Challa V Kumar

List of Publications by Year
in descending order

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112 papers	4,962 citations	126907 33 h-index	95266 68 g-index
116 all docs	116 docs citations	116 times ranked	5613 citing authors

#	Article	IF	Citations
1	Adsorption of metal ions on graphene sheet for applications in environmental sensing and wastewater treatment. Sensors and Actuators Reports, 2022, 4, 100077.	4.4	6
2	Modeling and Designing Particle-Regulated Amyloid-like Assembly of Synthetic Polypeptides in Aqueous Solution. Biomacromolecules, 2022, 23, 196-209.	5.4	4
3	One-step preparation of bioactive enzyme/inorganic materials. Journal of Materials Chemistry B, 2021, 9, 8451-8463.	5.8	2
4	Kinetic Study on Enzymatic Hydrolysis of Cellulose in an Open, Inhibition-Free System. Langmuir, 2021, 37, 5180-5192.	3.5	4
5	â€œSimple-Stirâ€•Heterolayered MoS₂/Graphene Nanosheets for Znâ€“Air Batteries. ACS Applied Nano Materials, 2021, 4, 10389-10398.	5.0	17
6	Multiplexed Immunosensors and Immunoarrays. Analytical Chemistry, 2020, 92, 345-362.	6.5	102
7	N-Heterocyclic carbene-ended polymers as surface ligands of plasmonic metal nanoparticles. Journal of Materials Chemistry C, 2020, 8, 2280-2288.	5.5	24
8	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.	8.0	6
9	Engineering functional inorganic nanobiomaterials: controlling interactions between 2D-nanosheets and enzymes. Dalton Transactions, 2020, 49, 3917-3933.	3.3	7
10	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.	8.0	12
11	Preface. Methods in Enzymology, 2020, 630, xix-xxi.	1.0	0
12	Exfoliated and water dispersible biocarbon nanotubes for enzymology applications. Methods in Enzymology, 2020, 630, 407-430.	1.0	1
13	Tuning Enzyme/Î±-Zr(IV) Phosphate Nanoplate Interactions via Chemical Modification of Glucose Oxidase. Langmuir, 2018, 34, 480-491.	3.5	5
14	Epitopeâ€Resolved Detection of Peanutâ€Specific IgE Antibodies by Surface Plasmon Resonance Imaging. ChemBioChem, 2018, 19, 199-202.	2.6	15
15	A Simple Flow Reactor for Continuous Synthesis of Biographene for Enzymology Studies. Methods in Enzymology, 2018, 609, 273-291.	1.0	0
16	Stimuli-responsive, protein hydrogels for potential applications in enzymology and drug delivery$$^{S }$$. Journal of Chemical Sciences, 2018, 130, 1.	1.5	6
17	Interlocking Enzymes in Graphene-Coated Cellulose Paper for Increased Enzymatic Efficiency. Methods in Enzymology, 2018, 609, 1-22.	1.0	2
18	Multicolored Protein Nanoparticles: Synthesis, Characterization, and Cell Uptake. Bioconjugate Chemistry, 2018, 29, 2576-2585.	3.6	4

