

Kevin M Koo

List of Publications by Year in descending order

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107
papers

4,535
citations

71102

41
h-index

114465

63
g-index

110
all docs

110
docs citations

110
times ranked

5914
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative Sizing of Nano/Microparticles with a Tunable Elastomeric Pore Sensor. <i>Analytical Chemistry</i> , 2011, 83, 3499-3506.	6.5	256
2	Analysis of exosome purification methods using a model liposome system and tunable-resistive pulse sensing. <i>Scientific Reports</i> , 2015, 5, 7639.	3.3	226
3	Detecting Exosomes Specifically: A Multiplexed Device Based on Alternating Current Electrohydrodynamic Induced Nanoshearing. <i>Analytical Chemistry</i> , 2014, 86, 11125-11132.	6.5	220
4	Methylome sequencing in triple-negative breast cancer reveals distinct methylation clusters with prognostic value. <i>Nature Communications</i> , 2015, 6, 5899.	12.8	162
5	Epigenetically reprogrammed methylation landscape drives the DNA self-assembly and serves as a universal cancer biomarker. <i>Nature Communications</i> , 2018, 9, 4915.	12.8	135
6	DNA-bare gold affinity interactions: mechanism and applications in biosensing. <i>Analytical Methods</i> , 2015, 7, 7042-7054.	2.7	131
7	Poly(A) Extensions of miRNAs for Amplification-Free Electrochemical Detection on Screen-Printed Gold Electrodes. <i>Analytical Chemistry</i> , 2016, 88, 2000-2005.	6.5	128
8	Real time and label free profiling of clinically relevant exosomes. <i>Scientific Reports</i> , 2016, 6, 30460.	3.3	124
9	Engineering State-of-the-Art Plasmonic Nanomaterials for SERS-Based Clinical Liquid Biopsy Applications. <i>Advanced Science</i> , 2019, 6, 1900730.	11.2	112
10	Simple, Sensitive and Accurate Multiplex Detection of Clinically Important Melanoma DNA Mutations in Circulating Tumour DNA with SERS Nanotags. <i>Theranostics</i> , 2016, 6, 1506-1513.	10.0	106
11	Tracking extracellular vesicle phenotypic changes enables treatment monitoring in melanoma. <i>Science Advances</i> , 2020, 6, eaax3223.	10.3	97
12	Enabling Rapid and Specific Surface-Enhanced Raman Scattering Immunoassay Using Nanoscaled Surface Shear Forces. <i>ACS Nano</i> , 2015, 9, 6354-6362.	14.6	93
13	Field Demonstration of a Multiplexed Point-of-Care Diagnostic Platform for Plant Pathogens. <i>Analytical Chemistry</i> , 2016, 88, 8074-8081.	6.5	87
14	Characterising the phenotypic evolution of circulating tumour cells during treatment. <i>Nature Communications</i> , 2018, 9, 1482.	12.8	86
15	Merging new-age biomarkers and nanodiagnostics for precision prostate cancer management. <i>Nature Reviews Urology</i> , 2019, 16, 302-317.	3.8	86
16	Electrohydrodynamic-Induced SERS Immunoassay for Extensive Multiplexed Biomarker Sensing. <i>Small</i> , 2017, 13, 1602902.	10.0	79
17	Molecular inversion probe-based SPR biosensing for specific, label-free and real-time detection of regional DNA methylation. <i>Chemical Communications</i> , 2014, 50, 3585-3588.	4.1	78
18	A nanoplasmonic label-free surface-enhanced Raman scattering strategy for non-invasive cancer genetic subtyping in patient samples. <i>Nanoscale</i> , 2017, 9, 3496-3503.	5.6	74

