Warren W C Chan

List of Publications by Year
in descending order

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156 papers	47,630 citations	9264 74 h-index	7518 151 g-index
167 all docs	167 docs citations	167 times ranked	47813 citing authors

#	Article	IF	Citations
1	Determining the Size and Shape Dependence of Gold Nanoparticle Uptake into Mammalian Cells. Nano Letters, 2006, 6, 662-668.	9.1	4,242
2	Analysis of nanoparticle delivery to tumours. Nature Reviews Materials, 2016, 1, .	48.7	3,393
3	Probing the Cytotoxicity of Semiconductor Quantum Dots. Nano Letters, 2004, 4, 11-18.	9.1	3,159
4	The Effect of Nanoparticle Size, Shape, and Surface Chemistry on Biological Systems. Annual Review of Biomedical Engineering, 2012, 14, 1-16.	12.3	3,078
5	Nanoparticle-mediated cellular response is size-dependent. Nature Nanotechnology, 2008, 3, 145-150.	31.5	2,452
6	Elucidating the Mechanism of Cellular Uptake and Removal of Protein-Coated Gold Nanoparticles of Different Sizes and Shapes. Nano Letters, 2007, 7, 1542-1550.	9.1	2,001
7	Luminescent quantum dots for multiplexed biological detection and imaging. Current Opinion in Biotechnology, 2002, 13, 40-46.	6.6	1,975
8	Nanoparticle Size and Surface Chemistry Determine Serum Protein Adsorption and Macrophage Uptake. Journal of the American Chemical Society, 2012, 134, 2139-2147.	13.7	1,601
9	Nanocrystal targeting in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 12617-12621.	7.1	1,398
10	Understanding and controlling the interaction of nanomaterials with proteins in a physiological environment. Chemical Society Reviews, 2012, 41, 2780-2799.	38.1	1,385
11	Diagnosing COVID-19: The Disease and Tools for Detection. ACS Nano, 2020, 14, 3822-3835.	14.6	1,360
12	Mediating Tumor Targeting Efficiency of Nanoparticles Through Design. Nano Letters, 2009, 9, 1909-1915.	9.1	1,344
13	The entry of nanoparticles into solid tumours. Nature Materials, 2020, 19, 566-575.	27.5	1,036
14	Nanomedicine. New England Journal of Medicine, 2010, 363, 2434-2443.	27.0	987
15	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	14.6	976
16	Nanoparticleâ€“liver interactions: Cellular uptake and hepatobiliary elimination. Journal of Controlled Release, 2016, 240, 332-348.	9.9	869
17	Effect of Gold Nanoparticle Aggregation on Cell Uptake and Toxicity. ACS Nano, 2011, 5, 5478-5489.	14.6	716
18	Protein Corona Fingerprinting Predicts the Cellular Interaction of Gold and Silver Nanoparticles. ACS Nano, 2014, 8, 2439-2455.	14.6	693