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19	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.	3.8	0
20	Ultrathin Grapheneâ€"Protein Supercapacitors for Miniaturized Bioelectronics. Advanced Energy Materials, 2017, 7, 1700358.	19.5	88
21	Nanoarmoring: strategies for preparation of multi-catalytic enzyme polymer conjugates and enhancement of high temperature biocatalysis. RSC Advances, 2017, 7, 29563-29574.	3.6	12
22	Chiral photochemical scissors: Toward site specific cleavage of proteins with light. Journal of Photochemistry and Photobiology A: Chemistry, 2017, 340, 181-200.	3.9	2
23	Protein Biophosphors: Biodegradable, Multifunctional, Proteinâ€Based Hydrogel for White Emission, Sensing, and pH Detection. Advanced Functional Materials, 2017, 27, 1702955.	14.9	74
24	Three-Dimensional, Enzyme Biohydrogel Electrode for Improved Bioelectrocatalysis. ACS Applied Materials & Interfaces, 2017, 9, 42556-42565.	8.0	8
25	Controlling the Grapheneâ€"Bio Interface: Dispersions in Animal Sera for Enhanced Stability and Reduced Toxicity. Langmuir, 2017, 33, 14184-14194.	3.5	23
26	Nanoarmoring of Enzymes by Interlocking in Cellulose Fibers With Poly(Acrylic Acid). Methods in Enzymology, 2017, 590, 475-500.	1.0	9
27	Armored Enzymeâ€"Nanohybrids and Their Catalytic Function Under Challenging Conditions. Methods in Enzymology, 2017, 590, 169-192.	1.0	2
28	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.	2.6	3
29	Enzymatic Activities of Polycatalytic Complexes with Nonprocessive Cellulases Immobilized on the Surface of Magnetic Nanoparticles. Langmuir, 2016, 32, 11573-11579.	3.5	10
30	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.	11.2	34
31	â€œStable-on-the-Tableâ€•Biosensors: Hemoglobin-Poly (Acrylic Acid) Nanogel BioElectrodes with High Thermal Stability and Enhanced Electroactivity. Sensors, 2015, 15, 23868-23885.	3.8	11
32	Fluorescent, Bioactive Protein Nanoparticles (Prodots) for Rapid, Improved Cellular Uptake. Bioconjugate Chemistry, 2015, 26, 396-404.	3.6	17
33	Bienzymeâ€"Polymerâ€"Graphene Oxide Quaternary Hybrid Biocatalysts: Efficient Substrate Channeling under Chemically and Thermally Denaturing Conditions. ACS Catalysis, 2015, 5, 4979-4988.	11.2	25
34	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.	3.6	12
35	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.	8.0	17
36	Ultrasensitive carbohydrate-peptide SPR imaging microarray for diagnosing IgE mediated peanut allergy. Analyst, The, 2014, 139, 5728-5733.	3.5	25

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37	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.	2.9	7
38	Efficient Biocatalysis in Organic Media with Hemoglobin and Poly(acrylic acid) Nanogels. Langmuir, 2014, 30, 5176-5184.	3.5	9
39	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.	3.6	31
40	Proton-Coupled Protein Binding: Controlling Lysozyme/Poly(acrylic acid) Interactions with pH. Journal of Physical Chemistry B, 2014, 118, 5026-5033.	2.6	19
41	Protein-based sensitive, selective and rapid fluorescence detection of picric acid in aqueous media. Analytical Methods, 2014, 6, 8464-8468.	2.7	42
42	Adsorption and Hydrolytic Activity of the Polycatalytic Cellulase Nanocomplex on Cellulose. ACS Applied Materials & Interfaces, 2013, 5, 8486-8494.	8.0	12
43	Metal-Enzyme Frameworks: Role of Metal Ions in Promoting Enzyme Self-Assembly on Î±-Zirconium(IV) Phosphate Nanoplates. Langmuir, 2013, 29, 2971-2981.	3.5	26
44	Tuning the Activities and Structures of Enzymes Bound to Graphene Oxide with a Protein Glue. Langmuir, 2013, 29, 15643-15654.	3.5	38
45	Nanobio Interfaces: Charge Control of Enzyme/Inorganic Interfaces for Advanced Biocatalysis. Langmuir, 2013, 29, 14001-14016.	3.5	30
46	Highly Efficient Binding of Paramagnetic Beads Bioconjugated with 100â€‰000 or More Antibodies to Protein-Coated Surfaces. Analytical Chemistry, 2012, 84, 10485-10491.	6.5	48
47	Ultra-stable hemoglobinâ€“poly(acrylic acid) conjugates. Journal of Materials Chemistry, 2012, 22, 20423.	6.7	26
48	Tuning Hemoglobinâ€“Poly(acrylic acid) Interactions by Controlled Chemical Modification with Triethylenetetramine. Journal of Physical Chemistry B, 2012, 116, 12783-12792.	2.6	11
49	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.	5.5	21
50	Control of Enzymeâ€“Solid Interactions via Chemical Modification. Langmuir, 2012, 28, 11881-11889.	3.5	25
51	Protein Polymer Conjugates: Improving the Stability of Hemoglobin with Poly(acrylic acid). Langmuir, 2011, 27, 7663-7671.	3.5	48
52	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.	2.8	18
53	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.	13.8	179
54	Photocleavage of avidin by a new pyrenyl probe. Journal of Photochemistry and Photobiology B: Biology, 2011, 103, 251-255.	3.8	8

