Kevin M Koo

List of Publications by Year
in descending order

107	4,535	71102	114465
papers	citations	41 h-index	63 g-index

110	110	110	5914
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An Integrated Microfluidicâ€SERS Platform Enables Sensitive Phenotyping of Serum Extracellular Vesicles in Early Stage Melanomas. Advanced Functional Materials, 2022, 32, 2010296.	14.9	30
2	Toward precision oncology: SERS microfluidic systems for multiplex biomarker analysis in liquid biopsy. Materials Advances, 2022, 3, 1459-1471.	5.4	19
3	Molecular locker probe enrichment of gene fusion variants from matched patient liquid biopsy specimens for magneto-bioelectrocatalytic nanosensing. Nanoscale, 2022, 14, 4225-4233.	5.6	4
4	An Electrochemical and Raman Scattering Dual Detection Biosensor for Rapid Screening and Biomolecular Profiling of Cancer Biomarkers. Chemosensors, 2022, 10, 93.	3.6	5
5	Next-Generation Molecular Discovery: From Bottom-Up In Vivo and In Vitro Approaches to In Silico Top-Down Approaches for Therapeutics Neogenesis. Life, 2022, 12, 363.	2.4	1
6	Magnetic nanomaterialâ€“based electrochemical biosensors for the detection of diverse circulating cancer biomarkers. Current Opinion in Electrochemistry, 2021, 25, 100645.	4.8	33
7	Nucleic Acid Hybridizationâ€Based Noise Suppression for Ultraselective Multiplexed Amplification of Mutant Variants. Small, 2021, 17, e2006370.	10.0	13
8	Separation of distinct exosome subpopulations: isolation and characterization approaches and their associated challenges. Analyst, The, 2021, 146, 3731-3749.	3.5	53
9	Simultaneous BRAFV600E Protein and DNA Aberration Detection in Circulating Melanoma Cells Using an Integrated Multimolecular Sensor. Methods in Molecular Biology, 2021, 2265, 265-276.	0.9	0
10	Bioengineered Polymer Nanobeads for Isolation and Electrochemical Detection of Cancer Biomarkers. ACS Applied Materials & Interfaces, 2021, 13, 31418-31430.	8.0	23
11	Characterizing the Heterogeneity of Small Extracellular Vesicle Populations in Multiple Cancer Types via an Ultrasensitive Chip. ACS Sensors, 2021, 6, 3182-3194.	7.8	22
12	Amplification-Free SARS-CoV-2 Detection Using Nanoyeast-scFv and Ultrasensitive Plasmonic Nanobox-Integrated Nanomixing Microassay. Analytical Chemistry, 2021, 93, 10251-10260.	6.5	19
13	In Situ Single Cell Proteomics Reveals Circulating Tumor Cell Heterogeneity during Treatment. ACS Nano, 2021, 15, 11231-11243.	14.6	47
14	Progressing Antimicrobial Resistance Sensing Technologies across Human, Animal, and Environmental Health Domains. ACS Sensors, 2021, 6, 4283-4296.	7.8	5
15	Dynamic Monitoring of EMT in CTCs as an Indicator of Cancer Metastasis. Analytical Chemistry, 2021, 93, 16787-16795.	6.5	15
16	Phosphoprotein Biosensors for Monitoring Pathological Protein Structural Changes. Trends in Biotechnology, 2020, 38, 519-531.	9.3	8
17	Ultrasensitive melanoma biomarker detection using a microchip SERS immunoassay with anisotropic Auâ€“Ag alloy nanoboxes. RSC Advances, 2020, 10, 28778-28785.	3.6	6
18	Nanostructured mesoporous gold electrodes detect protein phosphorylation in cancer with electrochemical signal amplification. Analyst, The, 2020, 145, 6639-6648.	3.5	6

#	Article	IF	Citations
19	Nanostructured mesoporous gold biosensor for microRNA detection at attomolar level. Biosensors and Bioelectronics, 2020, 168, 112429.	10.1	48
20	Multiomics: The Growing Impact of Micro/Nanomaterialâ€Based Systems in Precision Oncology: Translating â€œMultiomicsâ€•Technologies (Adv. Funct. Mater. 37/2020). Advanced Functional Materials, 2020, 30, 2070248.	14.9	1