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19	Mechanism of hard-nanomaterial clearance by theÂliver. Nature Materials, 2016, 15, 1212-1221.	27.5	686
20	Strategies for the intracellular delivery of nanoparticles. Chemical Society Reviews, 2011, 40, 233-245.	38.1	684
21	Assessing the Effect of Surface Chemistry on Gold Nanorod Uptake, Toxicity, and Gene Expression in Mammalian Cells. Small, 2008, 4, 153-159.	10.0	634
22	Nanotoxicity: the growing need for in vivo study. Current Opinion in Biotechnology, 2007, 18, 565-571.	6.6	625
23	Synthesis and Surface Modification of Highly Monodispersed, Spherical Gold Nanoparticles of 50â˘200 nm. Journal of the American Chemical Society, 2009, 131, 17042-17043.	13.7	589
24	Investigating the Impact of Nanoparticle Size on Active and Passive Tumor Targeting Efficiency. ACS Nano, 2014, 8, 5696-5706.	14.6	528
25	Quantifying the Ligand-Coated Nanoparticle Delivery to Cancer Cells in Solid Tumors. ACS Nano, 2018, 12, 8423-8435.	14.6	444
26	Quantum-dot nanocrystals for ultrasensitive biological labeling and multicolor optical encoding. Journal of Biomedical Optics, 2002, 7, 532.	2.6	412
27	In vivo Quantumâ€Dot Toxicity Assessment. Small, 2010, 6, 138-144.	10.0	388
28	DNA assembly of nanoparticle superstructures for controlled biological delivery and elimination. Nature Nanotechnology, 2014, 9, 148-155.	31.5	385
29	Are Quantum Dots Toxic? Exploring the Discrepancy Between Cell Culture and Animal Studies. Accounts of Chemical Research, 2013, 46, 662-671.	15.6	378
30	Enhancing the Toxicity of Cancer Chemotherapeutics with Gold Nanorod Hyperthermia. Advanced Materials, 2008, 20, 3832-3838.	21.0	371
31	Elimination Pathways of Nanoparticles. ACS Nano, 2019, 13, 5785-5798.	14.6	343
32	A framework for designing delivery systems. Nature Nanotechnology, 2020, 15, 819-829.	31.5	305
33	The dose threshold for nanoparticle tumour delivery. Nature Materials, 2020, 19, 1362-1371.	27.5	295
34	Polyethylene Glycol Backfilling Mitigates the Negative Impact of the Protein Corona on Nanoparticle Cell Targeting. Angewandte Chemie - International Edition, 2014, 53, 5093-5096.	13.8	276
35	Tumour-on-a-chip provides an optical window into nanoparticle tissue transport. Nature Communications, 2013, 4, 2718.	12.8	264
36	Tailoring nanoparticle designs to target cancer based on tumor pathophysiology. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E1142-51.	7.1	228

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37	Nanoparticleâ€“blood interactions: the implications on solid tumour targeting. Chemical Communications, 2015, 51, 2756-2767.	4.1	226
38	Secreted Biomolecules Alter the Biological Identity and Cellular Interactions of Nanoparticles. ACS Nano, 2014, 8, 5515-5526.	14.6	225
39	Effect of removing Kupffer cells on nanoparticle tumor delivery. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10871-E10880.	7.1	217
40	Convergence of Quantum Dot Barcodes with Microfluidics and Signal Processing for Multiplexed High-Throughput Infectious Disease Diagnostics. Nano Letters, 2007, 7, 2812-2818.	9.1	198
41	DNA-controlled dynamic colloidal nanoparticle systems for mediating cellular interaction. Science, 2016, 351, 841-845.	12.6	180
42	Phenotype Determines Nanoparticle Uptake by Human Macrophages from Liver and Blood. ACS Nano, 2017, 11, 2428-2443.	14.6	180
43	In vivo assembly of nanoparticle components to improve targeted cancer imaging. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11194-11199.	7.1	161
44	Integrated Quantum Dot Barcode Smartphone Optical Device for Wireless Multiplexed Diagnosis of Infected Patients. ACS Nano, 2015, 9, 3060-3074.	14.6	157
45	Significantly Improved Analytical Sensitivity of Lateral Flow Immunoassays by Using Thermal Contrast. Angewandte Chemie - International Edition, 2012, 51, 4358-4361.	13.8	155
46	The Role of Nanoparticle Design in Determining Analytical Performance of Lateral Flow Immunoassays. Nano Letters, 2017, 17, 7207-7212.	9.1	149
47	Nanotechnology diagnostics for infectious diseases prevalent in developing countries. Advanced Drug Delivery Reviews, 2010, 62, 438-448.	13.7	147
48	Design and Characterization of Lysine Cross-Linked Mercapto-Acid Biocompatible Quantum Dots. Chemistry of Materials, 2006, 18, 872-878.	6.7	144
49	Optimizing the Synthesis of Red- to Near-IR-Emitting CdS-Capped CdTexSe1-xAlloyed Quantum Dots for Biomedical Imaging. Chemistry of Materials, 2006, 18, 4845-4854.	6.7	143
50	Nanoparticle Size Influences Antigen Retention and Presentation in Lymph Node Follicles for Humoral Immunity. Nano Letters, 2019, 19, 7226-7235.	9.1	140
51	Facile and Rapid Oneâ€Step Mass Preparation of Quantumâ€Dot Barcodes. Angewandte Chemie - International Edition, 2008, 47, 5577-5581.	13.8	129
52	Systematic Investigation of Preparing Biocompatible, Single, and Small ZnS-Capped CdSe Quantum Dots with Amphiphilic Polymers. ACS Nano, 2008, 2, 1341-1352.	14.6	127
53	A Plasmonic DNAzyme Strategy for Pointâ€ofâ€Care Genetic Detection of Infectious Pathogens. Angewandte Chemie - International Edition, 2013, 52, 3168-3171.	13.8	125
54	Prediction of nanoparticles-cell association based on corona proteins and physicochemical properties. Nanoscale, 2015, 7, 9664-9675.	5.6	118

