John M Papanikolas

List of Publications by Year
in descending order

108	5,528	87888 38	85541 71
papers	citations	h-index	g-index

110	110	110	6146
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Molecular Chromophoreâ€“Catalyst Assemblies for Solar Fuel Applications. Chemical Reviews, 2015, 115, 13006-13049.	47.7	412
2	Chemical approaches to artificial photosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15560-15564.	7.1	366
3	Energy Transfer Dynamics in Metalâ˜Organic Frameworks. Journal of the American Chemical Society, 2010, 132, 12767-12769.	13.7	328
4	Finding the Way to Solar Fuels with Dye-Sensitized Photoelectrosynthesis Cells. Journal of the American Chemical Society, 2016, 138, 13085-13102.	13.7	317
5	Light Harvesting in Microscale Metalâ€“Organic Frameworks by Energy Migration and Interfacial Electron Transfer Quenching. Journal of the American Chemical Society, 2011, 133, 12940-12943.	13.7	242
6	Turning the [Ru(bpy)2dppz]2+Light-Switch On and Off with Temperature. Journal of the American Chemical Society, 2002, 124, 15094-15098.	13.7	199
7	[Ru(bpy)2dppz]2+Light-Switch Mechanism in Protic Solvents as Studied through Temperature-Dependent Lifetime Measurementsâ€. Journal of Physical Chemistry A, 2004, 108, 9938-9944.	2.5	161
8	Integrating proton coupled electron transfer (PCET) and excited states. Coordination Chemistry Reviews, 2010, 254, 2459-2471.	18.8	155
9	Ultrafast Excited-State Energy Migration Dynamics in an Efficient Light-Harvesting Antenna Polymer Based on Ru(II) and Os(II) Polypyridyl Complexes. Journal of the American Chemical Society, 2001, 123, 10336-10347.	13.7	125
10	Direct Imaging of Free Carrier and Trap Carrier Motion in Silicon Nanowires by Spatially-Separated Femtosecond Pumpâ€“Probe Microscopy. Nano Letters, 2013, 13, 1336-1340.	9.1	120
11	Iâ˜2 photodissociation and recombination dynamics in sizeâ€selected Iâ˜2(CO2)n cluster ions. Journal of Chemical Physics, 1993, 99, 8733-8750.	3.0	106
12	Excited-State Quenching by Proton-Coupled Electron Transfer. Journal of the American Chemical Society, 2007, 129, 6968-6969.	13.7	104
13	Critical Flocculation Concentrations, Binding Isotherms, and Ligand Exchange Properties of Peptide-Modified Gold Nanoparticles Studied by UVâ˜Visible, Fluorescence, and Time-Correlated Single Photon Counting Spectroscopies. Analytical Chemistry, 2003, 75, 5797-5805.	6.5	101
14	Concerted electron-proton transfer in the optical excitation of hydrogen-bonded dyes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8554-8558.	7.1	99
15	I2â˜ photofragmentation/recombination dynamics in sizeâ€selected I2â˜(CO2)n cluster ions: Observation of coherent I...Iâ˜ vibrational motion. Journal of Chemical Physics, 1992, 97, 7002-7005.	3.0	91
16	Synthetically Encoding 10 nm Morphology in Silicon Nanowires. Nano Letters, 2013, 13, 6281-6286.	9.1	87
17	Disentangling the Physical Processes Responsible for the Kinetic Complexity in Interfacial Electron Transfer of Excited Ru(II) Polypyridyl Dyes on TiO₂. Journal of the American Chemical Society, 2016, 138, 4426-4438.	13.7	84
18	Investigation of Interligand Electron Transfer in Polypyridyl Complexes of Os(II) Using Femtosecond Polarization Anisotropy Methods:â€‰ Examination of Os(bpy)32+ and Os(bpy)2(mab)2+. Journal of Physical Chemistry A, 2002, 106, 1483-1495.	2.5	78

