

John A Shelnutt

List of Publications by Year in descending order

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110
papers

8,531
citations

41344

49
h-index

43889

91
g-index

115
all docs

115
docs citations

115
times ranked

6761
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonplanar porphyrins and their significance in proteins. <i>Chemical Society Reviews</i> , 1998, 27, 31.	38.1	789
2	Porphyrin Nanotubes by Ionic Self-Assembly. <i>Journal of the American Chemical Society</i> , 2004, 126, 15954-15955.	13.7	407
3	Controlled Synthesis of 2-D and 3-D Dendritic Platinum Nanostructures. <i>Journal of the American Chemical Society</i> , 2004, 126, 635-645.	13.7	381
4	Structural Characterization of Synthetic and Protein-Bound Porphyrins in Terms of the Lowest-Frequency Normal Coordinates of the Macrocycle. <i>Journal of Physical Chemistry B</i> , 1997, 101, 1684-1699.	2.6	373
5	Nonplanar distortion modes for highly substituted porphyrins. <i>Journal of the American Chemical Society</i> , 1992, 114, 9859-9869.	13.7	341
6	Synthesis of Platinum Nanowire Networks Using a Soft Template. <i>Nano Letters</i> , 2007, 7, 3650-3655.	9.1	328
7	Conservation of the Conformation of the Porphyrin Macrocycle in Hemoproteins. <i>Biophysical Journal</i> , 1998, 74, 753-763.	0.5	317
8	Origin of the Red Shifts in the Optical Absorption Bands of Nonplanar Tetraalkylporphyrins. <i>Journal of the American Chemical Society</i> , 2003, 125, 1253-1268.	13.7	260
9	Self-assembled porphyrin nanostructures. <i>Chemical Communications</i> , 2009, , 7261.	4.1	252
10	Synthesis of peptide-nanotube platinum-nanoparticle composites. <i>Chemical Communications</i> , 2004, , 1044-1045.	4.1	208
11	Self-Metallization of Photocatalytic Porphyrin Nanotubes. <i>Journal of the American Chemical Society</i> , 2004, 126, 16720-16721.	13.7	190
12	Self-Assembly and Self-Metallization of Porphyrin Nanosheets. <i>Journal of the American Chemical Society</i> , 2007, 129, 2440-2441.	13.7	173
13	Ligand-Induced Heme Ruffling and Bent NO Geometry in Ultra-High-Resolution Structures of Nitrophorin 4â€¦. <i>Biochemistry</i> , 2001, 40, 11327-11337.	2.5	147
14	Picosecond to Microsecond Photodynamics of a Nonplanar Nickel Porphyrin: Solvent Dielectric and Temperature Effects. <i>Journal of the American Chemical Society</i> , 1998, 120, 3781-3791.	13.7	135
15	Functional Nanocomposites Prepared by Self-Assembly and Polymerization of Diacetylene Surfactants and Silicic Acid. <i>Journal of the American Chemical Society</i> , 2003, 125, 1269-1277.	13.7	135
16	New crystalline phase of (octaethylporphinato)nickel(II): effects of .pi.-.pi. interactions on molecular structure and resonance Raman spectra. <i>Journal of the American Chemical Society</i> , 1988, 110, 3919-3924.	13.7	132
17	Cobaltâ€”Porphyrin Catalyzed Electrochemical Reduction of Carbon Dioxide in Water. 2. Mechanism from First Principles. <i>Journal of Physical Chemistry A</i> , 2010, 114, 10174-10184.	2.5	130
18	Conformational Properties of Nickel(II) Octaethylporphyrin in Solution. 1. Resonance Excitation Profiles and Temperature Dependence of Structure-Sensitive Raman Lines. <i>The Journal of Physical Chemistry</i> , 1996, 100, 14184-14191.	2.9	118

