Reaction. <i>Analytical Chemistry</i> , 2013, 85, 245-250.	6.5	43
27	Supramolecular fibers from a liquid crystalline octa-substituted copper phthalocyanine. <i>Advanced Materials</i> , 1996, 8, 926-928.	21.0	42
28	Amperometric Lactate Sensor Based on Sol-Gel Processing of an Enzyme-Linked Silicon Alkoxide. <i>Analytical Chemistry</i> , 2007, 79, 3757-3763.	6.5	41
29	Anion-Exchange Material with pH-Switchable Surface Charge Prepared by Sol-Gel Processing of an Organofunctional Silicon Alkoxide. <i>Chemistry of Materials</i> , 2001, 13, 1124-1130.	6.7	40
30	Composition and structure of spontaneously adsorbed monolayers of n-perfluorocarboxylic acids on silver. <i>Chemical Physics Letters</i> , 1990, 167, 198-204.	2.6	39
31	Intensity-detection-based guided-mode-resonance optofluidic biosensing system for rapid, low-cost, label-free detection. <i>Sensors and Actuators B: Chemical</i> , 2017, 250, 659-666.	7.8	39
32	Improved performance of aminopropylsilatrane over aminopropyltriethoxysilane as a linker for nanoparticle-based plasmon resonance sensors. <i>Sensors and Actuators B: Chemical</i> , 2012, 163, 207-215.	7.8	38
33	Epitaxial phthalocyanine thin films and phthalocyanine/C60 multilayers. <i>Synthetic Metals</i> , 1993, 54, 351-362.	3.9	36
34	Effect of Surface Coverage of Gold Nanoparticles on the Refractive Index Sensitivity in Fiber-Optic Nanoplasmonic Sensing. <i>Sensors</i> , 2018, 18, 1759.	3.8	36
35	Optical sensor for calcium: performance, structure, and reactivity of calcichrome immobilized at an anionic polymer film. <i>Analytical Chemistry</i> , 1990, 62, 1964-1971.	6.5	32
36	Doubly resonant surface-enhanced Raman scattering on gold nanorod decorated inverse opal photonic crystals. <i>Optics Express</i> , 2012, 20, 29266.	3.4	32

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37	Synthesis and characterization of dirhodium complexes with four N,N'-diphenylbenzamidine bridging ligands. Electrochemical generation and ESR properties of [Rh ₂ (N ₂ R ₂ CR) ₄] _n where R = Phenyl and n = 1 and -1. <i>Journal of the American Chemical Society</i> , 1985, 107, 7195-7197.	13.7	31
38	Single-step approach to β -cyclodextrin-bonded silica as monolithic stationary phases for CEC. <i>Journal of Separation Science</i> , 2008, 31, 1819-1827.	2.5	31
39	Self-referencing fiber optic particle plasmon resonance sensing system for real-time biological monitoring. <i>Talanta</i> , 2016, 146, 291-298.	5.5	30
40	Enhanced sensitivity in injection-molded guided-mode-resonance sensors via low-index cavity layers. <i>Optics Express</i> , 2015, 23, 14850.	3.4	29
41	Sol-gel monolithic anion-exchange column for capillary electrochromatography. <i>Analytica Chimica Acta</i> , 2006, 576, 117-123.	5.4	28
42	Hybrid surface-enhanced Raman scattering substrate from gold nanoparticle and photonic crystal: Maneuverability and uniformity of Raman spectra. <i>Optics Express</i> , 2009, 17, 21522.	3.4	28
43	Synthesis of silica-coated gold nanorod as Raman tags by modulating cetyltrimethylammonium bromide concentration. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2012, 409, 61-68.	4.7	28
44	A low cost, label-free biosensor based on a novel double-sided grating waveguide coupler with sub-surface cavities. <i>Sensors and Actuators B: Chemical</i> , 2015, 206, 371-380.	7.8	28
45	Multiple resonance fiber-optic sensor with time division multiplexing for multianalyte detection. <i>Optics Letters</i> , 2012, 37, 3969.	3.3	27
46	Novel U-shape gold nanoparticles-modified optical fiber for localized plasmon resonance chemical sensing. <i>Microsystem Technologies</i> , 2010, 16, 1207-1214.	2.0	26