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55	Biodegradable Quantum Dot Nanocomposites Enable Live Cell Labeling and Imaging of Cytoplasmic Targets. Nano Letters, 2008, 8, 3887-3892.	9.1	116
56	Quantitative Comparison of Photothermal Heat Generation between Gold Nanospheres and Nanorods. Scientific Reports, 2016, 6, 29836.	3.3	114
57	Peptideâ€“MHC-based nanomedicines for autoimmunity function as T-cell receptor microclustering devices. Nature Nanotechnology, 2017, 12, 701-710.	31.5	114
58	Trilayer hybrid polymer-quantum dot light-emitting diodes. Applied Physics Letters, 2004, 84, 2925-2927.	3.3	113
59	Supervised Learning and Mass Spectrometry Predicts the <i>in Vivo</i> Fate of Nanomaterials. ACS Nano, 2019, 13, 8023-8034.	14.6	109
60	Advances and challenges of nanotechnology-based drug delivery systems. Expert Opinion on Drug Delivery, 2007, 4, 621-633.	5.0	108
61	Rapid Screening of Genetic Biomarkers of Infectious Agents Using Quantum Dot Barcodes. ACS Nano, 2011, 5, 1580-1587.	14.6	107
62	Clinical Validation of Quantum Dot Barcode Diagnostic Technology. ACS Nano, 2016, 10, 4742-4753.	14.6	107
63	Design and potential application of PEGylated gold nanoparticles with size-dependent permeation through brain microvasculature. Nanomedicine: Nanotechnology, Biology, and Medicine, 2011, 7, 992-1000.	3.3	106
64	Nanoparticle exposure in animals can be visualized in the skin and analysed via skin biopsy. Nature Communications, 2014, 5, 3796.	12.8	106
65	Nanomedicine 2.0. Accounts of Chemical Research, 2017, 50, 627-632.	15.6	105
66	Surface-Plasmon-Coupled Emission of Quantum Dots. Journal of Physical Chemistry B, 2005, 109, 1088-1093.	2.6	98
67	Semiconductor quantum dots as contrast agents for whole animal imaging. Trends in Biotechnology, 2004, 22, 607-609.	9.3	97
68	Nano Research for COVID-19. ACS Nano, 2020, 14, 3719-3720.	14.6	97
69	An Analysis of the Binding Function and Structural Organization of the Protein Corona. Journal of the American Chemical Society, 2020, 142, 8827-8836.	13.7	96
70	Fluorescenceâ€Tagged Gold Nanoparticles for Rapidly Characterizing the Sizeâ€Dependent Biodistribution in Tumor Models. Advanced Healthcare Materials, 2012, 1, 714-721.	7.6	92
71	Tuning the Drug Loading and Release of DNAâ€Assembled Goldâ€Nanorod Superstructures. Advanced Materials, 2016, 28, 8511-8518.	21.0	88
72	Nanotechnology for modern medicine: next step towards clinical translation. Journal of Internal Medicine, 2021, 290, 486-498.	6.0	88