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19	Tetracycloalkenyl-meso-tetraphenylporphyrins as models for the effect of non-planarity on the light absorption properties of photosynthetic chromophores. <i>Tetrahedron Letters</i> , 1990, 31, 3719-3722.	1.4	113
20	Conserved nonplanar heme distortions in cytochromesc. <i>The Protein Journal</i> , 1995, 14, 19-25.	1.1	113
21	Donor~Acceptor Biomorphs from the Ionic Self-Assembly of Porphyrins. <i>Journal of the American Chemical Society</i> , 2010, 132, 8194-8201.	13.7	111
22	Planar Solid-State and Solution Structures of (Porphinato)nickel(II) As Determined by X-ray Diffraction and Resonance Raman Spectroscopy. <i>Inorganic Chemistry</i> , 1996, 35, 3559-3567.	4.0	109
23	Energetics and Structural Consequences of Axial Ligand Coordination in Nonplanar Nickel Porphyrins. <i>Journal of the American Chemical Society</i> , 2005, 127, 1179-1192.	13.7	100
24	Comparative Analysis of the Conformations of Symmetrically and Asymmetrically Deca- and Undecasubstituted Porphyrins Bearing Meso-Alkyl or -Aryl Groups. <i>Inorganic Chemistry</i> , 1997, 36, 1149-1163.	4.0	99
25	Influence of Electronic and Structural Effects on the Oxidative Behavior of Nickel Porphyrins. <i>Inorganic Chemistry</i> , 2002, 41, 6673-6687.	4.0	98
26	Chelataes: distort to select?. <i>Trends in Biochemical Sciences</i> , 2006, 31, 135-142.	7.5	94
27	Synthesis of Platinum Nanowheels Using a Bicellar Template. <i>Journal of the American Chemical Society</i> , 2008, 130, 12602-12603.	13.7	92
28	The Structural Origin of Nonplanar Heme Distortions in Tetraheme Ferricytochromesc3â€. <i>Biochemistry</i> , 1998, 37, 12431-12442.	2.5	90
29	Unusual Aryl~Porphyrin Rotational Barriers in Peripherally Crowded Porphyrins. <i>Inorganic Chemistry</i> , 2003, 42, 2227-2241.	4.0	89
30	Foamlike Nanostructures Created from Dendritic Platinum Sheets on Liposomes. <i>Chemistry of Materials</i> , 2006, 18, 2335-2346.	6.7	88
31	Representation of Nonplanar Structures of Nickel(II) 5,15-Disubstituted Porphyrins in Terms of Displacements along the Lowest-Frequency Normal Coordinates of the Macrocycle. <i>Journal of the American Chemical Society</i> , 1996, 118, 12975-12988.	13.7	87
32	Planar-nonplanar conformational equilibrium in metal derivatives of octaethylporphyrin and meso-nitrooctaethylporphyrin. <i>Journal of the American Chemical Society</i> , 1993, 115, 12346-12352.	13.7	84
33	Influences of .pi.-.pi. complex formation, dimerization, and binding to hemoglobin on the planarity of nickel(II) porphyrins. <i>Journal of the American Chemical Society</i> , 1990, 112, 691-697.	13.7	83
34	Synthesis of Platinum Nanocages by Using Liposomes Containing Photocatalyst Molecules. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 8126-8130.	13.8	82
35	The Quantum Mixed-Spin Heme State of Barley Peroxidase:A Paradigm for Class III Peroxidases. <i>Biophysical Journal</i> , 1999, 77, 478-492.	0.5	76
36	Resonance Raman spectra of manganese (III) etioporphyrin I. <i>Journal of Chemical Physics</i> , 1976, 64, 1156-1165.	3.0	73

