Romana Schirhagl

List of Publications by Year
in descending order

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83 papers	4,900 citations	117453 34 h-index	91712 69 g-index
85 all docs	85 docs citations	85 times ranked	5937 citing authors

#	Article	IF	Citations
1	Nitrogen-Vacancy Centers in Diamond: Nanoscale Sensors for Physics and Biology. Annual Review of Physical Chemistry, 2014, 65, 83-105.	4.8	1,121
2	Applications of Molecularly Imprinted Polymer Nanoparticles and Their Advances toward Industrial Use: A Review. Analytical Chemistry, 2016, 88, 250-261.	3.2	320
3	Bioapplications for Molecularly Imprinted Polymers. Analytical Chemistry, 2014, 86, 250-261.	3.2	310
4	Spin properties of very shallow nitrogen vacancy defects in diamond. Physical Review B, 2012, 86, .	1.1	159
5	Nanodiamonds and Their Applications in Cells. Small, 2018, 14, e1704263.	5.2	152
6	Investigation of Surface Magnetic Noise by Shallow Spins in Diamond. Physical Review Letters, 2014, 112, 147602.	2.9	148
7	Nanodiamonds for In Vivo Applications. Small, 2018, 14, e1703838.	5.2	138
8	Advanced vapor recognition materials for selective and fast responsive surface acoustic wave sensors: A review. Analytica Chimica Acta, 2013, 787, 36-49.	2.6	134
9	Sensing Picornaviruses Using Molecular Imprinting Techniques on a Quartz Crystal Microbalance. Analytical Chemistry, 2009, 81, 5320-5326.	3.2	123
10	Particle sorting using a porous membrane in a microfluidic device. Lab on A Chip, 2011, 11, 238-245.	3.1	120
11	Nanosensors for diagnosis with optical, electric and mechanical transducers. RSC Advances, 2019, 9, 6793-6803.	1.7	103
12	Gravimetric Viral Diagnostics: QCM Based Biosensors for Early Detection of Viruses. Chemosensors, 2017, 5, 7.	1.8	98
13	Natural and Biomimetic Materials for the Detection of Insulin. Analytical Chemistry, 2012, 84, 3908-3913.	3.2	93
14	Detection of viruses with molecularly imprinted polymers integrated on a microfluidic biochip using contact-less dielectric microsensors. Lab on A Chip, 2009, 9, 3549.	3.1	89
15	Improving surface and defect center chemistry of fluorescent nanodiamonds for imaging purposesâ€”a review. Analytical and Bioanalytical Chemistry, 2015, 407, 7521-7536.	1.9	85
16	Chemosensors for Viruses Based on Artificial Immunoglobulin Copies. Advanced Materials, 2010, 22, 2078-2081.	11.1	82
17	Nanodiamonds as multi-purpose labels for microscopy. Scientific Reports, 2017, 7, 720.	1.6	79
18	Recent advances in natural polymer-based hydroxyapatite scaffolds: Properties and applications. European Polymer Journal, 2021, 148, 110360.	2.6	73

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19	The interaction of fluorescent nanodiamond probes with cellular media. Mikrochimica Acta, 2017, 184, 1001-1009.	2.5	69
20	Quantum monitoring of cellular metabolic activities in single mitochondria. Science Advances, 2021, 7, .	4.7	69
21	Separation of bacteria with imprinted polymeric films. Analyst, The, 2012, 137, 1495.	1.7	60
22	Male subfertility and oxidative stress. Redox Biology, 2021, 46, 102071.	3.9	54
23	Comparing biomimetic and biological receptors for insulin sensing. Chemical Communications, 2010, 46, 3128.	2.2	53
24	Nanodiamond Relaxometry-Based Detection of Free-Radical Species When Produced in Chemical Reactions in Biologically Relevant Conditions. ACS Sensors, 2020, 5, 3862-3869.	4.0	53
25	Two-dimensional nanomaterial based sensors for heavy metal ions. Mikrochimica Acta, 2018, 185, 478.	2.5	48
26	Microfluidic capture and release of bacteria in a conical nanopore array. Lab on A Chip, 2012, 12, 558-561.	3.1	43
27	Surface-imprinted polymers in microfluidic devices. Science China Chemistry, 2012, 55, 469-483.	4.2	43
28	Interaction of nanodiamonds with bacteria. Nanoscale, 2018, 10, 17117-17124.	2.8	42
29	Quantum Sensing of Free Radicals in Primary Human Dendritic Cells. Nano Letters, 2022, 22, 1818-1825.	4.5	42
30	The Response of HeLa Cells to Fluorescent NanoDiamond Uptake. Sensors, 2018, 18, 355.	2.1	40
31	Microfluidic purification and analysis of hematopoietic stem cells from bone marrow. Lab on A Chip, 2011, 11, 3130.	3.1	39
32	Shape and crystallographic orientation of nanodiamonds for quantum sensing. Physical Chemistry Chemical Physics, 2017, 19, 10748-10752.	1.3	39
33	Membrane-Based Scanning Force Microscopy. Physical Review Applied, 2021, 15, .	1.5	38
34	Generally Applicable Transformation Protocols for Fluorescent Nanodiamond Internalization into Cells. Scientific Reports, 2017, 7, 5862.	1.6	36
35	Atrazine detection based on antibody replicas. Journal of Materials Chemistry, 2011, 21, 14594.	6.7	30
36	Viruses, Artificial Viruses and Virusâ€Based Structures for Biomedical Applications. Advanced Healthcare Materials, 2016, 5, 1386-1400.	3.9	30

