Challa V Kumar

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/4500743/publications.pdf

Version: 2024-02-01

112 papers	4,962 citations	126708 33 h-index	95083 68 g-index
116 all docs	116 docs citations	116 times ranked	5613 citing authors

#	Article	IF	Citations
1	Photophysics of ruthenium complexes bound to double helical DNA. Journal of the American Chemical Society, 1985, 107, 5518-5523.	6.6	599
2	Binding modes and base specificity of tris(phenanthroline)ruthenium(II) enantiomers with nucleic acids: tuning the stereoselectivity. Journal of the American Chemical Society, 1986, 108, 2081-2088.	6.6	536
3	Measurement of biomarker proteins for point-of-care early detection and monitoring of cancer. Analyst, The, 2010, 135, 2496.	1.7	469
4	Proteins Immobilized at the Galleries of Layered Î±-Zirconium Phosphate:â€‰ Structure and Activity Studies. Journal of the American Chemical Society, 2000, 122, 830-837.	6.6	266
5	Attomolar Detection of a Cancer Biomarker Protein in Serum by Surface Plasmon Resonance Using Superparamagnetic Particle Labels. Angewandte Chemie - International Edition, 2011, 50, 1175-1178.	7.2	179
6	Aromatic thioketone triplets and their quenching behaviour towards oxygen and di-t-butylnitroxy radical. A laser-flash-photolysis study. Journal of the Chemical Society, Faraday Transactions 2, 1984, 80, 783.	1.1	139
7	Nanoencapsulation of Cytochromecand Horseradish Peroxidase at the Galleries of Î±-Zirconium Phosphate. Chemistry of Materials, 1997, 9, 863-870.	3.2	126
8	DNA-mediated photoelectron transfer reactions. Journal of the American Chemical Society, 1986, 108, 6391-6393.	6.6	102
9	Multiplexed Immunosensors and Immunoarrays. Analytical Chemistry, 2020, 92, 345-362.	3.2	102
10	Adenine-Thymine Base Pair Recognition by an Anthryl Probe from the DNA Minor Groove. Tetrahedron, 2000, 56, 7027-7040.	1.0	90
11	Contributions of a Long Side Chain to the Binding Affinity of an Anthracene Derivative to DNA. Journal of Physical Chemistry B, 2005, 109, 11810-11818.	1.2	90
12	Ultrathin Grapheneâ€“Protein Supercapacitors for Miniaturized Bioelectronics. Advanced Energy Materials, 2017, 7, 1700358.	10.2	88
13	Tuning the Selectivity of Protein Photocleavage:Â Spectroscopic and Photochemical Studies. Journal of the American Chemical Society, 1999, 121, 4262-4270.	6.6	81
14	Protein Biophosphors: Biodegradable, Multifunctional, Proteinâ€Based Hydrogel for White Emission, Sensing, and pH Detection. Advanced Functional Materials, 2017, 27, 1702955.	7.8	74
15	Site-Specific Photocleavage of Proteins. Angewandte Chemie International Edition in English, 1997, 36, 2085-2087.	4.4	69
16	Ultrathin Layered Myoglobinâ^'Polyion Films Functional and Stable at Acidic pH Values. Journal of the American Chemical Society, 2002, 124, 12515-12521.	6.6	69
17	DNA-Based Supramolecular Artificial Light Harvesting Complexes. Journal of the American Chemical Society, 2009, 131, 16024-16026.	6.6	63
18	Chiral protein scissors: High enantiomeric selectivity for binding and its effect on protein photocleavage efficiency and specificity. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 5810-5815.	3.3	54