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55	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
56	Steady-State and Time-Resolved Studies of the Photocleavage of Lysozyme by Co(III) Complexes. Langmuir, 2010, 26, 1966-1972.	3.5	2
57	Measurement of biomarker proteins for point-of-care early detection and monitoring of cancer. Analyst, The, 2010, 135, 2496.	3.5	469
58	Proteinâ˜Solid Interactions: Important Role of Solvent, Ions, Temperature, and Buffer in Protein Binding to Î±-Zr(IV) Phosphate. Langmuir, 2009, 25, 12635-12643.	3.5	21
59	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.	2.6	20
60	Rational Design of Anthracene-Based DNA Binders. Journal of Physical Chemistry B, 2009, 113, 1710-1721.	2.6	34
61	The metallomics approach: use of Fe(ii) and Cu(ii) footprinting to examine metal binding sites on serum albumins. Metallomics, 2009, 1, 518.	2.4	21
62	DNA-Based Supramolecular Artificial Light Harvesting Complexes. Journal of the American Chemical Society, 2009, 131, 16024-16026.	13.7	63
63	Enzymeâ€“inorganic nanoporous materials: Differential scanning calorimetric studies and protein stability. Microporous and Mesoporous Materials, 2008, 109, 223-232.	4.4	15
64	Enzyme-inorganic nanoporous materials: Stabilization of proteins intercalated in Î±-zirconium(IV) phosphate by a denaturant. Microporous and Mesoporous Materials, 2008, 110, 517-527.	4.4	17
65	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.	2.9	8
66	Inorganic photochemical protein scissors: photocleavage of lysozyme by Co(III) complexes. Photochemical and Photobiological Sciences, 2008, 7, 1531.	2.9	10
67	Chiral Protein Scissors Activated by Light: Recognition and Protein Photocleavage by a New Pyrenyl Probe. Journal of Physical Chemistry B, 2008, 112, 9258-9265.	2.6	9
68	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.	2.6	8
69	Thermostable Biocatalytic Films of Enzymes and Polylysine on Electrodes and Nanoparticles in Microemulsions. Langmuir, 2008, 24, 10365-10370.	3.5	12
70	Novel enzyme/DNA/inorganic nanomaterials: a new generation of biocatalysts. Dalton Transactions, 2007, , 5483.	3.3	36
71	Thermostable Peroxidaseâ˜Polylysine Films for Biocatalysis at 90 Â°C. Journal of Physical Chemistry B, 2007, 111, 9125-9131.	2.6	22
72	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.	6.7	15

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73	Contributions of Hydroxyethyl Groups to the DNA Binding Affinities of Anthracene Probes. Journal of Physical Chemistry B, 2006, 110, 20693-20701.	2.6	35
74	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.	4.4	24
75	Tuning the DNA binding modes of an anthracene derivative with salt. Journal of Photochemistry and Photobiology A: Chemistry, 2006, 177, 43-54.	3.9	46
76	Spectroscopic Identification of Binding Modes of Anthracene Probes and DNA Sequence Recognitionâ€. Photochemistry and Photobiology, 2006, 82, 20.	2.5	41
77	Site-Selective Photocleavage of Proteins by Uranyl Ions. Angewandte Chemie - International Edition, 2006, 45, 137-139.	13.8	35
78	Endonuclease-like activity of heme proteins. Journal of Biological Inorganic Chemistry, 2005, 10, 790-799.	2.6	28
79	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.	2.6	90
80	Photocleavage of Lysozyme by Cobalt(III) Complexes. Inorganic Chemistry, 2005, 44, 825-827.	4.0	32
81	Denaturation and Renaturation of Self-Assembled Yeast Iso-1-cytochromecon Au. Analytical Chemistry, 2004, 76, 2112-2117.	6.5	39
82	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.	7.1	54
83	Ultrathin Layered Myoglobinâ^'Polyion Films Functional and Stable at Acidic pH Values. Journal of the American Chemical Society, 2002, 124, 12515-12521.	13.7	69
84	Protein scissors: Photocleavage of proteins at specific locations. Journal of Chemical Sciences, 2002, 114, 579-592.	1.5	8
85	Large chiral discrimination of a molecular probe by bovine serum albumin. Chemical Communications, 2001, , 297-298.	4.1	28
86	Adenine-Thymine Base Pair Recognition by an Anthryl Probe from the DNA Minor Groove. Tetrahedron, 2000, 56, 7027-7040.	1.9	90
87	Probing the donor and acceptor dye assemblies at the galleries of Î±-zirconium phosphate. Microporous and Mesoporous Materials, 2000, 41, 307-318.	4.4	24
88	Photochemical Protein Scissors: Role of Aromatic Residues on the Binding Affinity and Photocleavage Efficiency of Pyrenyl Peptides. Tetrahedron, 2000, 56, 7019-7025.	1.9	39
89	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.	13.7	266
90	Artificial metallopeptidases: regioselective cleavage of lysozyme. Chemical Communications, 2000, , 597-598.	4.1	45