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19	Timeâ€resolved measurements of the photodissociation and recombination dynamics of Iâ¯2 in mass selected cluster ions. Journal of Chemical Physics, 1989, 91, 6533-6534.	3.0	74
20	Recombination and relaxation of molecular ions in sizeâ€selected clusters: Monte Carlo and molecular dynamics simulations of Iâ¯2(CO2)n. Journal of Chemical Physics, 1995, 102, 2452-2470.	3.0	68
21	Interligand Electron Transfer Dynamics in [Os(bpy)3]2+:â€‰Exploring the Excited State Potential Surfaces with Femtosecond Spectroscopy. Journal of Physical Chemistry A, 2004, 108, 4998-5006.	2.5	58
22	Exciton Dynamics and Biexciton Formation in Single-Walled Carbon Nanotubes Studied with Femtosecond Transient Absorption Spectroscopy. Journal of Physical Chemistry C, 2008, 112, 4507-4516.	3.1	58
23	Pumpâ€“probe microscopy: Visualization and spectroscopy of ultrafast dynamics at the nanoscale. Chemical Physics, 2015, 458, 30-40.	1.9	56
24	Varying the Electronic Structure of Surface-Bound Ruthenium(II) Polypyridyl Complexes. Inorganic Chemistry, 2015, 54, 460-469.	4.0	56
25	Triplet Excitation Energy Dynamics in Metalâ€“Organic Frameworks. Journal of Physical Chemistry C, 2013, 117, 22250-22259.	3.1	54
26	Waveâ€packet dynamics in the Li2 E(1Î£+g) shelf state: Simultaneous observation of vibrational and rotational recurrences with single rovibronic control of an intermediate state. Journal of Chemical Physics, 1995, 103, 7269-7276.	3.0	53
27	Ultrafast Carrier Dynamics in Individual Silicon Nanowires: Characterization of Diameter-Dependent Carrier Lifetime and Surface Recombination with Pumpâ€“Probe Microscopy. Journal of Physical Chemistry C, 2014, 118, 8634-8640.	3.1	50
28	Imaging Charge Separation and Carrier Recombination in Nanowire p-i-n Junctions Using Ultrafast Microscopy. Nano Letters, 2014, 14, 3079-3087.	9.1	48
29	Photoinduced Interfacial Electron Transfer within a Mesoporous Transparent Conducting Oxide Film. Journal of the American Chemical Society, 2014, 136, 2208-2211.	13.7	47
30	The End Is Different than The Middle: Spatially Dependent Dynamics in ZnO Rods Observed by Femtosecond Pumpâ€“Probe Microscopy. Journal of Physical Chemistry Letters, 2011, 2, 1777-1781.	4.6	45
31	Photophysical Characterization of a Chromophore/Water Oxidation Catalyst Containing a Layer-by-Layer Assembly on Nanocrystalline TiO₂ Using Ultrafast Spectroscopy. Journal of Physical Chemistry A, 2014, 118, 10301-10308.	2.5	45
32	Enabling Efficient Creation of Long-Lived Charge-Separation on Dye-Sensitized NiO Photocathodes. ACS Applied Materials & Interfaces, 2017, 9, 26786-26796.	8.0	45
33	Interfacial Energy Conversion in Ru^{II} Polypyridyl-Derivatized Oligoproline Assemblies on TiO₂. Journal of the American Chemical Society, 2013, 135, 5250-5253.	13.7	44
34	Driving Force Dependent, Photoinduced Electron Transfer at Degenerately Doped, Optically Transparent Semiconductor Nanoparticle Interfaces. Journal of the American Chemical Society, 2014, 136, 15869-15872.	13.7	43
35	Watching Photoactivation in a Ru(II) Chromophoreâ€“Catalyst Assembly on TiO₂ by Ultrafast Spectroscopy. Journal of Physical Chemistry C, 2013, 117, 24250-24258.	3.1	41
36	Ultrafast Recombination Dynamics in Dye-Sensitized SnO₂/TiO₂ Core/Shell Films. Journal of Physical Chemistry Letters, 2016, 7, 5297-5301.	4.6	41

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37	Light-Driven Water Oxidation Using Polyelectrolyte Layer-by-Layer Chromophoreâ€“Catalyst Assemblies. ACS Energy Letters, 2016, 1, 339-343.	17.4	40
38	Phase and amplitude control in the formation and detection of rotational wave packets in the Eâ€‰1Î£g+ state of Li2. Journal of Chemical Physics, 1998, 108, 9259-9274.	3.0	39
39	Energy Transfer between Ru(II) and Os(II) Polypyridyl Complexes Linked to Polystyreneâ€. Journal of Physical Chemistry A, 2002, 106, 2328-2334.	2.5	39
40	Ultrafast Energy Transfer between the3MLCT State of [RuII(dmb)2(bpy-an)]2+and the Covalently Appended Anthracene. Journal of Physical Chemistry A, 2005, 109, 2472-2475.	2.5	38
41	Self-Catalyzed Vaporâ€“Liquidâ€“Solid Growth of Lead Halide Nanowires and Conversion to Hybrid Perovskites. Nano Letters, 2017, 17, 7561-7568.	9.1	37
42	Detection of Adsorption of Ru(II) and Os(II) Polypyridyl Complexes on Gold and Silver Nanoparticles by Single-Photon Counting Emission Measurements. Journal of Physical Chemistry B, 2005, 109, 804-810.	2.6	36
43	Application of Degenerately Doped Metal Oxides in the Study of Photoinduced Interfacial Electron Transfer. Journal of Physical Chemistry B, 2015, 119, 7698-7711.	2.6	36
44	Ultrafast Dynamics in Multifunctional Ru(II)-Loaded Polymers for Solar Energy Conversion. Accounts of Chemical Research, 2015, 48, 818-827.	15.6	35
45	Reversible Strain-Induced Electronâ€“Hole Recombination in Silicon Nanowires Observed with Femtosecond Pumpâ€“Probe Microscopy. Nano Letters, 2014, 14, 6287-6292.	9.1	34
46	Efficient Light-Driven Oxidation of Alcohols Using an Organic Chromophoreâ€“Catalyst Assembly Anchored to TiO₂. ACS Applied Materials & Interfaces, 2016, 8, 9125-9133.	8.0	34
47	Poly(fluorene-co-thiophene)-based ionic transition-metal complex polymers for solar energy harvesting and storage applications. Polymer Chemistry, 2014, 5, 2363.	3.9	33
48	Ï€-Conjugated Organometallic Isoindigo Oligomer and Polymer Chromophores: Singlet and Triplet Excited State Dynamics and Application in Polymer Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 26828-26838.	8.0	32
49	Chromophore-Catalyst Assembly for Water Oxidation Prepared by Atomic Layer Deposition. ACS Applied Materials & Interfaces, 2017, 9, 39018-39026.	8.0	32
50	Light Harvesting and Charge Separation in a Ï€-Conjugated Antenna Polymer Bound to TiO₂. Journal of Physical Chemistry C, 2014, 118, 28535-28541.	3.1	31
51	Competition between Ultrafast Energy Flow and Electron Transfer in a Ru(II)-Loaded Polyfluorene Light-Harvesting Polymer. Journal of Physical Chemistry Letters, 2012, 3, 2453-2457.	4.6	30
52	Photophysical Characterization of a Helical Peptide Chromophoreâ€“Water Oxidation Catalyst Assembly on a Semiconductor Surface Using Ultrafast Spectroscopy. Journal of Physical Chemistry C, 2014, 118, 6029-6037.	3.1	30
53	Energy Migration Dynamics in a Ru(II)- and Os(II)-Based Antenna Polymer Embedded in a Disordered, Rigid Medium. Journal of Physical Chemistry B, 2004, 108, 2205-2209.	2.6	29
54	Photoinduced Electron Transfer in Naphthalene Diimide End-Capped Thiophene Oligomers. Journal of Physical Chemistry A, 2017, 121, 9579-9588.	2.5	29

