

Katarzyna Matczyszyn

List of Publications by Year in descending order

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105
papers

1,892
citations

236612

25
h-index

360668

35
g-index

110
all docs

110
docs citations

110
times ranked

2602
citing authors

#	ARTICLE	IF	CITATIONS
1	Third-Order Nonlinear Optical Properties of Colloidal Gold Nanorods. <i>Journal of Physical Chemistry C</i> , 2012, 116, 13731-13737.	1.5	83
2	High gain of light in photoconducting polymer–nematic liquid crystal hybrid structures. <i>Optics Communications</i> , 2001, 187, 257-261.	1.0	70
3	Post-synthesis reshaping of gold nanorods using a femtosecond laser. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 71-78.	1.3	61
4	Photophysical, amplified spontaneous emission and charge transport properties of oligofluorene derivatives in thin films. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 16941-16956.	1.3	48
5	Bio-mediated synthesis, characterization and cytotoxicity of gold nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 29014-29019.	1.3	47
6	Selective parallel G-quadruplex recognition by a NIR-to-NIR two-photon squaraine. <i>Chemical Science</i> , 2018, 9, 8375-8381.	3.7	44
7	Photochromic switching of the DNA helicity induced by azobenzene derivatives. <i>Scientific Reports</i> , 2016, 6, 28605.	1.6	42
8	pH-Induced transformation of ligated Au ₂₅ to brighter Au ₂₃ nanoclusters. <i>Nanoscale</i> , 2018, 10, 11335-11341.	2.8	39
9	A closer look at two-photon absorption, absorption saturation and nonlinear refraction in gold nanoclusters. <i>RSC Advances</i> , 2016, 6, 98748-98752.	1.7	38
10	All-Optical Poling and Two-Photon Absorption in Heterocyclic Azo Dyes with Different Side Groups. <i>Journal of Physical Chemistry C</i> , 2019, 123, 725-734.	1.5	37
11	Two-photon absorption and two-photon-induced isomerization of azobenzene compounds. <i>RSC Advances</i> , 2020, 10, 40489-40507.	1.7	37
12	Synthesis, optical and nonlinear optical properties of new pyrazoline derivatives. <i>Dyes and Pigments</i> , 2014, 102, 63-70.	2.0	36
13	Quadratic and Cubic Nonlinear Optical Properties of Salts of Diquat-Based Chromophores with Diphenylamino Substituents. <i>Journal of Physical Chemistry A</i> , 2010, 114, 12028-12041.	1.1	35
14	Linear Optical and Third-Order Nonlinear Optical Properties of Some Fluorenyl- and Triarylamine-Containing Tetracyanobutadiene Derivatives. <i>Chemistry - A European Journal</i> , 2016, 22, 10155-10167.	1.7	35
15	Styryl dye possessing donor–acceptor structure – Synthesis, spectroscopic and computational studies. <i>Dyes and Pigments</i> , 2013, 99, 673-685.	2.0	33
16	Porphyrin-Loaded Lignin Nanoparticles Against Bacteria: A Photodynamic Antimicrobial Chemotherapy Application. <i>Frontiers in Microbiology</i> , 2020, 11, 606185.	1.5	32
17	Cubic nonlinear optical properties of new zinc tetraphenyl porphyrins peripherally functionalized with electron-rich Ru(II) alkynyl substituents. <i>Tetrahedron</i> , 2012, 68, 10351-10359.	1.0	31
18	1,1,4,4-Tetracyanobutadiene-Functionalized Anthracenes: Regioselectivity of Cycloadditions in the Synthesis of Small Near-IR Dyes. <i>Organic Letters</i> , 2021, 23, 2007-2012.	2.4	30