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91	Tuning the Selectivity of Protein Photocleavage:Â Spectroscopic and Photochemical Studies. Journal of the American Chemical Society, 1999, 121, 4262-4270.	13.7	81
92	Protein cleavage by transition metal complexes bearing amino acid substituents. BBA - Proteins and Proteomics, 1998, 1387, 309-316.	2.1	28
93	Nanoencapsulation of Cytochromecand Horseradish Peroxidase at the Galleries of Î±-Zirconium Phosphate. Chemistry of Materials, 1997, 9, 863-870.	6.7	126
94	Hexamminecobalt(III) chloride assisted, visible light induced, sequence dependent cleavage of DNA. Journal of Inorganic Biochemistry, 1997, 68, 177-181.	3.5	23
95	Site-Specific Photocleavage of Proteins. Angewandte Chemie International Edition in English, 1997, 36, 2085-2087.	4.4	69
96	Supramolecular assemblies of ethidium and acridinium ions at the interlayer regions of Î±-zirconium phosphate. Microporous Materials, 1996, 7, 161-171.	1.6	9
97	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
98	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.	13.7	32
99	Excited-state resonance Raman spectroscopy as a probe of alumina-sodium dodecyl sulfate hemimicelles. Langmuir, 1989, 5, 215-218.	3.5	39
100	Energy redistribution and localization in the excited states of ruthenium(II) polypyridyl complexes. Inorganic Chemistry, 1988, 27, 648-651.	4.0	40
101	Are triplet exciplexes involved in [2 + 2] photocycloaddition of cyclic enones to alkenes?. Journal of the American Chemical Society, 1988, 110, 8261-8263.	13.7	46
102	Factors influencing the excited-state behavior of ruthenium(II) complexes adsorbed on aqueous laponite. Langmuir, 1987, 3, 1056-1059.	3.5	15
103	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.	13.7	536
104	DNA-mediated photoelectron transfer reactions. Journal of the American Chemical Society, 1986, 108, 6391-6393.	13.7	102
105	Photophysics of ruthenium complexes bound to double helical DNA. Journal of the American Chemical Society, 1985, 107, 5518-5523.	13.7	599
106	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
107	Steady-state and laser flash photolysis studies of 1-aziridinyl-1,2-dibenzoylalkenes. Journal of Organic Chemistry, 1985, 50, 4309-4317.	3.2	16
108	Steady-state and laser flash photolysis studies of bridgehead-substituted dibenzobarrelenes. Journal of Organic Chemistry, 1985, 50, 2533-2538.	3.2	16

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109	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
110	Photochemical transformations and laser flash photolysis studies of dibenzobarrelenes containing 1,2-dibenzoylalkene moieties. Journal of Organic Chemistry, 1984, 49, 4923-4929.	3.2	23
111	Photochemical transformations of 1-pyrazolyl-cis-1,2-dibenzoylalkenes. A laser flash photolysis investigation. Journal of Organic Chemistry, 1984, 49, 4647-4656.	3.2	11
112	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