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37	Recombinant Protein Polymers for Colloidal Stabilization and Improvement of Cellular Uptake of Diamond Nanosensors. Analytical Chemistry, 2017, 89, 12812-12820.	3.2	29
38	Immunosensing with artificial antibodies in organic solvents or complex matrices. Sensors and Actuators B: Chemical, 2012, 173, 585-590.	4.0	28
39	Bioinspired surfaces and materials. Chemical Society Reviews, 2016, 45, 234-236.	18.7	27
40	Optical Detection of Intracellular Quantities Using Nanoscale Technologies. Accounts of Chemical Research, 2019, 52, 1739-1749.	7.6	25
41	Applying NV center-based quantum sensing to study intracellular free radical response upon viral infections. Redox Biology, 2022, 52, 102279.	3.9	25
42	Influence of ZnO nanostructures in liquid crystal interfaces for bistable switching applications. Applied Surface Science, 2015, 357, 1499-1510.	3.1	22
43	Antibodies and Their Replicae in Microfluidic Sensor Systemsâ€"Labelfree Quality Assessment in Food Chemistry and Medicine. Sensor Letters, 2010, 8, 399-404.	0.4	21
44	Toward Using Fluorescent Nanodiamonds To Study Chronological Aging in Saccharomyces cerevisiae. Analytical Chemistry, 2018, 90, 13506-13513.	3.2	20
45	Facile in situ generation of bismuth tungstate nanosheet-multiwalled carbon nanotube composite as unconventional affinity material for quartz crystal microbalance detection of antibiotics. Journal of Hazardous Materials, 2019, 373, 50-59.	6.5	20
46	Effect of medium and aggregation on antibacterial activity of nanodiamonds. Materials Science and Engineering C, 2020, 112, 110930.	3.8	20
47	Fluorescent Nanodiamonds for Detecting Free-Radical Generation in Real Time during Shear Stress in Human Umbilical Vein Endothelial Cells. ACS Sensors, 2021, 6, 4349-4359.	4.0	20
48	Switchable, self-assembled CdS nanomaterials embedded in liquid crystal cell for high performance static memory device. Materials Letters, 2016, 169, 37-41.	1.3	19
49	Nanodiamond uptake in colon cancer cells: the influence of direction and trypsin-EDTA treatment. Nanoscale, 2019, 11, 17357-17367.	2.8	19
50	Nanoscale MRI for Selective Labeling and Localized Free Radical Measurements in the Acrosomes of Single Sperm Cells. ACS Nano, 2022, 16, 10701-10710.	7.3	19
51	Smart probe for simultaneous detection of copper ion, pyrophosphate, and alkaline phosphatase in vitro and in clinical samples. Analytical and Bioanalytical Chemistry, 2019, 411, 6475-6485.	1.9	18
52	The Fate of Lipid-Coated and Uncoated Fluorescent Nanodiamonds during Cell Division in Yeast. Nanomaterials, 2020, 10, 516.	1.9	18
53	Diamond Color Centers in Diamonds for Chemical and Biochemical Analysis and Visualization. Analytical Chemistry, 2022, 94, 225-249.	3.2	18
54	Nanoparticle discrimination based on wavelength and lifetime-multiplexed cathodoluminescence microscopy. Nanoscale, 2017, 9, 12727-12734.	2.8	17