21	Direct Enhanced Detection of Multiple Circulating Tumor DNA Variants in Unprocessed Plasma by Magnetic-Assisted Bioelectrocatalytic Cycling. ACS Sensors, 2020, 5, 3217-3225.	7.8	21
22	Surface-Enhanced Raman Spectroscopy for Cancer Immunotherapy Applications: Opportunities, Challenges, and Current Progress in Nanomaterial Strategies. Nanomaterials, 2020, 10, 1145.	4.1	21
23	Tracking Drugâ€Induced Epithelialâ€“Mesenchymal Transition in Breast Cancer by a Microfluidic Surfaceâ€Enhanced Raman Spectroscopy Immunoassay. Small, 2020, 16, e1905614.	10.0	33
24	The Growing Impact of Micro/Nanomaterialâ€Based Systems in Precision Oncology: Translating â€œMultiomicsâ€•Technologies. Advanced Functional Materials, 2020, 30, 1909306.	14.9	25
25	Tracking extracellular vesicle phenotypic changes enables treatment monitoring in melanoma. Science Advances, 2020, 6, eaax3223.	10.3	97
26	The role of circulating tumor DNA testing in breast cancer liquid biopsies: getting ready for prime time. Breast Cancer Management, 2020, 9, .	0.2	12
27	Toward Personalized Cancer Treatment: From Diagnostics to Therapy Monitoring in Miniaturized Electrohydrodynamic Systems. Accounts of Chemical Research, 2019, 52, 2113-2123.	15.6	32
28	Native MicroRNA Targets Trigger Selfâ€Assembly of Nanozymeâ€Patterned Hollowed Nanocuboids with Optimal Interparticle Gaps for Plasmonicâ€Activated Cancer Detection. Small, 2019, 15, e1904689.	10.0	53
29	Engineering Stateâ€ofâ€theâ€Art Plasmonic Nanomaterials for SERSâ€Based Clinical Liquid Biopsy Applications. Advanced Science, 2019, 6, 1900730.	11.2	112
30	An integrated multi-molecular sensor for simultaneous BRAFV600E protein and DNA single point mutation detection in circulating tumour cells. Lab on A Chip, 2019, 19, 738-748.	6.0	16
31	Watching SERS glow for multiplex biomolecular analysis in the clinic: A review. Applied Materials Today, 2019, 15, 431-444.	4.3	49
32	Merging new-age biomarkers and nanodiagnostics for precision prostate cancer management. Nature Reviews Urology, 2019, 16, 302-317.	3.8	86
33	Label-free detection of exosomes using a surface plasmon resonance biosensor. Analytical and Bioanalytical Chemistry, 2019, 411, 1311-1318.	3.7	70
34	Reading Conformational Changes in Proteins with a New Colloidal-Based Interfacial Biosensing System. ACS Applied Materials & Interfaces, 2019, 11, 11125-11135.	8.0	3
35	Single droplet detection of immune checkpoints on a multiplexed electrohydrodynamic biosensor. Analyst, The, 2019, 144, 6914-6921.	3.5	18
36	Retooling phage display with electrohydrodynamic nanomixing and nanopore sequencing. Lab on A Chip, 2019, 19, 4083-4092.	6.0	8

#	Article	IF	Citations
37	A microfluidic-SERSplatform for isolation and immuno-phenotyping of antigen specific T-cells. Sensors and Actuators B: Chemical, 2019, 284, 281-288.	7.8	10
38	A high-resolution study of in situ surface-enhanced Raman scattering nanotag behavior in biological systems. Journal of Colloid and Interface Science, 2019, 537, 536-546.	9.4	20
39	A SERS microfluidic platform for targeting multiple soluble immune checkpoints. Biosensors and Bioelectronics, 2019, 126, 178-186.	10.1	48
40	Label-Free Surface-Enhanced Raman Scattering Detection System for Clinical Biomarker Targets. Springer Theses, 2019, , 45-55.	0.1	0
41	Clinical Evaluation of Non-invasive Nanodiagnostics for PCa Risk Stratification. Springer Theses, 2019, , 83-97.	0.1	0