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19	Biogenic Gold Nanoparticles Decrease Methylene Blue Photobleaching and Enhance Antimicrobial Photodynamic Therapy. <i>Molecules</i> , 2021, 26, 623.	1.7	29
20	Remarkable Effect of Iridium Cyclometalation on the Nonlinear Absorption Properties of a Quadrupolar Imine Ligand. <i>Inorganic Chemistry</i> , 2013, 52, 10705-10707.	1.9	28
21	Enhancement of third-order optical susceptibility of C60-TTF compounds using nematic liquid crystal. <i>Chemical Physics Letters</i> , 2002, 365, 327-332.	1.2	27
22	Popcorn-shaped gold nanoparticles: Plant extract-mediated synthesis, characterization and multiphoton-excited luminescence properties. <i>Materials Chemistry and Physics</i> , 2019, 229, 56-60.	2.0	27
23	Phase Change in Azobenzene Derivative-Doped Liquid Crystal Controlled by the Photochromic Reaction of the Dye. <i>Journal of Physical Chemistry B</i> , 2003, 107, 6039-6045.	1.2	26
24	Efficient Singlet Oxygen Photogeneration by Zinc Porphyrin Dimers upon One- and Two-Photon Excitation. <i>Journal of Physical Chemistry B</i> , 2019, 123, 4271-4277.	1.2	26
25	Polarization-Sensitive Two-Photon Microscopy Study of the Organization of Liquid-Crystalline DNA. <i>Biophysical Journal</i> , 2009, 97, 2348-2357.	0.2	25
26	Shell-thickness-dependent nonlinear optical properties of colloidal gold nanoshells. <i>Journal of Materials Chemistry C</i> , 2014, 2, 7239-7246.	2.7	25
27	Biogenic gold nanoparticles enhance methylene blue-induced phototoxic effect on <i>Staphylococcus epidermidis</i> . <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.	0.8	25
28	Interactions of Isophorone Derivatives with DNA: Spectroscopic Studies. <i>PLoS ONE</i> , 2015, 10, e0129817.	1.1	25
29	Linear and nonlinear optical properties of azobenzene derivatives. <i>Journal of Molecular Modeling</i> , 2009, 15, 581-590.	0.8	24
30	Charge carrier mobility study of a mesogenic thienothiophene derivative in bulk and thin films. <i>Organic Electronics</i> , 2014, 15, 943-953.	1.4	24
31	Interactions of a biocompatible water-soluble anthracenyl polymer derivative with double-stranded DNA. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 30318-30327.	1.3	24
32	Enhancement of the Efficacy of Photodynamic Inactivation of <i>Candida albicans</i> with the Use of Biogenic Gold Nanoparticles. <i>Photochemistry and Photobiology</i> , 2017, 93, 1081-1090.	1.3	24
33	One- and Two-Photon Absorption of a Spiropyran-Merocyanine System: Experimental and Theoretical Studies. <i>Journal of Physical Chemistry B</i> , 2015, 119, 1515-1522.	1.2	23
34	Enhanced two-photon absorption cross-sections of zinc(II) tetraphenylporphyrins peripherally substituted with d6-metal alkynyl complexes. <i>New Journal of Chemistry</i> , 2012, 36, 2192.	1.4	22
35	Gold nanorods as multifunctional probes in a liquid crystalline DNA matrix. <i>Nanoscale</i> , 2013, 5, 10975.	2.8	22
36	Revealing Spectral Features in Two-Photon Absorption Spectrum of Hoechst 33342: A Combined Experimental and Quantum-Chemical Study. <i>Journal of Physical Chemistry B</i> , 2013, 117, 12013-12019.	1.2	22