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19	Label-free detection of exosomes using a surface plasmon resonance biosensor. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 1311-1318.	3.7	70
20	eMethylsorb: electrochemical quantification of DNA methylation at CpG resolution using DNA-gold affinity interactions. <i>Chemical Communications</i> , 2014, 50, 13153-13156.	4.1	68
21	Design and Clinical Verification of Surface-Enhanced Raman Spectroscopy Diagnostic Technology for Individual Cancer Risk Prediction. <i>ACS Nano</i> , 2018, 12, 8362-8371.	14.6	66
22	Amplification-Free Detection of Gene Fusions in Prostate Cancer Urinary Samples Using mRNA-Gold Affinity Interactions. <i>Analytical Chemistry</i> , 2016, 88, 6781-6788.	6.5	65
23	Duplex Microfluidic SERS Detection of Pathogen Antigens with Nanoyeast Single-Chain Variable Fragments. <i>Analytical Chemistry</i> , 2014, 86, 9930-9938.	6.5	60
24	Methylsorb: A Simple Method for Quantifying DNA Methylation Using DNA-Gold Affinity Interactions. <i>Analytical Chemistry</i> , 2014, 86, 10179-10185.	6.5	59
25	Multiplexed SERS Detection of Soluble Cancer Protein Biomarkers with Gold-Silver Alloy Nanoboxes and Nanoyeast Single-Chain Variable Fragments. <i>Analytical Chemistry</i> , 2018, 90, 10377-10384.	6.5	59
26	Enabling miniaturised personalised diagnostics: from lab-on-a-chip to lab-in-a-drop. <i>Lab on A Chip</i> , 2017, 17, 3200-3220.	6.0	55
27	Native MicroRNA Targets Trigger Self-Assembly of Nanozyme-Patterned Hollowed Nanocuboids with Optimal Interparticle Gaps for Plasmonic-Activated Cancer Detection. <i>Small</i> , 2019, 15, e1904689.	10.0	53
28	Separation of distinct exosome subpopulations: isolation and characterization approaches and their associated challenges. <i>Analyst, The</i> , 2021, 146, 3731-3749.	3.5	53
29	Simple Isothermal Strategy for Multiplexed, Rapid, Sensitive, and Accurate miRNA Detection. <i>ACS Sensors</i> , 2016, 1, 670-675.	7.8	52
30	Toward Precision Medicine: A Cancer Molecular Subtyping Nano-Strategy for RNA Biomarkers in Tumor and Urine. <i>Small</i> , 2016, 12, 6233-6242.	10.0	52
31	eMethylsorb: rapid quantification of DNA methylation in cancer cells on screen-printed gold electrodes. <i>Analyst, The</i> , 2014, 139, 6178-6184.	3.5	51
32	Rapid, Single-Cell Electrochemical Detection of <i>Mycobacterium tuberculosis</i> Using Colloidal Gold Nanoparticles. <i>Analytical Chemistry</i> , 2015, 87, 10613-10618.	6.5	49
33	Naked-Eye Colorimetric and Electrochemical Detection of <i>Mycobacterium tuberculosis</i> toward Rapid Screening for Active Case Finding. <i>ACS Sensors</i> , 2016, 1, 173-178.	7.8	49
34	Watching SERS glow for multiplex biomolecular analysis in the clinic: A review. <i>Applied Materials Today</i> , 2019, 15, 431-444.	4.3	49
35	A SERS microfluidic platform for targeting multiple soluble immune checkpoints. <i>Biosensors and Bioelectronics</i> , 2019, 126, 178-186.	10.1	48
36	Nanostructured mesoporous gold biosensor for microRNA detection at attomolar level. <i>Biosensors and Bioelectronics</i> , 2020, 168, 112429.	10.1	48

