

Petr Cigler

List of Publications by Year in descending order

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85
papers

3,976
citations

101496

36
h-index

123376

61
g-index

93
all docs

93
docs citations

93
times ranked

4569
citing authors

#	ARTICLE	IF	CITATIONS
1	From nonpeptide toward noncarbon protease inhibitors: Metallacarboranes as specific and potent inhibitors of HIV protease. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15394-15399.	3.3	279
2	Unambiguous observation of shape effects on cellular fate of nanoparticles. Scientific Reports, 2014, 4, 4495.	1.6	227
3	Photoluminescent Carbon Nanostructures. Chemistry of Materials, 2016, 28, 4085-4128.	3.2	186
4	Optical imaging of localized chemical events using programmable diamond quantum nanosensors. Nature Communications, 2017, 8, 14701.	5.8	135
5	Design of HIV Protease Inhibitors Based on Inorganic Polyhedral Metallacarboranes. Journal of Medicinal Chemistry, 2009, 52, 7132-7141.	2.9	132
6	Luminescence of Nanodiamond Driven by Atomic Functionalization: Towards Novel Detection Principles. Advanced Functional Materials, 2012, 22, 812-819.	7.8	131
7	DNA-controlled assembly of a NaI lattice structure from gold nanoparticles and protein nanoparticles. Nature Materials, 2010, 9, 918-922.	13.3	121
8	Gold nanoclusters with bright near-infrared photoluminescence. Nanoscale, 2018, 10, 3792-3798.	2.8	113
9	Lanthanide(III) Complexes of a Mono(methylphosphonate) Analogue of H4dota: The Influence of Protonation of the Phosphonate Moiety on the TSAP/SAP Isomer Ratio and the Water Exchange Rate. Chemistry - A European Journal, 2005, 11, 2373-2384.	1.7	110
10	Boosting nanodiamond fluorescence: towards development of brighter probes. Nanoscale, 2013, 5, 3208.	2.8	107
11	Molecular Assembly of Metallacarboranes in Water: Light Scattering and Microscopy Study. Langmuir, 2006, 22, 575-581.	1.6	106
12	Coating nanodiamonds with biocompatible shells for applications in biology and medicine. Current Opinion in Solid State and Materials Science, 2017, 21, 43-53.	5.6	104
13	Carborane-Based Carbonic Anhydrase Inhibitors. Angewandte Chemie - International Edition, 2013, 52, 13760-13763.	7.2	93
14	Inorganic Polyhedral Metallacarborane Inhibitors of HIV Protease: A New Approach to Overcoming Antiviral Resistance. Journal of Medicinal Chemistry, 2008, 51, 4839-4843.	2.9	90
15	Fluorescent Nanodiamonds Embedded in Biocompatible Translucent Shells. Small, 2014, 10, 1106-1115.	5.2	88
16	Designing the nanobiointerface of fluorescent nanodiamonds: highly selective targeting of glioma cancer cells. Nanoscale, 2015, 7, 415-420.	2.8	87
17	Crystal Structures of Lanthanide(III) Complexes with Cyclen Derivative Bearing Three Acetate and One Methylphosphonate Pendants. Inorganic Chemistry, 2005, 44, 5591-5599.	1.9	84
18	Toward Quantitative Bio-sensing with Nitrogen Vacancy Center in Diamond. ACS Sensors, 2021, 6, 2077-2107.	4.0	84