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73	Improving nanoparticle diffusion through tumor collagen matrix by photo-thermal gold nanorods. Nanoscale, 2016, 8, 12524-12530.	5.6	85
74	Thermal Contrast Amplification Reader Yielding 8-Fold Analytical Improvement for Disease Detection with Lateral Flow Assays. Analytical Chemistry, 2016, 88, 11774-11782.	6.5	81
75	Bionanotechnology Progress and Advances. Biology of Blood and Marrow Transplantation, 2006, 12, 87-91.	2.0	73
76	Exploring Primary Liver Macrophages for Studying Quantum Dot Interactions with Biological Systems. Advanced Materials, 2010, 22, 2520-2524.	21.0	73
77	Three-Dimensional Optical Mapping of Nanoparticle Distribution in Intact Tissues. ACS Nano, 2016, 10, 5468-5478.	14.6	73
78	Flow Rate Affects Nanoparticle Uptake into Endothelial Cells. Advanced Materials, 2020, 32, e1906274.	21.0	69
79	Why nanoparticles prefer liver macrophage cell uptake in vivo. Advanced Drug Delivery Reviews, 2022, 185, 114238.	13.7	66
80	Clarifying intact 3D tissues on a microfluidic chip for high-throughput structural analysis. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14915-14920.	7.1	62
81	Controlling DNAâ€"nanoparticle serum interactions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13600-13605.	7.1	62
82	Three-Dimensional Imaging of Transparent Tissues via Metal Nanoparticle Labeling. Journal of the American Chemical Society, 2017, 139, 9961-9971.	13.7	60
83	Specific Endothelial Cells Govern Nanoparticle Entry into Solid Tumors. ACS Nano, 2021, 15, 14080-14094.	14.6	60
84	Assessing micrometastases as a target for nanoparticles using 3D microscopy and machine learning. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14937-14946.	7.1	55
85	Gold nanoshells in cancer imaging and therapy: towards clinical application. Nanomedicine, 2007, 2, 735-738.	3.3	52
86	Quantumâ€Dotâ€Encoded Microbeads for Multiplexed Genetic Detection of Nonâ€amplified DNA Samples. Small, 2011, 7, 137-146.	10.0	50
87	Rough around the Edges: The Inflammatory Response of Microglial Cells to Spiky Nanoparticles. ACS Nano, 2010, 4, 2490-2493.	14.6	49
88	Engineering the Structure and Properties of DNA-Nanoparticle Superstructures Using Polyvalent Counterions. Journal of the American Chemical Society, 2016, 138, 4565-4572.	13.7	46
89	Automating Quantum Dot Barcode Assays Using Microfluidics and Magnetism for the Development of a Point-of-Care Device. ACS Applied Materials & Interfaces, 2013, 5, 2853-2860.	8.0	45
90	Principles of conjugating quantum dots to proteins via carbodiimide chemistry. Nanotechnology, 2011, 22, 494006.	2.6	44

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91	Diagnosing Antibiotic Resistance Using Nucleic Acid Enzymes and Gold Nanoparticles. ACS Nano, 2021, 15, 9379-9390.	14.6	44
92	Patients, Here Comes More Nanotechnology. ACS Nano, 2016, 10, 8139-8142.	14.6	43
93	Engineering Steps for Mobile Point-of-Care Diagnostic Devices. Accounts of Chemical Research, 2019, 52, 2406-2414.	15.6	43
94	Nonblinking Plasmonic Quantum Dot Assemblies for Multiplex Biological Detection. Angewandte Chemie - International Edition, 2012, 51, 8773-8777.	13.8	41
95	Synthesis of Patient-Specific Nanomaterials. Nano Letters, 2019, 19, 116-123.	9.1	40
96	Exploring Passive Clearing for 3D Optical Imaging of Nanoparticles in Intact Tissues. Bioconjugate Chemistry, 2017, 28, 253-259.	3.6	39
97	Characterizing the protein corona of sub-10â€¯nm nanoparticles. Journal of Controlled Release, 2019, 304, 102-110.	9.9	38
98	Surveilling and Tracking COVID-19 Patients Using a Portable Quantum Dot Smartphone Device. Nano Letters, 2021, 21, 5209-5216.	9.1	38
99	Illuminating the deep. Nature Materials, 2013, 12, 285-287.	27.5	37
100	State of diagnosing infectious pathogens using colloidal nanomaterials. Biomaterials, 2017, 146, 97-114.	11.4	37
101	Endothelialized collagen based pseudo-islets enables tuneable subcutaneous diabetes therapy. Biomaterials, 2020, 232, 119710.	11.4	37
102	A Systematic Nomenclature for Codifying Engineered Nanostructures. Small, 2009, 5, 426-431.	10.0	36
103	No signs of illness. Nature Nanotechnology, 2012, 7, 416-417.	31.5	36
104	The Role of Ligand Density and Size in Mediating Quantum Dot Nuclear Transport. Small, 2014, 10, 4182-4192.	10.0	35
105	Reply to â€œEvaluation of nanomedicines: stick to the basicsâ€. Nature Reviews Materials, 2016, 1, .	48.7	35
106	Macrophages Actively Transport Nanoparticles in Tumors After Extravasation. ACS Nano, 2022, 16, 6080-6092.	14.6	34
107	Suppressing Subcapsular Sinus Macrophages Enhances Transport of Nanovaccines to Lymph Node Follicles for Robust Humoral Immunity. ACS Nano, 2020, 14, 9478-9490.	14.6	33
108	Application of semiconductor and metal nanostructures in biology and medicine. Hematology American Society of Hematology Education Program, 2009, 2009, 701-707.	2.5	30