42	Unifying Next-Generation Biomarkers and Nanodiagnostic Platforms for Precision Prostate Cancer Management. Springer Theses, 2019, , 1-29.	0.1	0
43	Simultaneous Analysis of Multiple Biomarkers via High-Throughput Parallel Profiling. Springer Theses, 2019, , 71-82.	0.1	0
44	Colorimetric Gene Fusion Diagnostics for Visual Binary Readout. Springer Theses, 2019, , 31-44.	0.1	0
45	Interfacial nano-mixing in a miniaturised platform enables signal enhancement and in situ detection of cancer biomarkers. Nanoscale, 2018, 10, 10884-10890.	5.6	18
46	Characterising the phenotypic evolution of circulating tumour cells during treatment. Nature Communications, 2018, 9, 1482.	12.8	86
47	Amplificationâ€Free Multiâ€RNAâ€Type Profiling for Cancer Risk Stratification via Alternating Current Electrohydrodynamic Nanomixing. Small, 2018, 14, e1704025.	10.0	22
48	DNA-directed assembly of copper nanoblocks with inbuilt fluorescent and electrochemical properties: Application in simultaneous amplification-free analysis of multiple RNA species. Nano Research, 2018, 11, 940-952.	10.4	32
49	Geometric optimisation of electrohydrodynamic fluid flows for enhanced biosensing. Microchemical Journal, 2018, 137, 231-237.	4.5	11
50	A Sample-to-Targeted Gene Analysis Biochip for Nanofluidic Manipulation of Solid-Phase Circulating Tumor Nucleic Acid Amplification in Liquid Biopsies. ACS Sensors, 2018, 3, 2597-2603.	7.8	44
51	Epigenetically reprogrammed methylation landscape drives the DNA self-assembly and serves as a universal cancer biomarker. Nature Communications, 2018, 9, 4915.	12.8	135
52	â€œMix-to-Goâ€•Silver Colloidal Strategy for Prostate Cancer Molecular Profiling and Risk Prediction. Analytical Chemistry, 2018, 90, 12698-12705.	6.5	13
53	Facile One-Pot Synthesis of Nanodot-Decorated Goldâ€“Silver Alloy Nanoboxes for Single-Particle Surface-Enhanced Raman Scattering Activity. ACS Applied Materials & Interfaces, 2018, 10, 32526-32535.	8.0	45
54	Parallel profiling of cancer cells and proteins using a graphene oxide functionalized ac-EHD SERS immunoassay. Nanoscale, 2018, 10, 18482-18491.	5.6	29

#	Article	IF	Citations
55	An exosomal- and interfacial-biosensing based strategy for remote monitoring of aberrantly phosphorylated proteins in lung cancer cells. Biomaterials Science, 2018, 6, 2336-2341.	5.4	17
56	Design and Clinical Verification of Surface-Enhanced Raman Spectroscopy Diagnostic Technology for Individual Cancer Risk Prediction. ACS Nano, 2018, 12, 8362-8371.	14.6	66
57	Interfacial Biosensing: Direct Biosensing of Biomolecules at the Bare Metal Interface. , 2018, , 269-277.		3
58	Adjustable Fluidic Nanomixing: Amplificationâ€Free Multiâ€RNAâ€Type Profiling for Cancer Risk Stratification via Alternating Current Electrohydrodynamic Nanomixing (Small 17/2018). Small, 2018, 14, 1870075.	10.0	2
59	Multiplexed SERS Detection of Soluble Cancer Protein Biomarkers with Goldâ€“Silver Alloy Nanoboxes and Nanoyeast Single-Chain Variable Fragments. Analytical Chemistry, 2018, 90, 10377-10384.	6.5	59
60	PrimerSuite: A High-Throughput Web-Based Primer Design Program for Multiplex Bisulfite PCR. Scientific Reports, 2017, 7, 41328.	3.3	36
61	A nanoplasmonic label-free surface-enhanced Raman scattering strategy for non-invasive cancer genetic subtyping in patient samples. Nanoscale, 2017, 9, 3496-3503.	5.6	74
62	Electrohydrodynamicâ€Induced SERS Immunoassay for Extensive Multiplexed Biomarker Sensing. Small, 2017, 13, 1602902.	10.0	79
63	Detection of aberrant protein phosphorylation in cancer using direct gold-protein affinity interactions. Biosensors and Bioelectronics, 2017, 91, 8-14.	10.1	15