#	Article	IF	Citations
19	Protein Polymer Conjugates: Improving the Stability of Hemoglobin with Poly(acrylic acid). Langmuir, 2011, 27, 7663-7671.	1.6	48
20	Highly Efficient Binding of Paramagnetic Beads Bioconjugated with 100â€‰000 or More Antibodies to Protein-Coated Surfaces. Analytical Chemistry, 2012, 84, 10485-10491.	3.2	48
21	Are triplet exciplexes involved in [2 + 2] photocycloaddition of cyclic enones to alkenes?. Journal of the American Chemical Society, 1988, 110, 8261-8263.	6.6	46
22	Tuning the DNA binding modes of an anthracene derivative with salt. Journal of Photochemistry and Photobiology A: Chemistry, 2006, 177, 43-54.	2.0	46
23	Artificial metallopeptidases: regioselective cleavage of lysozyme. Chemical Communications, 2000, , 597-598.	2.2	45
24	Protein-based sensitive, selective and rapid fluorescence detection of picric acid in aqueous media. Analytical Methods, 2014, 6, 8464-8468.	1.3	42
25	Spectroscopic Identification of Binding Modes of Anthracene Probes and DNA Sequence Recognitionâ€. Photochemistry and Photobiology, 2006, 82, 20.	1.3	41
26	Energy redistribution and localization in the excited states of ruthenium(II) polypyridyl complexes. Inorganic Chemistry, 1988, 27, 648-651.	1.9	40
27	Excited-state resonance Raman spectroscopy as a probe of alumina-sodium dodecyl sulfate hemimicelles. Langmuir, 1989, 5, 215-218.	1.6	39
28	Photochemical Protein Scissors: Role of Aromatic Residues on the Binding Affinity and Photocleavage Efficiency of Pyrenyl Peptides. Tetrahedron, 2000, 56, 7019-7025.	1.0	39
29	Denaturation and Renaturation of Self-Assembled Yeast Iso-1-cytochromecon Au. Analytical Chemistry, 2004, 76, 2112-2117.	3.2	39
30	Tuning the Activities and Structures of Enzymes Bound to Graphene Oxide with a Protein Glue. Langmuir, 2013, 29, 15643-15654.	1.6	38
31	Novel enzyme/DNA/inorganic nanomaterials: a new generation of biocatalysts. Dalton Transactions, 2007, , 5483.	1.6	36
32	Contributions of Hydroxyethyl Groups to the DNA Binding Affinities of Anthracene Probes. Journal of Physical Chemistry B, 2006, 110, 20693-20701.	1.2	35
33	Site-Selective Photocleavage of Proteins by Uranyl Ions. Angewandte Chemie - International Edition, 2006, 45, 137-139.	7.2	35
34	Rational Design of Anthracene-Based DNA Binders. Journal of Physical Chemistry B, 2009, 113, 1710-1721.	1.2	34
35	â€œStable-on-the-Tableâ€•Enzymes: Engineering the Enzymeâ€“Graphene Oxide Interface for Unprecedented Kinetic Stability of the Biocatalyst. ACS Catalysis, 2016, 6, 339-347.	5.5	34
36	Emission properties of dioxorhenium(V) complexes in aqueous solutions of anionic and nonionic surfactants: a sensitive probe of hydrophobic binding regions. Journal of the American Chemical Society, 1989, 111, 4364-4368.	6.6	32

#	Article	IF	Citations
37	Photocleavage of Lysozyme by Cobalt(III) Complexes. Inorganic Chemistry, 2005, 44, 825-827.	1.9	32
38	Toward â€œStable-on-the-Tableâ€•Enzymes: Improving Key Properties of Catalase by Covalent Conjugation with Poly(acrylic acid). Bioconjugate Chemistry, 2014, 25, 1501-1510.	1.8	31
39	Nanobio Interfaces: Charge Control of Enzyme/Inorganic Interfaces for Advanced Biocatalysis. Langmuir, 2013, 29, 14001-14016.	1.6	30
40	Protein cleavage by transition metal complexes bearing amino acid substituents. BBA - Proteins and Proteomics, 1998, 1387, 309-316.	2.1	28
41	Large chiral discrimination of a molecular probe by bovine serum albumin. Chemical Communications, 2001, , 297-298.	2.2	28
42	Endonuclease-like activity of heme proteins. Journal of Biological Inorganic Chemistry, 2005, 10, 790-799.	1.1	28
43	Ultra-stable hemoglobinâ€“poly(acrylic acid) conjugates. Journal of Materials Chemistry, 2012, 22, 20423.	6.7	26
44	Metal-Enzyme Frameworks: Role of Metal Ions in Promoting Enzyme Self-Assembly on Î±-Zirconium(IV) Phosphate Nanoplates. Langmuir, 2013, 29, 2971-2981.	1.6	26
45	Control of Enzymeâ€“Solid Interactions via Chemical Modification. Langmuir, 2012, 28, 11881-11889.	1.6	25
46	Ultrasensitive carbohydrate-peptide SPR imaging microarray for diagnosing IgE mediated peanut allergy. Analyst, The, 2014, 139, 5728-5733.	1.7	25
47	Bienzymeâ€“Polymerâ€“Graphene Oxide Quaternary Hybrid Biocatalysts: Efficient Substrate Channeling under Chemically and Thermally Denaturing Conditions. ACS Catalysis, 2015, 5, 4979-4988.	5.5	25
48	Probing the donor and acceptor dye assemblies at the galleries of Î±-zirconium phosphate. Microporous and Mesoporous Materials, 2000, 41, 307-318.	2.2	24
49	Protein annealing: Thermal treatment of met-hemoglobin bound to Î±-zirconium phosphate/phosphonates results in initial denaturation followed by recovery of activity and structure. Microporous and Mesoporous Materials, 2006, 88, 275-282.	2.2	24
50	N-Heterocyclic carbene-ended polymers as surface ligands of plasmonic metal nanoparticles. Journal of Materials Chemistry C, 2020, 8, 2280-2288.	2.7	24
51	Photochemical transformations and laser flash photolysis studies of dibenzobarrelenes containing 1,2-dibenzoylalkene moieties. Journal of Organic Chemistry, 1984, 49, 4923-4929.	1.7	23
52	Hexamminecobalt(III) chloride assisted, visible light induced, sequence dependent cleavage of DNA. Journal of Inorganic Biochemistry, 1997, 68, 177-181.	1.5	23
53	Controlling the Grapheneâ€“Bio Interface: Dispersions in Animal Sera for Enhanced Stability and Reduced Toxicity. Langmuir, 2017, 33, 14184-14194.	1.6	23
54	Thermostable Peroxidaseâ€“Polylysine Films for Biocatalysis at 90 Â°C. Journal of Physical Chemistry B, 2007, 111, 9125-9131.	1.2	22