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37	One-pot synthesis of triangular gold nanoplates allowing broad and fine tuning of edge length. <i>Nanoscale</i> , 2010, 2, 2209.	5.6	73
38	A planar dodecasubstituted porphyrin. <i>Inorganic Chemistry</i> , 1993, 32, 1716-1723.	4.0	69
39	An Unusual Near-Eclipsed Porphyrin Ring Orientation in Two Crystalline Forms of (μ -Oxo)bis[(octaethylporphinato)iron(III)]. <i>Structural and Molecular Mechanics Studies. Inorganic Chemistry</i> , 1995, 34, 102-110.	4.0	69
40	Protein-Induced Changes in Nonplanarity of the Porphyrin in Nickel Cytochrome c Probed by Resonance Raman Spectroscopy. <i>Biochemistry</i> , 1998, 37, 5118-5128.	2.5	67
41	Porphyrin Interactions with Wild-type and Mutant Mouse Ferrochelatase. <i>Biochemistry</i> , 2000, 39, 2517-2529.	2.5	64
42	Planar and Nonplanar Conformations of (meso-Tetraphenylporphinato)nickel(II) in Solution As Inferred from Solution and Solid-State Raman Spectroscopy. <i>Journal of Physical Chemistry A</i> , 1997, 101, 5789-5798.	2.5	63
43	Axial Coordination and Conformational Heterogeneity of Nickel(II) Tetraphenylporphyrin Complexes with Nitrogenous Bases. <i>Inorganic Chemistry</i> , 1998, 37, 4402-4412.	4.0	60
44	Synthesis and Electrochemical Studies of a Series of Fluorinated Dodecaphenylporphyrins. <i>Inorganic Chemistry</i> , 1999, 38, 2188-2198.	4.0	59
45	Interfacial Synthesis of Dendritic Platinum Nanoshells Templated on Benzene Nanodroplets Stabilized in Water by a Photocatalytic Lipoporphyrin. <i>Journal of the American Chemical Society</i> , 2006, 128, 9284-9285.	13.7	55
46	Morphological families of self-assembled porphyrin structures and their photosensitization of hydrogen generation. <i>Chemical Communications</i> , 2011, 47, 6069.	4.1	55
47	Monodisperse porphyrin nanospheres synthesized by coordination polymerization. <i>Nanotechnology</i> , 2008, 19, 395604.	2.6	54
48	Substituent-Induced Perturbation Symmetries and Distortions of meso-tert-Butylporphyrins. <i>Inorganic Chemistry</i> , 1998, 37, 2117-2128.	4.0	53
49	Binary ionic porphyrin nanosheets: electronic and light-harvesting properties regulated by crystal structure. <i>Nanoscale</i> , 2012, 4, 1695.	5.6	49
50	Heme Distortions in Sperm-Whale Carbonmonoxy Myoglobin: Correlations between Rotational Strengths and Heme Distortions in MD-Generated Structures. <i>Journal of the American Chemical Society</i> , 2002, 124, 3385-3394.	13.7	46
51	Four- and five-coordinate species in nickel-reconstituted hemoglobin and myoglobin: Raman identification of the nickel-histidine stretching mode. <i>Biochemistry</i> , 1986, 25, 620-627.	2.5	45
52	Platinum nanodendrites. <i>Nanotechnology</i> , 2006, 17, 1300-1308.	2.6	44
53	Conformational Study of 2,3,5,7,8,12,13,15,17,18-Decaalkylporphyrins. <i>Inorganic Chemistry</i> , 1994, 33, 3865-3872.	4.0	42
54	Metal Dependence of the Contributions of Low-Frequency Normal Coordinates to the Sterically Induced Distortions of Meso-Dialkyl-Substituted Porphyrins. <i>Inorganic Chemistry</i> , 1998, 37, 2009-2019.	4.0	41

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55	Raman dispersion spectroscopy on the highly saddled nickel(II)-octaethyltetraphenylporphyrin reveals the symmetry of nonplanar distortions and the vibronic coupling strength of normal modes. <i>Journal of Chemical Physics</i> , 1997, 107, 1794-1815.	3.0	39
56	Molecular organization in self-assembled binary porphyrin nanotubes revealed by resonance Raman spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 4072.	2.8	38
57	Protein influences on porphyrin structure in cytochrome c. <i>Biochemistry</i> , 1981, 20, 6485-6497.	2.5	37
58	Evolution of Dendritic Platinum Nanosheets into Ripening-Resistant Holey Sheets. <i>Nano Letters</i> , 2009, 9, 1534-1539.	9.1	37
59	Templated growth of platinum nanowheels using the inhomogeneous reaction environment of bicelles. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 4846-4852.	2.8	37
60	Electronic structure of metallouroporphyrins and their .pi.-.pi. dimers. <i>The Journal of Physical Chemistry</i> , 1984, 88, 4988-4992.	2.9	36
61	NMR studies of nonplanar porphyrins. Part 2. Effect of nonplanar conformational distortions on the porphyrin ring current. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1997, , 839-844.	0.9	34
62	Binding of Protoporphyrin IX and Metal Derivatives to the Active Site of Wild-Type Mouse Ferrochelatase at Low Porphyrin-to-Protein Ratios. <i>Biochemistry</i> , 2002, 41, 8253-8262.	2.5	33
63	Solution Conformations of Dodecasubstituted Cobalt(II) Porphyrins. <i>Inorganic Chemistry</i> , 1995, 34, 1333-1341.	4.0	32
64	The Conserved Active-Site Loop Residues of Ferrochelatase Induce Porphyrin Conformational Changes Necessary for Catalysis. <i>Biochemistry</i> , 2006, 45, 2904-2912.	2.5	30
65	Hierarchical cooperative binary ionic porphyrin nanocomposites. <i>Chemical Communications</i> , 2012, 48, 4863.	4.1	30
66	Synthesis and spectroscopic characterization of bis-pocket porphyrins: tetrakis(2',6'-dinitrophenyl)porphyrin and catalytic activity of a manganese(III) chloride derivative in alkane oxidation. <i>Inorganic Chemistry</i> , 1989, 28, 3421-3425.	4.0	28
67	Macrocycle and substituent vibrational modes of nonplanar nickel(II) octaethyltetraphenylporphyrin from its resonance Raman, near-infrared-excited FT Raman, and FT-IR spectra and deuterium isotope shifts. <i>The Journal of Physical Chemistry</i> , 1993, 97, 3701-3708.	2.9	28
68	A Pyridine-Sensitive Venus Flytrap Porphyrin. <i>Journal of the American Chemical Society</i> , 1997, 119, 12400-12401.	13.7	28
69	Resonance Raman Investigation of Nickel Microperoxidase-11. <i>Biochemistry</i> , 1999, 38, 2787-2795.	2.5	28
70	NMR studies of nonplanar porphyrins. Part 1. Axial ligand orientations in highly nonplanar porphyrins. <i>Journal of the Chemical Society Perkin Transactions II</i> , 1997, , 833-838.	0.9	27
71	Novel dodecaarylporphyrins: synthesis and dynamic properties. <i>Tetrahedron Letters</i> , 1999, 40, 6159-6162.	1.4	27
72	Polarized Raman dispersion spectroscopy probes planar and non-planar distortions of Ni(II) porphyrins with different peripheral substituents. <i>Journal of Raman Spectroscopy</i> , 1998, 29, 945-953.	2.5	25