64	Simple and rapid colorimetric detection of melanoma circulating tumor cells using bifunctional magnetic nanoparticles. Analyst, The, 2017, 142, 4788-4793.	3.5	47
65	A multiplex microplatform for the detection of multiple DNA methylation events using goldâ€“DNA affinity. Analyst, The, 2017, 142, 3573-3578.	3.5	10
66	Enabling miniaturised personalised diagnostics: from lab-on-a-chip to lab-in-a-drop. Lab on A Chip, 2017, 17, 3200-3220.	6.0	55
67	High-speed biosensing strategy for non-invasive profiling of multiple cancer fusion genes in urine. Biosensors and Bioelectronics, 2017, 89, 715-720.	10.1	16
68	Colorimetric TMPRSS2-ERG Gene Fusion Detection in Prostate Cancer Urinary Samples via Recombinase Polymerase Amplification. Theranostics, 2016, 6, 1415-1424.	10.0	38
69	Simple, Sensitive and Accurate Multiplex Detection of Clinically Important Melanoma DNA Mutations in Circulating Tumour DNA with SERS Nanotags. Theranostics, 2016, 6, 1506-1513.	10.0	106
70	Cancer Therapy: Toward Precision Medicine: A Cancer Molecular Subtyping Nano-Strategy for RNA Biomarkers in Tumor and Urine (Small 45/2016). Small, 2016, 12, 6302-6302.	10.0	0
71	A simple, rapid, low-cost technique for naked-eye detection of urine-isolated TMPRSS2:ERG gene fusion RNA. Scientific Reports, 2016, 6, 30722.	3.3	21
72	Simple Isothermal Strategy for Multiplexed, Rapid, Sensitive, and Accurate miRNA Detection. ACS Sensors, 2016, 1, 670-675.	7.8	52

#	Article	IF	Citations
73	Toward Precision Medicine: A Cancer Molecular Subtyping Nanoâ€Strategy for RNA Biomarkers in Tumor and Urine. Small, 2016, 12, 6233-6242.	10.0	52
74	Rapid and Sensitive Fusion Gene Detection in Prostate Cancer Urinary Specimens by Label-Free Surface-Enhanced Raman Scattering. Journal of Biomedical Nanotechnology, 2016, 12, 1798-1805.	1.1	15
75	Field Demonstration of a Multiplexed Point-of-Care Diagnostic Platform for Plant Pathogens. Analytical Chemistry, 2016, 88, 8074-8081.	6.5	87
76	Capture and On-chip analysis of Melanoma Cells Using Tunable Surface Shear forces. Scientific Reports, 2016, 6, 19709.	3.3	8
77	Nanoyeast and Other Cell Envelope Compositions for Protein Studies and Biosensor Applications. ACS Applied Materials & Interfaces, 2016, 8, 30649-30664.	8.0	16
78	Real time and label free profiling of clinically relevant exosomes. Scientific Reports, 2016, 6, 30460.	3.3	124
79	Amplification-Free Detection of Gene Fusions in Prostate Cancer Urinary Samples Using mRNAâ€“Gold Affinity Interactions. Analytical Chemistry, 2016, 88, 6781-6788.	6.5	65
80	Naked-Eye Colorimetric and Electrochemical Detection of Mycobacterium tuberculosisâ€”toward Rapid Screening for Active Case Finding. ACS Sensors, 2016, 1, 173-178.	7.8	49
81	Poly(A) Extensions of miRNAs for Amplification-Free Electrochemical Detection on Screen-Printed Gold Electrodes. Analytical Chemistry, 2016, 88, 2000-2005.	6.5	128
82	Electric Field Induced Isolation, Release, and Recapture of Tumor Cells. ACS Sensors, 2016, 1, 399-405.	7.8	14
83	Electrochemical detection of protein glycosylation using lectin and proteinâ€“gold affinity interactions. Analyst, The, 2016, 141, 2356-2361.	3.5	13
84	Rapid DNA detection of Mycobacterium tuberculosis-towards single cell sensitivity in point-of-care diagnosis. Scientific Reports, 2015, 5, .	3.3	35
85	Alternating current electrohydrodynamics in microsystems: Pushing biomolecules and cells around on surfaces. Biomicrofluidics, 2015, 9, 061501.	2.4	25