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19	CONTRIBUTION TO UNDERSTANDING THE MECHANISM OF TITANIUM ACTION IN PLANT. <i>Journal of Plant Nutrition</i> , 2002, 25, 577-598.	0.9	79
20	Stealth Amphiphiles: Self-Assembly of Polyhedral Boron Clusters. <i>Langmuir</i> , 2016, 32, 6713-6722.	1.6	69
21	Nanoscale Dynamic Readout of a Chemical Redox Process Using Radicals Coupled with Nitrogen-Vacancy Centers in Nanodiamonds. <i>ACS Nano</i> , 2020, 14, 12938-12950.	7.3	66
22	Imaging of transfection and intracellular release of intact, non-labeled DNA using fluorescent nanodiamonds. <i>Nanoscale</i> , 2016, 8, 12002-12012.	2.8	61
23	Not All Fluorescent Nanodiamonds Are Created Equal: A Comparative Study. <i>Particle and Particle Systems Characterization</i> , 2019, 36, 1900009.	1.2	56
24	Structure-Aided Design of Novel Inhibitors of HIV Protease Based on a Benzodiazepine Scaffold. <i>Journal of Medicinal Chemistry</i> , 2012, 55, 10130-10135.	2.9	53
25	Fluorescent Nanodiamonds with Bioorthogonally Reactive Protein-Resistant Polymeric Coatings. <i>ChemPlusChem</i> , 2014, 79, 21-24.	1.3	53
26	Precise estimation of HPHT nanodiamond size distribution based on transmission electron microscopy image analysis. <i>Diamond and Related Materials</i> , 2014, 46, 21-24.	1.8	53
27	Carborane- β -cyclodextrin complexes as a supramolecular connector for bioactive surfaces. <i>Journal of Materials Chemistry B</i> , 2015, 3, 539-545.	2.9	47
28	Elicitation of Pharmacologically Active Substances in an Intact Medical Plant. <i>Journal of Agricultural and Food Chemistry</i> , 2009, 57, 7907-7911.	2.4	45
29	Interaction of Fluorescently Substituted Metallacarboranes with Cyclodextrins and Phospholipid Bilayers: Fluorescence and Light Scattering Study. <i>Langmuir</i> , 2010, 26, 6268-6275.	1.6	45
30	On the Solubility and Lipophilicity of Metallacarborane Pharmacophores. <i>Molecular Pharmaceutics</i> , 2013, 10, 1751-1759.	2.3	45
31	Aggregation Behavior of Nucleoside-Boron Cluster Conjugates in Aqueous Solutions. <i>Langmuir</i> , 2008, 24, 2625-2630.	1.6	43
32	Mechanism of Physiological Effects of Titanium Leaf Sprays on Plants Grown on Soil. <i>Biological Trace Element Research</i> , 2003, 91, 179-190.	1.9	42
33	Quantum Sensing of Free Radicals in Primary Human Dendritic Cells. <i>Nano Letters</i> , 2022, 22, 1818-1825.	4.5	42
34	In Vitro Transfection Mediated by Dendrigraft Poly(L-lysines): The Effect of Structure and Molecule Size. <i>Macromolecular Bioscience</i> , 2013, 13, 167-176.	2.1	41
35	Plasmonic Nanodiamonds: Targeted Core-Shell Type Nanoparticles for Cancer Cell Thermoablation. <i>Advanced Healthcare Materials</i> , 2015, 4, 460-468.	3.9	39
36	Tetraphenylporphyrin-cobalt(III) Bis(1,2-dicarbollide) Conjugates: From the Solution Characteristics to Inhibition of HIV Protease. <i>Journal of Physical Chemistry B</i> , 2007, 111, 4539-4546.	1.2	38