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37	Unravelling the Binding Mechanism of a Poly(cationic) Anthracenyl Fluorescent Probe with High Affinity toward Double-Stranded DNA. <i>Biomacromolecules</i> , 2016, 17, 3609-3618.	2.6	22
38	DNA as scaffolding for nanophotonic structures. <i>Journal of Nanophotonics</i> , 2012, 6, 064505-1.	0.4	21
39	Specific Recognition of G-Quadruplexes Over Duplex-DNA by a Macromolecular NIR Two-Photon Fluorescent Probe. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 5915-5920.	2.1	21
40	A Fluorescent Polymer Probe with High Selectivity toward Vascular Endothelial Cells for and beyond Noninvasive Two-Photon Intravital Imaging of Brain Vasculature. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 17047-17059.	4.0	20
41	A new holographic system: liquid crystal doped with photochromic molecules. <i>Optical Materials</i> , 2002, 20, 57-61.	1.7	18
42	Two-Photon Imaging of 3D Organization of Bimetallic AuAg Nanoclusters in DNA Matrix. <i>Langmuir</i> , 2017, 33, 8993-8999.	1.6	18
43	Experimental and theoretical investigations of spectroscopic properties of azobenzene derivatives in solution. <i>Journal of Molecular Modeling</i> , 2007, 13, 785-791.	0.8	17
44	Applications of plasmonics: general discussion. <i>Faraday Discussions</i> , 2015, 178, 435-466.	1.6	17
45	Structure-charge transfer property relationship in self-assembled discotic liquid-crystalline donor-acceptor dyad and triad thin films. <i>RSC Advances</i> , 2016, 6, 57811-57819.	1.7	17
46	Plasmonic and new plasmonic materials: general discussion. <i>Faraday Discussions</i> , 2015, 178, 123-149.	1.6	16
47	Synergistic effect of methylene blue and biogenic gold nanoparticles against <i>Enterococcus faecalis</i> . <i>Photodiagnosis and Photodynamic Therapy</i> , 2019, 27, 218-226.	1.3	16
48	Kinetics of Photochromic Reactions of Substituted Azobenzenes in Solutions, and in Liquid Crystalline and Polymer Matrices. <i>Molecular Crystals and Liquid Crystals</i> , 2001, 361, 143-148.	0.3	15
49	Liquid crystal phases of DNA: Evaluation of DNA organization by two-photon fluorescence microscopy and polarization analysis. <i>Biopolymers</i> , 2011, 95, 365-375.	1.2	15
50	Molecular design and structural characterization of photoresponsive azobenzene-based polyamide units. <i>Dyes and Pigments</i> , 2020, 180, 108501.	2.0	15
51	Nonlinear absorption and nonlinear refraction: maximizing the merit factors. <i>Proceedings of SPIE</i> , 2012, , .	0.8	14
52	A 5-(difluorenyl)-1,10-phenanthroline-based Ru(II) complex as a coating agent for potential multifunctional gold nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 14826-14833.	1.3	14
53	Photochromic reaction-induced changes of ordering in liquid crystalline films. <i>Thin Solid Films</i> , 2008, 516, 8899-8904.	0.8	13
54	Synthesis and optical properties of water-soluble fluoride nanophosphors co-doped with Eu ³⁺ and Tb ³⁺ . <i>Optical Materials</i> , 2011, 33, 1419-1423.	1.7	13