#	Article	IF	Citations
55	Proteinâ^'Solid Interactions: Important Role of Solvent, Ions, Temperature, and Buffer in Protein Binding to Î±-Zr(IV) Phosphate. Langmuir, 2009, 25, 12635-12643.	1.6	21
56	The metallomics approach: use of Fe(ii) and Cu(ii) footprinting to examine metal binding sites on serum albumins. Metallomics, 2009, 1, 518.	1.0	21
57	Novel surface plasmon resonance sensor for the detection of heme at biological levels via highly selective recognition by apo-hemoglobin. Talanta, 2012, 99, 113-118.	2.9	21
58	Molecular Signatures of Enzymeâ^'Solid Interactions: Thermodynamics of Protein Binding to Î±-Zr(IV) Phosphate Nanoplates. Journal of Physical Chemistry B, 2009, 113, 15083-15089.	1.2	20
59	Proton-Coupled Protein Binding: Controlling Lysozyme/Poly(acrylic acid) Interactions with pH. Journal of Physical Chemistry B, 2014, 118, 5026-5033.	1.2	19
60	Quenching of Tris(2,2'-bipyridine)ruthenium(II) Luminescence by Cobalt(III) Polypyridyl Complexes in Different Sites in and on Clays. The Journal of Physical Chemistry, 1995, 99, 9886-9892.	2.9	18
61	Computational and experimental investigations of mono-septanoside binding by Concanavalin A: correlation of ligand stereochemistry to enthalpies of binding. Organic and Biomolecular Chemistry, 2011, 9, 154-164.	1.5	18
62	Enzyme-inorganic nanoporous materials: Stabilization of proteins intercalated in Î±-zirconium(IV) phosphate by a denaturant. Microporous and Mesoporous Materials, 2008, 110, 517-527.	2.2	17
63	Biofunctionalization of Î±-Zirconium Phosphate Nanosheets: Toward Rational Control of Enzyme Loading, Affinities, Activities and Structure Retention. ACS Applied Materials & Interfaces, 2014, 6, 9643-9653.	4.0	17
64	Fluorescent, Bioactive Protein Nanoparticles (Prodots) for Rapid, Improved Cellular Uptake. Bioconjugate Chemistry, 2015, 26, 396-404.	1.8	17
65	â€œSimple-Stirâ€•Heterolayered MoS₂/Graphene Nanosheets for Znâ€“Air Batteries. ACS Applied Nano Materials, 2021, 4, 10389-10398.	2.4	17
66	Steady-state and laser flash photolysis studies of 1-aziridinyl-1,2-dibenzoylalkenes. Journal of Organic Chemistry, 1985, 50, 4309-4317.	1.7	16
67	Steady-state and laser flash photolysis studies of bridgehead-substituted dibenzobarrelenes. Journal of Organic Chemistry, 1985, 50, 2533-2538.	1.7	16
68	Factors influencing the excited-state behavior of ruthenium(II) complexes adsorbed on aqueous laponite. Langmuir, 1987, 3, 1056-1059.	1.6	15
69	Tuning the Properties of Hb Intercalated in the Galleries of Î±-ZrP with Ionic Strength:Â Improved Structure Retention and Enhanced Activity. Chemistry of Materials, 2006, 18, 740-747.	3.2	15
70	Enzymeâ€“inorganic nanoporous materials: Differential scanning calorimetric studies and protein stability. Microporous and Mesoporous Materials, 2008, 109, 223-232.	2.2	15
71	Epitopeâ€Resolved Detection of Peanutâ€Specific IgE Antibodies by Surface Plasmon Resonance Imaging. ChemBioChem, 2018, 19, 199-202.	1.3	15
72	Thermostable Biocatalytic Films of Enzymes and Polylysine on Electrodes and Nanoparticles in Microemulsions. Langmuir, 2008, 24, 10365-10370.	1.6	12