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37	Simple and rapid colorimetric detection of melanoma circulating tumor cells using bifunctional magnetic nanoparticles. <i>Analyst</i> , 2017, 142, 4788-4793.	3.5	47
38	<i>In Situ</i> Single Cell Proteomics Reveals Circulating Tumor Cell Heterogeneity during Treatment. <i>ACS Nano</i> , 2021, 15, 11231-11243.	14.6	47
39	Facile One-Pot Synthesis of Nanodot-Decorated Gold-Silver Alloy Nanoboxes for Single-Particle Surface-Enhanced Raman Scattering Activity. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 32526-32535.	8.0	45
40	A Sample-to-Targeted Gene Analysis Biochip for Nanofluidic Manipulation of Solid-Phase Circulating Tumor Nucleic Acid Amplification in Liquid Biopsies. <i>ACS Sensors</i> , 2018, 3, 2597-2603.	7.8	44
41	Microdevices for detecting locus-specific DNA methylation at CpG resolution. <i>Biosensors and Bioelectronics</i> , 2014, 56, 278-285.	10.1	41
42	Colorimetric <i>TMPRSS2-ERG</i> Gene Fusion Detection in Prostate Cancer Urinary Samples via Recombinase Polymerase Amplification. <i>Theranostics</i> , 2016, 6, 1415-1424.	10.0	38
43	PrimerSuite: A High-Throughput Web-Based Primer Design Program for Multiplex Bisulfite PCR. <i>Scientific Reports</i> , 2017, 7, 41328.	3.3	36
44	Rapid DNA detection of <i>Mycobacterium tuberculosis</i> -towards single cell sensitivity in point-of-care diagnosis. <i>Scientific Reports</i> , 2015, 5, .	3.3	35
45	Tracking Drug-Induced Epithelial-Mesenchymal Transition in Breast Cancer by a Microfluidic Surface-Enhanced Raman Spectroscopy Immunoassay. <i>Small</i> , 2020, 16, e1905614.	10.0	33
46	Magnetic nanomaterial-based electrochemical biosensors for the detection of diverse circulating cancer biomarkers. <i>Current Opinion in Electrochemistry</i> , 2021, 25, 100645.	4.8	33
47	A simple bridging flocculation assay for rapid, sensitive and stringent detection of gene specific DNA methylation. <i>Scientific Reports</i> , 2015, 5, 15028.	3.3	32
48	DNA-directed assembly of copper nanoblocks with inbuilt fluorescent and electrochemical properties: Application in simultaneous amplification-free analysis of multiple RNA species. <i>Nano Research</i> , 2018, 11, 940-952.	10.4	32
49	Toward Personalized Cancer Treatment: From Diagnostics to Therapy Monitoring in Miniaturized Electrohydrodynamic Systems. <i>Accounts of Chemical Research</i> , 2019, 52, 2113-2123.	15.6	32
50	Molecular Nanoshearing: An Innovative Approach to Shear off Molecules with AC-Induced Nanoscopic Fluid Flow. <i>Scientific Reports</i> , 2014, 4, 3716.	3.3	31
51	An Integrated Microfluidic-SERS Platform Enables Sensitive Phenotyping of Serum Extracellular Vesicles in Early Stage Melanomas. <i>Advanced Functional Materials</i> , 2022, 32, 2010296.	14.9	30
52	Parallel profiling of cancer cells and proteins using a graphene oxide functionalized ac-EHD SERS immunoassay. <i>Nanoscale</i> , 2018, 10, 18482-18491.	5.6	29
53	Considerations of Solid-Phase DNA Amplification. <i>Bioconjugate Chemistry</i> , 2010, 21, 690-695.	3.6	28
54	Alternating current electrohydrodynamics in microsystems: Pushing biomolecules and cells around on surfaces. <i>Biomicrofluidics</i> , 2015, 9, 061501.	2.4	25

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55	The Growing Impact of Micro/Nanomaterial-Based Systems in Precision Oncology: Translating "Multiomics" Technologies. <i>Advanced Functional Materials</i> , 2020, 30, 1909306.	14.9	25
56	DNA Ligase-Based Strategy for Quantifying Heterogeneous DNA Methylation without Sequencing. <i>Clinical Chemistry</i> , 2015, 61, 163-171.	3.2	24
57	Bioengineered Polymer Nanobeads for Isolation and Electrochemical Detection of Cancer Biomarkers. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 31418-31430.	8.0	23
58	Tunable "Nano-Shearing": A Physical Mechanism to Displace Nonspecific Cell Adhesion During Rare Cell Detection. <i>Analytical Chemistry</i> , 2014, 86, 2042-2049.	6.5	22
59	Amplification-Free Multi-RNA Type Profiling for Cancer Risk Stratification via Alternating Current Electrohydrodynamic Nanomixing. <i>Small</i> , 2018, 14, e1704025.	10.0	22
60	Characterizing the Heterogeneity of Small Extracellular Vesicle Populations in Multiple Cancer Types via an Ultrasensitive Chip. <i>ACS Sensors</i> , 2021, 6, 3182-3194.	7.8	22
61	A simple, rapid, low-cost technique for naked-eye detection of urine-isolated TMPRSS2:ERG gene fusion RNA. <i>Scientific Reports</i> , 2016, 6, 30722.	3.3	21
62	Direct Enhanced Detection of Multiple Circulating Tumor DNA Variants in Unprocessed Plasma by Magnetic-Assisted Bioelectrocatalytic Cycling. <i>ACS Sensors</i> , 2020, 5, 3217-3225.	7.8	21
63	Surface-Enhanced Raman Spectroscopy for Cancer Immunotherapy Applications: Opportunities, Challenges, and Current Progress in Nanomaterial Strategies. <i>Nanomaterials</i> , 2020, 10, 1145.	4.1	21
64	A high-resolution study of in situ surface-enhanced Raman scattering nanotag behavior in biological systems. <i>Journal of Colloid and Interface Science</i> , 2019, 537, 536-546.	9.4	20
65	Amplification-Free SARS-CoV-2 Detection Using Nanoyeast-scFv and Ultrasensitive Plasmonic Nanobox-Integrated Nanomixing Microassay. <i>Analytical Chemistry</i> , 2021, 93, 10251-10260.	6.5	19
66	Toward precision oncology: SERS microfluidic systems for multiplex biomarker analysis in liquid biopsy. <i>Materials Advances</i> , 2022, 3, 1459-1471.	5.4	19
67	Interfacial nano-mixing in a miniaturised platform enables signal enhancement and in situ detection of cancer biomarkers. <i>Nanoscale</i> , 2018, 10, 10884-10890.	5.6	18
68	Single droplet detection of immune checkpoints on a multiplexed electrohydrodynamic biosensor. <i>Analyst</i> , 2019, 144, 6914-6921.	3.5	18
69	1/4-eLCR: a microfabricated device for electrochemical detection of DNA base changes in breast cancer cell lines. <i>Lab on A Chip</i> , 2013, 13, 4385.	6.0	17
70	An exosomal- and interfacial-biosensing based strategy for remote monitoring of aberrantly phosphorylated proteins in lung cancer cells. <i>Biomaterials Science</i> , 2018, 6, 2336-2341.	5.4	17
71	Nanoyeast and Other Cell Envelope Compositions for Protein Studies and Biosensor Applications. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 30649-30664.	8.0	16
72	High-speed biosensing strategy for non-invasive profiling of multiple cancer fusion genes in urine. <i>Biosensors and Bioelectronics</i> , 2017, 89, 715-720.	10.1	16