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55	Effective control of the intrinsic DNA morphology by photosensitive polyamines. <i>Journal of Materials Chemistry B</i> , 2017, 5, 1028-1038.	2.9	13
56	Linear and Third-Order Nonlinear Optical Properties of Triazobenzene-1,3,5-triazinane-2,4,6-trione (Isocyanurate) Derivatives. <i>ChemPlusChem</i> , 2017, 82, 1372-1383.	1.3	13
57	Reversible Photocontrol of DNA Melting by Visible-Light-Responsive F4-Coordinated Azobenzene Compounds. <i>Chemistry - A European Journal</i> , 2018, 24, 18963-18970.	1.7	13
58	Influence of the environment on kinetics and electronic structure of asymmetric azobenzene derivatives – experiment and quantum-chemical calculations. <i>Journal of Molecular Structure</i> , 2001, 565-566, 53-57.	1.8	12
59	Nonlinear absorption spectra of ethidium and ethidium homodimer. <i>Chemical Physics</i> , 2012, 404, 33-35.	0.9	12
60	Two- and three-photon absorption properties of fan-shaped dendrons derived from 2,3,8-trifunctionalized indenoquinoxaline units: synthesis and characterization. <i>Journal of Materials Chemistry C</i> , 2017, 5, 8219-8232.	2.7	12
61	Photothermal stability of biologically and chemically synthesized gold nanoprisms. <i>Journal of Nanoparticle Research</i> , 2017, 19, 327.	0.8	11
62	DNA liquid crystals doped with AuAg nanoclusters: One-photon and two-photon imaging. <i>Journal of Molecular Liquids</i> , 2018, 259, 82-87.	2.3	11
63	Light-driven chiroptical photoswitchable DNA assemblies mediated by bioinspired photoresponsive molecules. <i>Nanoscale</i> , 2018, 10, 11302-11306.	2.8	11
64	Cellulose as an Inert Scaffold in Plasmon-Assisted Photoregeneration of Cofactor Molecules. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19377-19383.	4.0	11
65	Light-Induced Modulation of Chiral Functions in G-Quadruplex-Photochrome Systems. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 9436-9441.	2.1	11
66	Two-photon absorption properties of multipolar triarylamino/tosylamido 1,1,4,4-tetracyanobutadienes. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 22283-22297.	1.3	11
67	Light-induced <i>in situ</i> chemical activation of a fluorescent probe for monitoring intracellular G-quadruplex structures. <i>Nanoscale</i> , 2021, 13, 13795-13808.	2.8	11
68	Spectral dependence of nonlinear absorption and refraction in terthiophene-based organic semiconductors. <i>Optical Materials</i> , 2012, 34, 1682-1685.	1.7	10
69	Two-Photon Macromolecular Probe Based on a Quadrupolar Anthracenyl Scaffold for Sensitive Recognition of Serum Proteins under Simulated Physiological Conditions. <i>ACS Omega</i> , 2017, 2, 5715-5725.	1.6	10
70	Remote-control of the enantiomeric supramolecular recognition mediated by chiral azobenzenes bound to human serum albumin. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 21272-21275.	1.3	10
71	An exocyclic π -system extension of the phenanthriporphyrin framework: towards azaaceneporphyrinoids. <i>Organic Chemistry Frontiers</i> , 2020, 7, 1430-1436.	2.3	10
72	Prospects for More Efficient Multi-Photon Absorption Photosensitizers Exhibiting Both Reactive Oxygen Species Generation and Luminescence. <i>Molecules</i> , 2021, 26, 6323.	1.7	10

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73	Impact of the Synergistic Collaboration of Oligothiophene Bridges and Ruthenium Complexes on the Optical Properties of Dumbbell-Shaped Compounds. <i>Chemistry - A European Journal</i> , 2013, 19, 1476-1488.	1.7	9
74	Stabilization of DNA liquid crystals on doping with gold nanorods. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 7278-7283.	1.3	8
75	Photochemical analysis of structural transitions in DNA liquid crystals reveals differences in spatial structure of DNA molecules organized in liquid crystalline form. <i>Scientific Reports</i> , 2018, 8, 4528.	1.6	8
76	Heterogeneity induced dual luminescence properties of AgInS ₂ and AgInS ₂ -ZnS alloyed nanocrystals. <i>Inorganic Chemistry Frontiers</i> , 2021, 8, 3450-3462.	3.0	8
77	Morphology of Lyotropic Myelin Figures Stained with a Fluorescent Dye. <i>Journal of Physical Chemistry B</i> , 2020, 124, 11974-11979.	1.2	8
78	One-Photon and Two-Photon Photophysical Properties of Tetrafunctionalized 5,10,15,20-tetrakis(4-hydroxyphenyl)chlorin (Temoporfin) Derivatives as Potential Two-Photon-Induced Photodynamic Therapy Agents. <i>ChemPhotoChem</i> , 2022, 6, .	1.5	8
79	Probing the binding mechanism of photoresponsive azobenzene polyamine derivatives with human serum albumin. <i>RSC Advances</i> , 2017, 7, 5912-5919.	1.7	7
80	Acetone-derived luminescent polymer dots: a facile and low-cost synthesis leads to remarkable photophysical properties. <i>RSC Advances</i> , 2020, 10, 38437-38445.	1.7	7
81	Dinuclear Rhenium Complexes with a Bridging Helicene-bipyridine Ligand: Synthesis, Structure, and Photophysical and Chiroptical Properties. <i>ChemPlusChem</i> , 2020, 85, 2446-2454.	1.3	7
82	Circular Dichroism of Gold Bipyramid Dimers. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 5208-5213.	2.1	7
83	Non-Exponential Decays in First-Order Kinetic Processes. The Case of "Squeezed Exponential". <i>Acta Physica Polonica A</i> , 2007, 112, S-153-S-159.	0.2	7
84	Z-scan studies of nonlinear optical properties of colloidal gold nanorods and nanoshells. <i>Journal of Nanophotonics</i> , 2014, 9, 093797.	0.4	6
85	Adverse Role of Shape and Size in Second-Harmonic Scattering from Gold Nanoprisms. <i>Journal of Physical Chemistry C</i> , 2020, 124, 14797-14803.	1.5	6
86	Two-photon excited luminescence and second-harmonic generation in quinacridone microstructures. <i>Dyes and Pigments</i> , 2020, 177, 108268.	2.0	6
87	Gold Nanoclusters Display Low Immunogenic Effect in Microglia Cells. <i>Nanomaterials</i> , 2021, 11, 1066.	1.9	6
88	Spontaneous formation of liquid crystalline phases and phase transitions in highly concentrated plasmid DNA. <i>Liquid Crystals</i> , 2011, 38, 461-468.	0.9	5
89	Triaryliscyanurate-Based Fluorescent Two-Photon Absorbers. <i>ChemPlusChem</i> , 2020, 85, 411-425.	1.3	5
90	LC Alignment Controlled by Photoordering and Photorefraction in a Command Substrate. <i>Molecular Crystals and Liquid Crystals</i> , 2004, 412, 301-312.	0.4	4