86	A simple bridging flocculation assay for rapid, sensitive and stringent detection of gene specific DNA methylation. Scientific Reports, 2015, 5, 15028.	3.3	32
87	Enhancing Protein Capture Using a Combination of Nanoyeast Single-Chain Fragment Affinity Reagents and Alternating Current Electrohydrodynamic Forces. Analytical Chemistry, 2015, 87, 11673-11681.	6.5	12
88	Enabling Rapid and Specific Surface-Enhanced Raman Scattering Immunoassay Using Nanoscaled Surface Shear Forces. ACS Nano, 2015, 9, 6354-6362.	14.6	93
89	Methylome sequencing in triple-negative breast cancer reveals distinct methylation clusters with prognostic value. Nature Communications, 2015, 6, 5899.	12.8	162
90	Analysis of exosome purification methods using a model liposome system and tunable-resistive pulse sensing. Scientific Reports, 2015, 5, 7639.	3.3	226

#	Article	IF	Citations
91	DNAâ€“bare gold affinity interactions: mechanism and applications in biosensing. Analytical Methods, 2015, 7, 7042-7054.	2.7	131
92	Rapid, Single-Cell Electrochemical Detection of Mycobacterium tuberculosis Using Colloidal Gold Nanoparticles. Analytical Chemistry, 2015, 87, 10613-10618.	6.5	49
93	DNA Ligase-Based Strategy for Quantifying Heterogeneous DNA Methylation without Sequencing. Clinical Chemistry, 2015, 61, 163-171.	3.2	24
94	Alternating Current Electrohydrodynamics Induced Nanoshearing and Fluid Micromixing for Specific Capture of Cancer Cells. Chemistry - A European Journal, 2014, 20, 3724-3729.	3.3	11
95	Detecting Exosomes Specifically: A Multiplexed Device Based on Alternating Current Electrohydrodynamic Induced Nanoshearing. Analytical Chemistry, 2014, 86, 11125-11132.	6.5	220
96	Molecular inversion probe-based SPR biosensing for specific, label-free and real-time detection of regional DNA methylation. Chemical Communications, 2014, 50, 3585-3588.	4.1	78
97	Electrohydrodynamic removal of non-specific colloidal adsorption at electrode interfaces. Chemical Communications, 2014, 50, 4813-4815.	4.1	8
98	eMethylsorb: electrochemical quantification of DNA methylation at CpG resolution using DNAâ€“gold affinity interactions. Chemical Communications, 2014, 50, 13153-13156.	4.1	68
99	Tunable â€œNano-Shearingâ€ A Physical Mechanism to Displace Nonspecific Cell Adhesion During Rare Cell Detection. Analytical Chemistry, 2014, 86, 2042-2049.	6.5	22
100	eMethylsorb: rapid quantification of DNA methylation in cancer cells on screen-printed gold electrodes. Analyst, The, 2014, 139, 6178-6184.	3.5	51
101	Methylsorb: A Simple Method for Quantifying DNA Methylation Using DNAâ€“Gold Affinity Interactions. Analytical Chemistry, 2014, 86, 10179-10185.	6.5	59
102	Duplex Microfluidic SERS Detection of Pathogen Antigens with Nanoyeast Single-Chain Variable Fragments. Analytical Chemistry, 2014, 86, 9930-9938.	6.5	60
103	Microdevices for detecting locus-specific DNA methylation at CpG resolution. Biosensors and Bioelectronics, 2014, 56, 278-285.	10.1	41
104	Molecular Nanoshearing: An Innovative Approach to Shear off Molecules with AC-Induced Nanoscopic Fluid Flow. Scientific Reports, 2014, 4, 3716.	3.3	31
105	Î¼-eLCR: a microfabricated device for electrochemical detection of DNA base changes in breast cancer cell lines. Lab on A Chip, 2013, 13, 4385.	6.0	17
106	Quantitative Sizing of Nano/Microparticles with a Tunable Elastomeric Pore Sensor. Analytical Chemistry, 2011, 83, 3499-3506.	6.5	256
107	Considerations of Solid-Phase DNA Amplification. Bioconjugate Chemistry, 2010, 21, 690-695.	3.6	28