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73	An integrated multi-molecular sensor for simultaneous BRAFV600E protein and DNA single point mutation detection in circulating tumour cells. <i>Lab on A Chip</i> , 2019, 19, 738-748.	6.0	16
74	Rapid and Sensitive Fusion Gene Detection in Prostate Cancer Urinary Specimens by Label-Free Surface-Enhanced Raman Scattering. <i>Journal of Biomedical Nanotechnology</i> , 2016, 12, 1798-1805.	1.1	15
75	Detection of aberrant protein phosphorylation in cancer using direct gold-protein affinity interactions. <i>Biosensors and Bioelectronics</i> , 2017, 91, 8-14.	10.1	15
76	Dynamic Monitoring of EMT in CTCs as an Indicator of Cancer Metastasis. <i>Analytical Chemistry</i> , 2021, 93, 16787-16795.	6.5	15
77	Electric Field Induced Isolation, Release, and Recapture of Tumor Cells. <i>ACS Sensors</i> , 2016, 1, 399-405.	7.8	14
78	Electrochemical detection of protein glycosylation using lectin and protein-gold affinity interactions. <i>Analyst, The</i> , 2016, 141, 2356-2361.	3.5	13
79	“Mix-to-Go” Silver Colloidal Strategy for Prostate Cancer Molecular Profiling and Risk Prediction. <i>Analytical Chemistry</i> , 2018, 90, 12698-12705.	6.5	13
80	Nucleic Acid Hybridization-Based Noise Suppression for Ultrasensitive Multiplexed Amplification of Mutant Variants. <i>Small</i> , 2021, 17, e2006370.	10.0	13
81	Enhancing Protein Capture Using a Combination of Nanoyeast Single-Chain Fragment Affinity Reagents and Alternating Current Electrohydrodynamic Forces. <i>Analytical Chemistry</i> , 2015, 87, 11673-11681.	6.5	12
82	The role of circulating tumor DNA testing in breast cancer liquid biopsies: getting ready for prime time. <i>Breast Cancer Management</i> , 2020, 9, .	0.2	12
83	Alternating Current Electrohydrodynamics Induced Nanoshearing and Fluid Micromixing for Specific Capture of Cancer Cells. <i>Chemistry - A European Journal</i> , 2014, 20, 3724-3729.	3.3	11
84	Geometric optimisation of electrohydrodynamic fluid flows for enhanced biosensing. <i>Microchemical Journal</i> , 2018, 137, 231-237.	4.5	11
85	A multiplex microplatform for the detection of multiple DNA methylation events using gold-DNA affinity. <i>Analyst, The</i> , 2017, 142, 3573-3578.	3.5	10
86	A microfluidic-SERSplatform for isolation and immuno-phenotyping of antigen specific T-cells. <i>Sensors and Actuators B: Chemical</i> , 2019, 284, 281-288.	7.8	10
87	Electrohydrodynamic removal of non-specific colloidal adsorption at electrode interfaces. <i>Chemical Communications</i> , 2014, 50, 4813-4815.	4.1	8
88	Capture and On-chip analysis of Melanoma Cells Using Tunable Surface Shear forces. <i>Scientific Reports</i> , 2016, 6, 19709.	3.3	8
89	Retooling phage display with electrohydrodynamic nanomixing and nanopore sequencing. <i>Lab on A Chip</i> , 2019, 19, 4083-4092.	6.0	8
90	Phosphoprotein Biosensors for Monitoring Pathological Protein Structural Changes. <i>Trends in Biotechnology</i> , 2020, 38, 519-531.	9.3	8