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37	Luminescence properties of engineered nitrogen vacancy centers in a close surface proximity. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 2051-2056.	0.8	38
38	Charge-sensitive fluorescent nanosensors created from nanodiamonds. <i>Nanoscale</i> , 2015, 7, 12307-12311.	2.8	37
39	Mass production of fluorescent nanodiamonds with a narrow emission intensity distribution. <i>Carbon</i> , 2016, 96, 812-818.	5.4	37
40	Benchmark Fluorination of Fluorescent Nanodiamonds on a Preparative Scale: Toward Unusually Hydrophilic Bright Particles. <i>Advanced Functional Materials</i> , 2016, 26, 4134-4142.	7.8	36
41	Hydroxamic Acids As a Novel Family of Serine Racemase Inhibitors: Mechanistic Analysis Reveals Different Modes of Interaction with the Pyridoxal-5'-phosphate Cofactor. <i>Journal of Medicinal Chemistry</i> , 2009, 52, 6032-6041.	2.9	33
42	Anchored but not internalized: shape dependent endocytosis of nanodiamond. <i>Scientific Reports</i> , 2017, 7, 46462.	1.6	31
43	Nanodiamonds as "artificial proteins" Regulation of a cell signalling system using low nanomolar solutions of inorganic nanocrystals. <i>Biomaterials</i> , 2018, 176, 106-121.	5.7	27
44	Interactions between iron and titanium metabolism in spinach: A chlorophyll fluorescence study in hydropony. <i>Journal of Plant Physiology</i> , 2010, 167, 1592-1597.	1.6	25
45	Triggering HIV polyprotein processing by light using rapid photodegradation of a tight-binding protease inhibitor. <i>Nature Communications</i> , 2015, 6, 6461.	5.8	25
46	Inhibitor-GCPII Interaction: Selective and Robust System for Targeting Cancer Cells with Structurally Diverse Nanoparticles. <i>Molecular Pharmaceutics</i> , 2018, 15, 2932-2945.	2.3	25
47	Visible-light sensitization of boron-doped nanocrystalline diamond through non-covalent surface modification. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 1165-1172.	1.3	22
48	Diamond nano-optode for fluorescent measurements of pH and temperature. <i>Nanoscale</i> , 2019, 11, 18537-18542.	2.8	22
49	The role of titanium in biomass production and its influence on essential elements' contents in field growing crops. <i>Plant, Soil and Environment</i> , 2005, 51, 19-25.	1.0	21
50	Efficiency and stability of spectral sensitization of boron-doped-diamond electrodes through covalent anchoring of a donor-acceptor organic chromophore (P1). <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16444-16450.	1.3	21
51	The Protein Corona Does Not Influence Receptor-Mediated Targeting of Virus-like Particles. <i>Bioconjugate Chemistry</i> , 2020, 31, 1575-1585.	1.8	20
52	Supported Lipid Bilayers on Fluorescent Nanodiamonds: A Structurally Defined and Versatile Coating for Bioapplications. <i>Advanced Functional Materials</i> , 2018, 28, 1803406.	7.8	19
53	Micelle-like nanoparticles of block copolymer poly(ethylene oxide)-block-poly(methacrylic acid) incorporating fluorescently substituted metallocarboranes designed as HIV protease inhibitor interaction probes. <i>Journal of Colloid and Interface Science</i> , 2010, 348, 129-136.	5.0	18
54	Carborane-Based Carbonic Anhydrase Inhibitors: Insight into CAII/CAIX Specificity from a High-Resolution Crystal Structure, Modeling, and Quantum Chemical Calculations. <i>BioMed Research International</i> , 2014, 2014, 1-9.	0.9	18