47	Controlled Silanization: High Molecular Regularity of Functional Thiol Groups on Siloxane Coatings. <i>Langmuir</i> , 2020, 36, 5935-5943.	3.5	26
48	Enhancing Upconversion Luminescence Emission of Rare Earth Nanophosphors in Aqueous Solution with Thousands Fold Enhancement Factor by Low Refractive Index Resonant Waveguide Grating. <i>ACS Photonics</i> , 2018, 5, 3263-3271.	6.6	25
49	Facile Functionalization of Polymer Surfaces in Aqueous and Polar Organic Solvents via 3-Mercaptopropylsilatrane. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 34159-34169.	8.0	24
50	Optofluidic refractive-index sensors employing bent waveguide structures for low-cost, rapid chemical and biomedical sensing. <i>Optics Express</i> , 2018, 26, 273.	3.4	23
51	Low-cost planar waveguide-based optofluidic sensor for real-time refractive index sensing. <i>Optics Express</i> , 2020, 28, 27337.	3.4	23
52	Dye aggregates and organic superlattices formed by organic-inorganic molecular beam epitaxy. <i>Thin Solid Films</i> , 1992, 216, 90-95.	1.8	22
53	Epitaxial Growth of the Ionic Polymer Fluoroaluminum Phthalocyanine on the Basal Plane of Single Crystal Tin Disulfide. <i>Chemistry of Materials</i> , 1995, 7, 2127-2135.	6.7	22
54	Electroosmotic flow controllable coating on a capillary surface by a sol-gel process for capillary electrophoresis. <i>Journal of Chromatography A</i> , 2002, 952, 255-266.	3.7	22

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55	Single-step approach for fabrication of vancomycin-bonded silica monolith as chiral stationary phase. <i>Journal of Chromatography A</i> , 2014, 1358, 208-216.	3.7	22
56	A Novel Design of Grooved Fibers for Fiber-Optic Localized Plasmon Resonance Biosensors. <i>Sensors</i> , 2009, 9, 6456-6470.	3.8	21
57	Electrochemical behavior of an anion-exchanger modified electrode prepared by sol-gel processing of an organofunctional silicon alkoxide. <i>Electrochimica Acta</i> , 2004, 49, 573-580.	5.2	20
58	A fiber optic nanoplasmonic biosensor for the sensitive detection of ampicillin and its analogs. <i>Mikrochimica Acta</i> , 2020, 187, 396.	5.0	19
59	Fiber optic particle plasmon resonance immunosensor for rapid and sensitive detection of methamphetamine based on competitive inhibition. <i>Microchemical Journal</i> , 2020, 157, 105026.	4.5	19
60	Rhodium complexes with axially and equatorially nonequivalent rhodium atoms. Characterization of Rh ₂ (tcl) ₄ (tclH) and Rh ₂ (tcl) ₄ (CO) (tcl = .omega.-thiocaprolactamate). <i>Inorganic Chemistry</i> , 1987, 26, 822-829.	4.0	18
61	Dye Sensitization with Octasubstituted Liquid Crystalline Phthalocyanines. <i>Langmuir</i> , 1994, 10, 351-353.	3.5	18
62	Microfabricated Silicon Flow-Cell for Optical Monitoring of Biological Fluids.. <i>Analytical Sciences</i> , 1999, 15, 721-724.	1.6	18
63	Corona-induced micro-centrifugal flows for concentration of Neisseria and Salmonella bacteria prior to their quantitation using antibody-functionalized SERS-reporter nanobeads. <i>Mikrochimica Acta</i> , 2017, 184, 1021-1028.	5.0	16
64	Gold nanorods conjugated upconversion nanoparticles nanocomposites for simultaneous bioimaging, local temperature sensing and photothermal therapy of OML-1 oral cancer cells. <i>International Journal of Smart and Nano Materials</i> , 2021, 12, 49-71.	4.2	16
65	Electrohydrodynamically enhanced drying droplets for concentration of Salmonella bacteria prior to their detections using antibody-functionalized SERS-reporter submicron beads. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 384-389.	7.8	14
66	MutS protein-based fiber optic particle plasmon resonance biosensor for detecting single nucleotide polymorphisms. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 3329-3337.	3.7	14