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109	Visualizing Quantum Dots in Biological Samples Using Silver Staining. Analytical Chemistry, 2009, 81, 4560-4565.	6.5	29
110	A versatile plasmonic thermogel for disinfection of antimicrobial resistant bacteria. Biomaterials, 2016, 97, 154-163.	11.4	29
111	Engineering multifunctional magnetic-quantum dot barcodes by flow focusing. Chemical Communications, 2011, 47, 4195.	4.1	28
112	Liposome Imaging in Optically Cleared Tissues. Nano Letters, 2020, 20, 1362-1369.	9.1	28
113	Subtherapeutic Photodynamic Treatment Facilitates Tumor Nanomedicine Delivery and Overcomes Desmoplasia. Nano Letters, 2021, 21, 344-352.	9.1	28
114	Fabrication of metal nanoshell quantum-dot barcodes for biomolecular detection. Nano Today, 2013, 8, 228-234.	11.9	25
115	Cancer: Nanoscience and Nanotechnology Approaches. ACS Nano, 2017, 11, 4375-4376.	14.6	24
116	Nanoscience and Nanotechnology Impacting Diverse Fields of Science, Engineering, and Medicine. ACS Nano, 2016, 10, 10615-10617.	14.6	22
117	The Future of Nanotechnology: Cross-disciplined Progress to Improve Health and Medicine. Accounts of Chemical Research, 2019, 52, 2405-2405.	15.6	21
118	Nanoparticle Uptake in a Spontaneous and Immunocompetent Woodchuck Liver Cancer Model. ACS Nano, 2020, 14, 4698-4715.	14.6	20
119	A Colorimetric Test to Differentiate Patients Infected with Influenza from COVIDâ€19. Small Structures, 2021, 2, 2100034.	12.0	19
120	Simultaneous Quantification of Cells and Nanomaterials by Inductive-Coupled Plasma Techniques. Journal of the Association for Laboratory Automation, 2013, 18, 99-104.	2.8	18
121	How Nanoparticles Interact with Cancer Cells. Cancer Treatment and Research, 2015, 166, 227-244.	0.5	16
122	Highly efficient adenoviral transduction of pancreatic islets using a microfluidic device. Lab on A Chip, 2016, 16, 2921-2934.	6.0	16
123	Redefining the Experimental and Methods Sections. ACS Nano, 2019, 13, 4862-4864.	14.6	16
124	Transcribing In Vivo Blood Vessel Networks into In Vitro Perfusable Microfluidic Devices. Advanced Materials Technologies, 2020, 5, 2000103.	5.8	16
125	Simplifying Assays by Tableting Reagents. Journal of the American Chemical Society, 2017, 139, 17341-17349.	13.7	15
126	Realâ€time monitoring and control of soluble signaling factors enables enhanced progenitor cell outputs from human cord blood stem cell cultures. Biotechnology and Bioengineering, 2014, 111, 1258-1264.	3.3	13