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55	Extremely rapid isotropic irradiation of nanoparticles with ions generated in situ by a nuclear reaction. <i>Nature Communications</i> , 2018, 9, 4467.	5.8	18
56	Proton-Gradient-Driven Oriented Motion of Nanodiamonds Grafted to Graphene by Dynamic Covalent Bonds. <i>ACS Nano</i> , 2018, 12, 7141-7147.	7.3	17
57	¹³ C and ¹ H nuclear magnetic resonance of methyl-substituted acetophenones and methyl benzoates: steric hindrance and inhibited conjugation. <i>Magnetic Resonance in Chemistry</i> , 2004, 42, 844-851.	1.1	16
58	Combination of two chromophores: Synthesis and PDT application of porphyrin-pentamethinium conjugate. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2012, 22, 82-84.	1.0	16
59	Nanodiamonds as Intracellular Probes for Imaging in Biology and Medicine. <i>Fundamental Biomedical Technologies</i> , 2014, , 363-401.	0.2	16
60	Visualization of Sentinel Lymph Nodes with Mannosylated Fluorescent Nanodiamonds. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	16
61	Harnessing subcellular-resolved organ distribution of cationic copolymer-functionalized fluorescent nanodiamonds for optimal delivery of active siRNA to a xenografted tumor in mice. <i>Nanoscale</i> , 2021, 13, 9280-9292.	2.8	13
62	Lipid Nanoparticles for Broad-spectrum Nucleic Acid Delivery. <i>Advanced Functional Materials</i> , 2021, 31, 2101391.	7.8	13
63	Medicinal Application of Carboranes. , 2011, , 41-70.		12
64	Simultaneous label-free live imaging of cell nucleus and luminescent nanodiamonds. <i>Scientific Reports</i> , 2020, 10, 9791.	1.6	12
65	The effect of simultaneous magnesium application on the biological effects of titanium. <i>Plant, Soil and Environment</i> , 2007, 53, 16-23.	1.0	11
66	The fluorescence of variously terminated nanodiamond particles: Quantum chemical calculations. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 2045-2048.	0.8	11
67	Chemical modification of diamond surface by a donor-acceptor organic chromophore (P1): Optimization of surface chemistry and electronic properties of diamond. <i>Applied Materials Today</i> , 2018, 12, 153-162.	2.3	11
68	Retargeting Polyomavirus-Like Particles to Cancer Cells by Chemical Modification of Capsid Surface. <i>Bioconjugate Chemistry</i> , 2017, 28, 307-313.	1.8	10
69	Inhibitor-Polymer Conjugates as a Versatile Tool for Detection and Visualization of Cancer-Associated Carbonic Anhydrase Isoforms. <i>ACS Omega</i> , 2019, 4, 6746-6756.	1.6	10
70	Nanodiamonds as traps for fibroblast growth factors: Parameters influencing the interaction. <i>Carbon</i> , 2022, 195, 372-386.	5.4	10
71	¹⁵ N- and ¹ H- and ¹⁵ N- ¹³ C couplings in ¹⁵ N-enriched dihydroxamic acids. <i>Magnetic Resonance in Chemistry</i> , 2008, 46, 748-755.	1.1	8
72	Optically coupled gold nanostructures: plasmon enhanced luminescence from gold nanorod-nanocluster hybrids. <i>Nanoscale</i> , 2022, 14, 3166-3178.	2.8	8

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73	Formation of gadolinium ferritin from clinical magnetic resonance contrast agents. <i>Nanoscale Advances</i> , 2020, 2, 5567-5571.	2.2	7
74	Reversible photo- and thermal-effects on the luminescence of gold nanoclusters: implications for nanothermometry. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 11954-11960.	1.3	7
75	Friction-directed self-assembly of Janus lithographic microgels into anisotropic 2D structures. <i>Journal of Materials Chemistry B</i> , 2021, 9, 4718-4725.	2.9	6
76	Inverse heavy-atom effect in near infrared photoluminescent gold nanoclusters. <i>Nanoscale</i> , 2021, 13, 10462-10467.	2.8	6
77	Nanodiamonds: Behavior in Biological Systems and Emerging Bioapplications. <i>Springer Series in Biomaterials Science and Engineering</i> , 2016, , 319-361.	0.7	5
78	Anomalous adsorptive properties of HIV protease: Indication of two-dimensional crystallization?. <i>Colloids and Surfaces B: Biointerfaces</i> , 2008, 64, 145-149.	2.5	3
79	Arbitrarily-shaped microgels composed of chemically unmodified biopolymers. <i>Biomaterials Science</i> , 2020, 8, 3044-3051.	2.6	3
80	Metastable Brominated Nanodiamond Surface Enables Room Temperature and Catalysis-Free Amine Chemistry. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1147-1158.	2.1	3
81	Influence of some fertilizer chemical properties on magnesium resorption from leaf surface of oats. <i>Journal of Plant Nutrition</i> , 1999, 22, 1241-1251.	0.9	2
82	Targeting Glioma Cancer Cells with Fluorescent Nanodiamonds via Integrin Receptors. <i>Methods in Pharmacology and Toxicology</i> , 2017, , 169-189.	0.1	2
83	Nanodiamonds embedded in shells. , 2017, , 339-363.		2
84	On the mechanism of charge transfer between neutral and negatively charged nitrogen-vacancy color centers in diamond. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1282, 103.	0.1	0
85	Synthesis of Near-Infrared Emitting Gold Nanoclusters for Biological Applications. <i>Journal of Visualized Experiments</i> , 2020, , .	0.2	0