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73	Resonance Raman spectroscopic investigation of axial coordination in <i>M. thermoautotrophicum</i> methyl reductase and its nickel tetrapyrrole cofactor F430. <i>Journal of the American Chemical Society</i> , 1988, 110, 1645-1646.	13.7	24
74	Silica ²⁺ Metal Core ²⁺ Shells and Metal Shells Synthesized by Porphyrin-Assisted Photocatalysis. <i>Chemistry of Materials</i> , 2008, 20, 7434-7439.	6.7	23
75	Normal-coordinate structural decomposition and the vibronic spectra of porphyrins. <i>Journal of Porphyrins and Phthalocyanines</i> , 2001, 05, 300-311.	0.8	22
76	Charge Effects on the Structure and Composition of Porphyrin Binary Ionic Solids: ZnTPPS/SnTMePyP Nanomaterials. <i>Chemistry of Materials</i> , 2013, 25, 441-447.	6.7	22
77	Synthesis and Spectroscopic Characterization of Octaacetic Acid Tetraphenylporphyrins. <i>Inorganic Chemistry</i> , 1994, 33, 6078-6085.	4.0	21
78	Selective fluorescence detection of divalent and trivalent metal ions with functionalized lipid membranes. <i>Journal of Materials Chemistry</i> , 2005, 15, 2938.	6.7	20
79	Light-driven synthesis of hollow platinum nanospheres. <i>Chemical Communications</i> , 2008, , 2535.	4.1	20
80	Conformational Distortions of Metalloporphyrins with Electron-Withdrawing NO ₂ Substituents at Different Meso Positions. A Structural Analysis by Polarized Resonance Raman Dispersion Spectroscopy and Molecular Mechanics Calculations. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6680-6694.	2.5	19
81	Synthesis and unusual properties of the first 2,3,7,8,12,13,17,18-octabromo-5,10,15,20-tetraalkylporphyrin. <i>Chemical Communications</i> , 1999, , 2071-2072.	4.1	18
82	Studies of urohemine I in aqueous solution. Thermodynamics of self-association and electronic properties of two species detected by proton NMR spectroscopy. <i>The Journal of Physical Chemistry</i> , 1984, 88, 5487-5492.	2.9	17
83	Synthesis and characterization of a chiral nonplanar porphyrin. <i>Chemical Communications</i> , 2000, , 131-132.	4.1	16
84	Nickel(II) Chelatase Variants Directly Evolved from Murine Ferrochelatase: Porphyrin Distortion and Kinetic Mechanism. <i>Biochemistry</i> , 2011, 50, 1535-1544.	2.5	15
85	Raman spectroscopic characterization of isomers of copper and zinc N-phenylprotoporphyrin IX dimethyl esters. <i>Inorganic Chemistry</i> , 1993, 32, 3153-3161.	4.0	13
86	Conformational diversity in (octaethylporphinato)(trichloroacetato)iron(III) derivatives. <i>Inorganica Chimica Acta</i> , 1999, 291, 49-59.	2.4	13
87	Molecular simulations of porphyrins and heme proteins. <i>Journal of Porphyrins and Phthalocyanines</i> , 2000, 04, 386-389.	0.8	13
88	Calcium-Dependent Conformation of a Heme and Fingerprint Peptide of the Diheme Cytochrome c Peroxidase from <i>Paracoccus pantotrophus</i> . <i>Biochemistry</i> , 2001, 40, 6570-6579.	2.5	13
89	Electron transfer photosensitized by a tin lipoporphyrin in solution, micelles, and at water ²⁺ organic solvent interfaces. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 1998, 113, 233-241.	3.9	12
90	Multiple four-coordinate forms in a nickel hydrocorphinato related to cofactor F430 of methylreductase. <i>The Journal of Physical Chemistry</i> , 1989, 93, 6283-6290.	2.9	11