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91	Shape and size separation of gold nanoparticles using glucose gradient density. Proceedings of SPIE, 2012, , .	0.8	4
92	Real-Time Surface-Enhanced Raman Scattering Tracking of Adenineâ€“Gold Charge Transfer Complex Formation on Nanocavity-Shaped Plasmonic Crystals. Journal of Physical Chemistry C, 2019, 123, 17961-17967.	1.5	4
93	Nonlinear Optical Absorption in Nanoscale Films Revealed through Ultrafast Acoustics. Nano Letters, 2022, 22, 4362-4367.	4.5	4
94	DNA Base Pair Resolution Measurements Using Resonance Energy Transfer Efficiency in Lanthanide Doped Nanoparticles. PLoS ONE, 2015, 10, e0117277.	1.1	3
95	Surface plasmon enhanced spectroscopies and time and space resolved methods: general discussion. Faraday Discussions, 2015, 178, 253-279.	1.6	3
96	Light-induced in situ transmission electron microscopy: Novel approach for antimicrobial photodynamic therapy imaging. Photodiagnosis and Photodynamic Therapy, 2021, 35, 102463.	1.3	3
97	Fiber-optic sample illuminator design for the observation of light induced phenomena with transmission electron microscopy in situ: Antimicrobial photodynamic therapy. Ultramicroscopy, 2021, 230, 113388.	0.8	3
98	Photo-Responsivity Improvement of Photo-Mobile Polymers Actuators Based on a Novel LCs/Azobenzene Copolymer and ZnO Nanoparticles Network. Nanomaterials, 2021, 11, 3320.	1.9	3
99	Two-photon absorption of 28-hetero-2,7-naphthiopyrins: expanded carbaporphyrinoid macrocycles. RSC Advances, 2022, 12, 19554-19560.	1.7	3
100	Nonlinear absorption in nanosystems of biological significance.. Materials Research Society Symposia Proceedings, 2014, 1698, 7.	0.1	2
101	Comparison of third-order nonlinear optical properties of colloidal gold nanoshells and nanorods. , 2014, , .		1
102	Surface plasmon influence on two-photon luminescence from single gold nanorods. , 2014, , .		1
103	Self-assembled heterometallic complexes showing enhanced two-photon absorption and their distribution in living cells. New Journal of Chemistry, 2021, 45, 4994-5001.	1.4	1
104	Investigation of the patterning efficiency in a new azo-dye copolymer under UV irradiation toward photonic applications. Proceedings of SPIE, 2008, , .	0.8	0
105	Nonlinear polarimetric analysis of DNA liquid crystalline domains. , 2009, , .		0