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127	Yeast Populations Evolve to Resist CdSe Quantum Dot Toxicity. Bioconjugate Chemistry, 2017, 28, 1205-1213.	3.6	13
128	A strategy to assemble nanoparticles with polymers for mitigating cytotoxicity and enabling size tuning. Nanomedicine, 2011, 6, 767-775.	3.3	12
129	The development of direct multicolour fluorescence cross-correlation spectroscopy: Towards a new tool for tracking complex biomolecular events in real-time. Physical Chemistry Chemical Physics, 2012, 14, 3290.	2.8	11
130	Accelerating Advances in Science, Engineering, and Medicine through Nanoscience and Nanotechnology. ACS Nano, 2017, 11, 3423-3424.	14.6	11
131	DNA-Controlled Encapsulation of Small Molecules in Protein Nanoparticles. Journal of the American Chemical Society, 2020, 142, 17938-17943.	13.7	11
132	Impact of Tumor Barriers on Nanoparticle Delivery to Macrophages. Molecular Pharmaceutics, 2022, 19, 1917-1925.	4.6	7
133	Gold Nanoparticle Smartphone Platform for Diagnosing Urinary Tract Infections. ACS Nanoscience Au, 2022, 2, 324-332.	4.8	7
134	Guiding principles for a successful multidisciplinary research collaboration. Future Science OA, 2015, 1, FSO7.	1.9	6
135	A Call for Clinical Studies. ACS Nano, 2014, 8, 4055-4057.	14.6	5
136	Making vessels more permeable. Nature Biomedical Engineering, 2017, 1, 629-631.	22.5	5
137	Tunable and precise miniature lithium heater for point-of-care applications. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 4632-4641.	7.1	5
138	Quantification of quantum dots using phage display screening and assay. Journal of Materials Chemistry, 2009, 19, 6321.	6.7	4
139	Complexities abound. Nature Nanotechnology, 2013, 8, 72-73.	31.5	4
140	Nanoscience and Nanotechnology Cross Borders. ACS Nano, 2017, 11, 1123-1126.	14.6	4
141	What Is the Value of Publishing?. ACS Nano, 2018, 12, 6345-6346.	14.6	4
142	Engineering Biocompatible Quantum Dots for Ultrasensitive, Real-Time Biological Imaging and Detection. , 2006, , 137-156.		4
143	Quantum Dots for Traceable Therapeutic Delivery. , 2014, , 393-417.		2
144	Biomedical Applications of Semiconductor Quantum Dots. , 2004, , 37-50.		1

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145	Bioinspired Approaches to Building Nanoscale Devices. , 2004, , 149-160.		1
146	A Big Year Ahead for Nano in 2018. ACS Nano, 2017, 11, 11755-11757.	14.6	1
147	Growing Contributions of Nano in 2020. ACS Nano, 2020, 14, 16163-16164.	14.6	1
148	Semiconductor Quantum Dots as Multicolor and Ultrasensitive Biological Labels. , 0, , 494-506.		0
149	Interfacing peptides identified using phage-display screening with quantum dots for the design of nanoprobes. , 2005, , .		0
150	Preliminary results: exploring the interactions of quantum dots with whole blood components. , 2005, 5969, 54.		0
151	Quantum dots: Small 1/2010. Small, 2010, 6, NA-NA.	10.0	0
152	Our First and Next Decades at ACS Nano. ACS Nano, 2017, 11, 7553-7555.	14.6	0
153	Helmuth MÃ¶hwald (1946â€“2018). ACS Nano, 2018, 12, 3053-3055.	14.6	0
154	Probing the Interactions of Nanoparticles with Biological Systems. FASEB Journal, 2009, 23, 69.1.	0.5	0
155	The Impact of Patient Characteristics on Diagnostic Test Performance. Small Methods, 2022, , 2101233.	8.6	0
156	Tanks and Truth. ACS Nano, 2022, 16, 4975-4976.	14.6	0