#	Article	IF	Citations
73	Adsorption and Hydrolytic Activity of the Polycatalytic Cellulase Nanocomplex on Cellulose. ACS Applied Materials & Interfaces, 2013, 5, 8486-8494.	4.0	12
74	Toward the design of bio-solar cells: high efficiency cascade energy transfer among four donorâ€“acceptor dyes self-assembled in a highly ordered proteinâ€“DNA matrix. RSC Advances, 2015, 5, 72416-72422.	1.7	12
75	Nanoarmoring: strategies for preparation of multi-catalytic enzyme polymer conjugates and enhancement of high temperature biocatalysis. RSC Advances, 2017, 7, 29563-29574.	1.7	12
76	Micelles Embedded in Multiphasic Protein Hydrogel Enable Efficient and Air-Tolerant Triplet Fusion Upconversion with Heavy-Atom and Spinâ€“Orbit Charge-Transfer Sensitizers. ACS Applied Materials & Interfaces, 2020, 12, 39293-39303.	4.0	12
77	Photochemical transformations of 1-pyrazolyl-cis-1,2-dibenzoylalkenes. A laser flash photolysis investigation. Journal of Organic Chemistry, 1984, 49, 4647-4656.	1.7	11
78	Tuning Hemoglobinâ€“Poly(acrylic acid) Interactions by Controlled Chemical Modification with Triethylenetetramine. Journal of Physical Chemistry B, 2012, 116, 12783-12792.	1.2	11
79	â€œStable-on-the-Tableâ€•Biosensors: Hemoglobin-Poly (Acrylic Acid) Nanogel BioElectrodes with High Thermal Stability and Enhanced Electroactivity. Sensors, 2015, 15, 23868-23885.	2.1	11
80	Laser-flash-photolysis study of aliphatic thioketone triplets. Self-quenching and singlet-oxygen sensitization. Journal of the Chemical Society, Faraday Transactions 2, 1985, 81, 1383.	1.1	10
81	Inorganic photochemical protein scissors: photocleavage of lysozyme by Co(III) complexes. Photochemical and Photobiological Sciences, 2008, 7, 1531.	1.6	10
82	Enzymatic Activities of Polycatalytic Complexes with Nonprocessive Cellulases Immobilized on the Surface of Magnetic Nanoparticles. Langmuir, 2016, 32, 11573-11579.	1.6	10
83	Supramolecular assemblies of ethidium and acridinium ions at the interlayer regions of Î±-zirconium phosphate. Microporous Materials, 1996, 7, 161-171.	1.6	9
84	Chiral Protein Scissors Activated by Light: Recognition and Protein Photocleavage by a New Pyrenyl Probe. Journal of Physical Chemistry B, 2008, 112, 9258-9265.	1.2	9
85	Efficient Biocatalysis in Organic Media with Hemoglobin and Poly(acrylic acid) Nanogels. Langmuir, 2014, 30, 5176-5184.	1.6	9
86	Nanoarmoring of Enzymes by Interlocking in Cellulose Fibers With Poly(Acrylic Acid). Methods in Enzymology, 2017, 590, 475-500.	0.4	9
87	Protein scissors: Photocleavage of proteins at specific locations. Journal of Chemical Sciences, 2002, 114, 579-592.	0.7	8
88	Towards building artificial light harvesting complexes: enhanced singlet-singlet energy transfer between donor and acceptor pairs bound to albumins. Photochemical and Photobiological Sciences, 2008, 7, 1522-1530.	1.6	8
89	Folding Control and Unfolding Free Energy of Yeast Iso-1-cytochrome c Bound to Layered Zirconium Phosphate Materials Monitored by Surface Plasmon Resonance. Journal of Physical Chemistry B, 2008, 112, 9201-9208.	1.2	8
90	Photocleavage of avidin by a new pyrenyl probe. Journal of Photochemistry and Photobiology B: Biology, 2011, 103, 251-255.	1.7	8