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55	Novel uric acid-based nano organocatalyst with phosphorous acid tags: Application for synthesis of new biologically-interest pyridines with indole moieties via a cooperative vinylogous anomeric based oxidation. Molecular Catalysis, 2021, 507, 111549.	1.0	16
56	Synthesis of novel magnetic nanoparticles with urea or urethane moieties: Applications as catalysts in the Strecker synthesis of Î±â€aminonitriles. Applied Organometallic Chemistry, 2017, 31, e3883.	1.7	15
57	Evaluation of the Oxidative Stress Response of Aging Yeast Cells in Response to Internalization of Fluorescent Nanodiamond Biosensors. Nanomaterials, 2020, 10, 372.	1.9	15
58	Influence of diamond crystal orientation on the interaction with biological matter. Carbon, 2020, 162, 1-12.	5.4	15
59	Glucose-Driven Fuel Cell Constructed from Enzymes and Filter Paper. Journal of Chemical Education, 2011, 88, 1283-1286.	1.1	13
60	Temperature variation dielectric behavior of TiO2 nanocabbages and doped W-182(AFLC). Journal of Luminescence, 2013, 136, 278-284.	1.5	13
61	Not all cells are created equal â€“ endosomal escape in fluorescent nanodiamonds in different cells. Nanoscale, 2021, 13, 13294-13300.	2.8	13
62	Nanodiamond for Sample Preparation in Proteomics. Analytical Chemistry, 2019, 91, 9800-9805.	3.2	12
63	Drug delivery and antimicrobial studies of chitosan-alginate based hydroxyapatite bioscaffolds formed by the Casein micelle assisted synthesis. Materials Chemistry and Physics, 2021, 272, 125019.	2.0	12
64	Cell Uptake of Lipidâ€Coated Diamond. Particle and Particle Systems Characterization, 2019, 36, 1900116.	1.2	11
65	Targeting Nanodiamonds to the Nucleus in Yeast Cells. Nanomaterials, 2020, 10, 1962.	1.9	11
66	High Temperature Treatment of Diamond Particles Toward Enhancement of Their Quantum Properties. Frontiers in Physics, 2020, 8, .	1.0	11
67	{[1,4-DHPyrazine][C(CN)3]2} as a New Nano Molten Salt Catalyst for the Synthesis of Novel Piperazine Based bis(4-hydroxy-2H-chromen-2-one) Derivatives. Catalysis Letters, 2017, 147, 2083-2099.	1.4	10
68	Non enzymatic fluorometric determination of glucose by using quenchable g-C3N4 quantum dots. Mikrochimica Acta, 2019, 186, 779.	2.5	10
69	Synthesis of biological based hennotannic acid-based salts over porous bismuth coordination polymer with phosphorous acid tags. RSC Advances, 2021, 11, 2141-2157.	1.7	9
70	Nanometer-scale isotope analysis of bulk diamond by atom probe tomography. Diamond and Related Materials, 2015, 60, 60-65.	1.8	8
71	Application of Triphenylammonium Tricyanomethanide as an Efficient and Recyclable Nanostructured Molten-Salt Catalyst for the Synthesis of N-Benzylidene-2-arylimidazo[1,2-a]pyridin-3-amines. Synlett, 2017, 28, 1173-1176.	1.0	8
72	Polyelectrolyte Multilayer Films Modification with Ag and rGO Influences Platelets Activation and Aggregate Formation under In Vitro Blood Flow. Nanomaterials, 2020, 10, 859.	1.9	8

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73	pH Sensitive Dextran Coated Fluorescent Nanodiamonds as a Biomarker for HeLa Cells Endocytic Pathway and Increased Cellular Uptake. Nanomaterials, 2021, 11, 1837.	1.9	8
74	Following Polymer Degradation with Nanodiamond Magnetometry. ACS Sensors, 2022, 7, 123-130.	4.0	8
75	Efficient one-step novel synthesis of ZnO nanospikes to nanoflakes doped OAFLCs (W-182) host: Optical and dielectric response. Applied Surface Science, 2013, 280, 405-417.	3.1	7
76	Influence of sonication on the physicochemical and biological characteristics of selenium-substituted hydroxyapatites. New Journal of Chemistry, 2020, 44, 17453-17464.	1.4	7
77	Insight into a Fenton-like Reaction Using Nanodiamond Based Relaxometry. Nanomaterials, 2022, 12, 2422.	1.9	6
78	Optical and Electrical Investigation of ZnO Nano-Wire Array to Micro-Flower from Hierarchical Nano-Rose Structures. Journal of Nanoscience and Nanotechnology, 2016, 16, 400-409.	0.9	4
79	Micro Versus Macro â€“ The Effect of Environmental Confinement on Cellular Nanoparticle Uptake. Frontiers in Bioengineering and Biotechnology, 2020, 8, 869.	2.0	3
80	Pharmacodynamic Studies of Fluorescent Diamond Carriers of Doxorubicin in Liver Cancer Cells and Colorectal Cancer Organoids. Nanotechnology, Science and Applications, 2021, Volume 14, 139-159.	4.6	2
81	Sensors for Healthcare Monitoring - Proteins, Viruses and Blood-Group-Typing. IFMBE Proceedings, 2009, , 325-328.	0.2	1
82	De Novo Designed Proteins for Colloidal Stabilization and Improvement of Cellular Uptake. Biophysical Journal, 2018, 114, 362a.	0.2	1
83	Transferring the Selectivity of a Natural Antibody into a Molecularly Imprinted Polymer. Methods in Molecular Biology, 2017, 1575, 325-340.	0.4	0