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91	Metalloporphines: Dimers and Trimers. <i>Inorganic Chemistry</i> , 2016, 55, 6294-6299.	4.0	11
92	Unusual coordination and metal-ligand geometry of a vanadyl porphyrin in aqueous solution. <i>The Journal of Physical Chemistry</i> , 1983, 87, 3012-3015.	2.9	10
93	Novel ligand orientations in pyridine and imidazole complexes of a highly substituted nonplanar porphyrin, and implications for the design of porphyrins as regio- and stereo-specific oxidation catalysts. <i>Journal of the Chemical Society Chemical Communications</i> , 1994, , 1843.	2.0	10
94	Title is missing!. <i>Structural Chemistry</i> , 2001, 12, 127-136.	2.0	10
95	Calcium-Dependent Heme Structure in the Reduced Forms of the Bacterial Cytochrome <i>c</i> Peroxidase from <i>Paracoccus pantotrophus</i> . <i>Biochemistry</i> , 2008, 47, 5841-5850.	2.5	9
96	Synthesis and nanostructures of 5,10,15,20-tetrakis(4-piperidyl)porphyrin. <i>Tetrahedron</i> , 2013, 69, 10507-10515.	1.9	9
97	Raman spectroscopic study of scandium in sodium silicate glasses. <i>Journal of Non-Crystalline Solids</i> , 1984, 68, 87-97.	3.1	8
98	Molecular structures and mixed spin states of chloroiron(III) complexes of the 2,3-diethyl-(detpp), 2,3,7,8-tetraethyl-(cis-tetpp), 2,3,12,13-tetraethyl-(trans-tetpp) and 2,3,7,8,12,13-hexaethyl-(hetpp) 5,10,15,20-tetraphenylporphyrin complexes. <i>Comptes Rendus Chimie</i> , 2002, 5, 405-416.	0.5	8
99	Vibrational Analysis of Metalloporphyrins with Electron-Withdrawing NO ₂ Substituents at Different Meso Positions. <i>Journal of Physical Chemistry A</i> , 2001, 105, 6668-6679.	2.5	7
100	One-step synthesis of carbon-supported foam-like platinum with enhanced activity and durability. <i>Journal of Materials Chemistry A</i> , 2015, 3, 21562-21568.	10.3	7
101	Protonation of Planar and Nonplanar Porphyrins: A Calorimetric and Computational Study. <i>Journal of Physical Chemistry A</i> , 2020, 124, 8994-9003.	2.5	7
102	Determination of the activation energies for ND tautomerism and anion exchange in a porphyrin monocation. <i>Journal of Porphyrins and Phthalocyanines</i> , 2016, 20, 307-317.	0.8	6
103	Characterization of pH dependent axial ligation changes of monomer and dimer forms of iron(III) uroporphyrin I in aqueous solution. <i>Inorganica Chimica Acta</i> , 1985, 106, 165-170.	2.4	5
104	Steric bulkiness of pyrrole substituents and the out-of-plane deformations of porphyrins: nickel(II) octaisopropylporphyrin and its <i>meso</i> -nitro derivative. <i>Journal of Porphyrins and Phthalocyanines</i> , 2011, 15, 727-741.	0.8	4
105	Evolution of dendritic nanosheets into durable holey sheets: a lattice gas simulation study. <i>Journal of Porphyrins and Phthalocyanines</i> , 2011, 15, 449-458.	0.8	4
106	Chloroquine interaction with ferric uroporphyrin in solution. <i>Inorganica Chimica Acta</i> , 1983, 79, 172-173.	2.4	3
107	Binary Ionic Porphyrin Nanomaterials for Energy from Sunlight. <i>Handbook of Porphyrin Science</i> , 2013, , 227-277.	0.8	3
108	Synthesis, Tissue Uptake, and Toxicity of a Nickel Tetracarboranylphenylporphyrin. , 1996, , 137-141.		3

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109	Excited-state transient of vanadyl uroporphyrin I detected by resonance Raman spectroscopy. The Journal of Physical Chemistry, 1990, 94, 1440-1443.	2.9	2
110	A thermodynamic perspective of the metastability of holey sheets: the role of curvature. Physical Chemistry Chemical Physics, 2012, 14, 13309.	2.8	1