67	Novel D-type Fiber Optic Localized Plasmon Resonance Sensor Realized by Femtosecond Laser Engraving. <i>Journal of Laser Micro Nanoengineering</i> , 2010, 5, 1-5.	0.1	14
68	Periodic Multilayers of Perylene-3,4:9,10-Tetracarboxylic Dianhydride and Chloroindium Phthalocyanine: Limitations to Long-Term Stability. <i>Chemistry of Materials</i> , 1995, 7, 657-662.	6.7	13
69	Detection of Hg(II) at Part-Per-Quadrillion Levels by Fiber Optic Plasmonic Absorption Using DNA Hairpin and DNA-Gold Nanoparticle Conjugates. <i>ACS Applied Nano Materials</i> , 2021, 4, 10128-10135.	5.0	13
70	Novel Method for Differentiating Histological Types of Gastric Adenocarcinoma by Using Confocal Raman Microspectroscopy. <i>PLoS ONE</i> , 2016, 11, e0159829.	2.5	13
71	Using ac-Field-Induced Electro-osmosis to Accelerate Biomolecular Binding in Fiber-Optic Sensing Chips with Microstructures. <i>Analytical Chemistry</i> , 2010, 82, 1123-1127.	6.5	12
72	Fabrication of titania inverse opals by multi-cycle dip-infiltration for optical sensing. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2016, 19, 48-54.	2.0	12

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73	Effect of elimination on antifouling and pH-responsive properties of carboxybetaine materials. <i>Chemical Communications</i> , 2017, 53, 9143-9146.	4.1	12
74	Fiber Optic Particle Plasmon Resonance Biosensor for Label-Free Detection of Nucleic Acids and Its Application to HLA-B27 mRNA Detection in Patients with Ankylosing Spondylitis. <i>Sensors</i> , 2020, 20, 3137.	3.8	11
75	Detection of Riboflavin Based on Fluorescence Enhancement of Evanescent-Wave Excited β -Cyclodextrin Complex in Sol-Gel-Derived Porous Coatings. <i>Applied Spectroscopy</i> , 2000, 54, 15-19.	2.2	10
76	Sol-Gel-Coated Poly(methyl methacrylate) as a Substrate for Localized Surface Plasmon Resonance Biosensors. <i>Journal of Biomedical Nanotechnology</i> , 2005, 1, 143-150.	1.1	10
77	Development of microfluidic concentrator using ion concentration polarization mechanism to assist trapping magnetic nanoparticle-bound miRNA to detect with Raman tags. <i>Biomicrofluidics</i> , 2020, 14, 014102.	2.4	10
78	Fiber-Optic Evanescent-Wave Absorption Copper(II) Sensor Based on Sol-Gel-Derived Organofunctionalized Silica Cladding. <i>Applied Spectroscopy</i> , 2001, 55, 1320-1326.	2.2	8
79	Dual-functional gold-iron oxide core-satellite hybrid nanoparticles for sensitivity enhancement in biosensors via nanoplasmonic and preconcentration effects. <i>Analyst</i> , 2021, 146, 6935-6943.	3.5	8
80	Quantitative and amplification-free detection of SOCS-1 CpG methylation percentage analyses in gastric cancer by fiber optic nanoplasmonic biosensor. <i>Biosensors and Bioelectronics</i> , 2022, 214, 114540.	10.1	8
81	Calcichrome: a re-examination of its structure and chemical properties by solid- and liquid-state NMR, infrared spectroscopy, and selective chemical degradation. <i>Analytica Chimica Acta</i> , 1989, 217, 31-42.	5.4	7
82	Tubular waveguide evanescent field absorption biosensor based on particle plasmon resonance for multiplex label-free detection. <i>Biosensors and Bioelectronics</i> , 2013, 41, 268-274.	10.1	7
83	Integrated Graphene Oxide with Noble Metal Nanoparticles to Develop High-Sensitivity Fiber Optic Particle Plasmon Resonance (FOPPR) Biosensor for Biomolecules Determination. <i>Nanomaterials</i> , 2021, 11, 635.	4.1	6
84	Versatile Thiol- and Amino-Functionalized Silatranes for in-situ polymerization and Immobilization of Gold Nanoparticles. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2022, 132, 104129.	5.3	6
85	Using nonlinear ac electrokinetics vortex flow to enhance catalytic activities of sol-gel encapsulated trypsin in microfluidic devices. <i>Biomicrofluidics</i> , 2007, 1, 34104.	2.4	4