#	Article	IF	Citations
91	Three-Dimensional, Enzyme Biohydrogel Electrode for Improved Bioelectrocatalysis. ACS Applied Materials & Interfaces, 2017, 9, 42556-42565.	4.0	8
92	Photophysical studies of an encapsulated neutral guest intercalated into the 2-dimensional space of Î±-Zr(iv) phosphate. Photochemical and Photobiological Sciences, 2014, 13, 301-309.	1.6	7
93	Engineering functional inorganic nanobiomaterials: controlling interactions between 2D-nanosheets and enzymes. Dalton Transactions, 2020, 49, 3917-3933.	1.6	7
94	Geminate reverse electron transfer in a photogenerated ion-pair. Mechanism of 1,4-dicyanonaphthalene sensitized ylide formation from stilbene oxides. Journal of the Chemical Society Chemical Communications, 1984, , 1107.	2.0	6
95	Stimuli-responsive, protein hydrogels for potential applications in enzymology and drug delivery$$^{S }$$. Journal of Chemical Sciences, 2018, 130, 1.	0.7	6
96	Stirred Not Shaken: Facile Production of High-Quality, High-Concentration Graphene Aqueous Suspensions Assisted by a Protein. ACS Applied Materials & Interfaces, 2020, 12, 3815-3826.	4.0	6
97	Adsorption of metal ions on graphene sheet for applications in environmental sensing and wastewater treatment. Sensors and Actuators Reports, 2022, 4, 100077.	2.3	6
98	Tuning Enzyme/Î±-Zr(IV) Phosphate Nanoplate Interactions via Chemical Modification of Glucose Oxidase. Langmuir, 2018, 34, 480-491.	1.6	5
99	Multicolored Protein Nanoparticles: Synthesis, Characterization, and Cell Uptake. Bioconjugate Chemistry, 2018, 29, 2576-2585.	1.8	4
100	Kinetic Study on Enzymatic Hydrolysis of Cellulose in an Open, Inhibition-Free System. Langmuir, 2021, 37, 5180-5192.	1.6	4
101	Modeling and Designing Particle-Regulated Amyloid-like Assembly of Synthetic Polypeptides in Aqueous Solution. Biomacromolecules, 2022, 23, 196-209.	2.6	4
102	Designer Histone Complexes: Controlling Proteinâ€“DNA Interactions with Protein Charge as an â€œAll-or-Noneâ€•Digital Switch. Journal of Physical Chemistry B, 2016, 120, 11880-11887.	1.2	3
103	Novel, Simple, Versatile and General Synthesis of Nanoparticles Made from Proteins, Nucleic Acids and other Materials. Journal of Nano Research, 2010, 12, 77-88.	0.8	2
104	Steady-State and Time-Resolved Studies of the Photocleavage of Lysozyme by Co(III) Complexes. Langmuir, 2010, 26, 1966-1972.	1.6	2
105	Chiral photochemical scissors: Toward site specific cleavage of proteins with light. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 340, 181-200.	2.0	2
106	Armored Enzymeâ€“Nanohybrids and Their Catalytic Function Under Challenging Conditions. Methods in Enzymology, 2017, 590, 169-192.	0.4	2
107	Interlocking Enzymes in Graphene-Coated Cellulose Paper for Increased Enzymatic Efficiency. Methods in Enzymology, 2018, 609, 1-22.	0.4	2
108	One-step preparation of bioactive enzyme/inorganic materials. Journal of Materials Chemistry B, 2021, 9, 8451-8463.	2.9	2

#	ARTICLE	IF	CITATIONS
109	Exfoliated and water dispersible biocarbon nanotubes for enzymology applications. Methods in Enzymology, 2020, 630, 407-430.	0.4	1
110	A Simple Flow Reactor for Continuous Synthesis of Biographene for Enzymology Studies. Methods in Enzymology, 2018, 609, 273-291.	0.4	0
111	Tuning the chain length of new pyrene derivatives for site-selective photocleavage of avidin. Journal of Photochemistry and Photobiology B: Biology, 2018, 186, 23-30.	1.7	0
112	Preface. Methods in Enzymology, 2020, 630, xix-xxi.	0.4	0