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91	Ultrasensitive melanoma biomarker detection using a microchip SERS immunoassay with anisotropic Au@Ag alloy nanoboxes. <i>RSC Advances</i> , 2020, 10, 28778-28785.	3.6	6
92	Nanostructured mesoporous gold electrodes detect protein phosphorylation in cancer with electrochemical signal amplification. <i>Analyst</i> , The, 2020, 145, 6639-6648.	3.5	6
93	An Electrochemical and Raman Scattering Dual Detection Biosensor for Rapid Screening and Biomolecular Profiling of Cancer Biomarkers. <i>Chemosensors</i> , 2022, 10, 93.	3.6	5
94	Progressing Antimicrobial Resistance Sensing Technologies across Human, Animal, and Environmental Health Domains. <i>ACS Sensors</i> , 2021, 6, 4283-4296.	7.8	5
95	Molecular locker probe enrichment of gene fusion variants from matched patient liquid biopsy specimens for magneto-bioelectrocatalytic nanosensing. <i>Nanoscale</i> , 2022, 14, 4225-4233.	5.6	4
96	Interfacial Biosensing: Direct Biosensing of Biomolecules at the Bare Metal Interface. , 2018, , 269-277.		3
97	Reading Conformational Changes in Proteins with a New Colloidal-Based Interfacial Biosensing System. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 11125-11135.	8.0	3
98	Adjustable Fluidic Nanomixing: Amplification-Free Multi- <i>miRNA</i> -Type Profiling for Cancer Risk Stratification via Alternating Current Electrohydrodynamic Nanomixing (<i>Small</i> 17/2018). <i>Small</i> , 2018, 14, 1870075.	10.0	2
99	Multiomics: The Growing Impact of Micro/Nanomaterial-Based Systems in Precision Oncology: Translating "Multiomics" Technologies (<i>Adv. Funct. Mater.</i> 37/2020). <i>Advanced Functional Materials</i> , 2020, 30, 2070248.	14.9	1
100	Next-Generation Molecular Discovery: From Bottom-Up In Vivo and In Vitro Approaches to In Silico Top-Down Approaches for Therapeutics Neogenesis. <i>Life</i> , 2022, 12, 363.	2.4	1
101	Cancer Therapy: Toward Precision Medicine: A Cancer Molecular Subtyping Nano-Strategy for RNA Biomarkers in Tumor and Urine (<i>Small</i> 45/2016). <i>Small</i> , 2016, 12, 6302-6302.	10.0	0
102	Simultaneous BRAFV600E Protein and DNA Aberration Detection in Circulating Melanoma Cells Using an Integrated Multimolecular Sensor. <i>Methods in Molecular Biology</i> , 2021, 2265, 265-276.	0.9	0
103	Label-Free Surface-Enhanced Raman Scattering Detection System for Clinical Biomarker Targets. <i>Springer Theses</i> , 2019, , 45-55.	0.1	0
104	Clinical Evaluation of Non-invasive Nanodiagnostics for PCa Risk Stratification. <i>Springer Theses</i> , 2019, , 83-97.	0.1	0
105	Unifying Next-Generation Biomarkers and Nanodiagnostic Platforms for Precision Prostate Cancer Management. <i>Springer Theses</i> , 2019, , 1-29.	0.1	0
106	Simultaneous Analysis of Multiple Biomarkers via High-Throughput Parallel Profiling. <i>Springer Theses</i> , 2019, , 71-82.	0.1	0
107	Colorimetric Gene Fusion Diagnostics for Visual Binary Readout. <i>Springer Theses</i> , 2019, , 31-44.	0.1	0