86	Low cost, rapid fabrication of durable molds of grating arrays for nanoimprint lithography. <i>Microelectronic Engineering</i> , 2011, 88, 3062-3066.	2.4	4
87	Integration of a Thermoelectric Heating Unit with Ionic Wind-Induced Droplet Centrifugation Chip to Develop Miniaturized Concentration Device for Rapid Determination of Salmonella on Food Samples Using Antibody-Functionalized SERS Tags. <i>Sensors</i> , 2020, 20, 7177.	3.8	4
88	A Fiber Optic Particle Plasmon Resonance Biosensing Platform Based on Detection of Light Scattering Intensity from the Proximal End. <i>Journal of the Chinese Chemical Society</i> , 2011, 58, 786-792.	1.4	3
89	Fabrication and characterization of a fused silica-based optical waveguide with femtosecond fiber laser pulses. <i>Microsystem Technologies</i> , 2012, 18, 1815-1821.	2.0	3
90	Label-free SERS characterization of snake venoms by exploring the cysteine environs with bone-shaped gold nanoparticles. <i>Journal of Materials Chemistry B</i> , 2020, 8, 10744-10753.	5.8	3

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91	Langmuir-Blodgett Films of Alkanethiolate Gold Nanorods. Journal of the Chinese Chemical Society, 2003, 50, 1015-1021.	1.4	2
92	Multimode fiber Mach-Zehnder interferometer for measurement of refractive index. , 2010, , .		2
93	Fiber optic particle plasmon resonance sensor based on plasmonic light scattering interrogation. Annalen Der Physik, 2012, 524, 705-712.	2.4	2
94	Nonspecific binding removal and specific binding regeneration using longitudinal acoustic waves. RSC Advances, 2013, 3, 16159.	3.6	2
95	Biosensors: On-line SERS Detection of Single Bacterium Using Novel SERS Nanoprobes and A Microfluidic Dielectrophoresis Device (Small 22/2014). Small, 2014, 10, 4414-4414.	10.0	2
96	Role of medial abrasion phenomenon in the pathogenesis of knee osteoarthritis. Medical Hypotheses, 2015, 85, 207-211.	1.5	2
97	Multiplex fiber-optic biosensor using multiple particle plasmon resonances. , 2012, , .		1
98	A New Surface Modifying Material "Mercaptosilatrane" for Particle Plasmon Resonance Sensor. Key Engineering Materials, 2014, 605, 123-126.	0.4	1
99	Detection of amphetamine-type stimulants using sample derivatization and SALDI-TOF-MS. Journal of the Chinese Chemical Society, 0, , .	1.4	1
100	Optical biosensor based on colloidal gold-modified long-period fiber grating. , 0, , .		0
101	Fiber optic biochemical sensing using colloidal gold-modified long period fiber grating. , 2005, , .		0
102	Nanoaggregate Embedded Beads as SERS Nanosensor for Multiplexed Pathogen Detection. , 2010, , .		0
103	A novel dual-channel fiber-optic particle plasmon resonance sensor realized by CO ₂ laser engraving. , 2011, , .		0
104	On-chip SERS analysis for single mimic pathogen detection using Raman-labeled nanoaggregate-embedded beads with a dielectrophoretic chip. Proceedings of SPIE, 2012, , .	0.8	0
105	Tubular optical waveguide-based particle plasmon resonance biosensor for label-free and real-time detection. , 2012, , .		0
106	CO ₂ -TAS for label-free biosensing with double-sided grating waveguide. , 2012, , .		0
107	Tubular optical waveguide particle plasmon resonance biosensor for multiplex real-time and label-free detection. Proceedings of SPIE, 2013, , .	0.8	0
108	Highly sensitive fiber-optic particle plasmon resonance refractive index sensor based on spatial light modulation technology. , 2013, , .		0

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109	Multianalyte detection using fiber optic particle plasmon resonance sensor based on plasmonic light scattering interrogation. , 2013, , .		0