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55	Efficient, long-range energy migration in RuII polypyridyl derivatized polystyrenes in rigid media. Antennae for artificial photosynthesis. Dalton Transactions, 2009, , 3903.	3.3	27
56	Controlling Morphology and Chain Aggregation in Semiconducting Conjugated Polymers: The Role of Solvent on Optical Gain in MEH-PPV. Journal of Physical Chemistry B, 2012, 116, 12835-12841.	2.6	27
57	Enhancement of optical gain and amplified spontaneous emission due to waveguide geometry in the conjugated polymer poly[2-methoxy-5-(2â€²-ethylhexyloxy)-p-phenylene vinylene]. Applied Physics Letters, 2013, 102, .	3.3	27
58	Direct observation of light-driven, concerted electronâ€“proton transfer. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11106-11109.	7.1	27
59	Cyclometalated Platinum-Containing Diketopyrrolopyrrole Complexes and Polymers: Photophysics and Photovoltaic Applications. Chemistry of Materials, 2017, 29, 8449-8461.	6.7	27
60	Pumpâ€“Probe Microscopy: Spatially Resolved Carrier Dynamics in ZnO Rods and the Influence of Optical Cavity Resonator Modes. Journal of Physical Chemistry B, 2013, 117, 4390-4398.	2.6	26
61	Light-Harvesting Polymers: Ultrafast Energy Transfer in Polystyrene-Based Arrays of Ï€-Conjugated Chromophores. Journal of Physical Chemistry B, 2014, 118, 372-378.	2.6	26
62	Compositional control of rovibrational wave packets in the E(1Î£g+) â€œshelfâ€•state of Li2 via quantum-state-resolved intermediate state selection. Journal of Chemical Physics, 1997, 106, 8310-8323.	3.0	25
63	Frequency Modulated Femtosecond Stimulated Raman Spectroscopy of Ultrafast Energy Transfer in a Donorâ€“Acceptor Copolymer. Journal of Physical Chemistry B, 2013, 117, 8245-8255.	2.6	25
64	Polymerâ€Based Ruthenium(II) Polypyridyl Chromophores on TiO₂ for Solar Energy Conversion. Chemistry - an Asian Journal, 2016, 11, 1257-1267.	3.3	25
65	Effects of hydrogen bonding on the low-lying electronic states of a model polyene aldehyde. Journal of the American Chemical Society, 1990, 112, 1912-1920.	13.7	24
66	Direct Imaging of Optical Cavity Modes in ZnO Rods Using Second Harmonic Generation Microscopy. Journal of Physical Chemistry A, 2010, 114, 1241-1246.	2.5	23
67	Ru(bpy)₃²⁺ derivatized polystyrenes constructed by nitroxide-mediated radical polymerization. Relationship between polymer chain length, structure and photophysical properties. Polymer Chemistry, 2015, 6, 8184-8193.	3.9	23
68	Manipulation of rovibrational wave packet composition in the Li2â€‰E(1Î£g+) shelf state using intermediate state selection and shaped femtosecond laser pulses. Journal of Chemical Physics, 1997, 107, 4172-4178.	3.0	22
69	Tripletâ^'Triplet Annihilation of Excited States of Polypyridyl Ru(II) Complexes Bound to Polystyrene. Journal of Physical Chemistry B, 2002, 106, 6156-6162.	2.6	22
70	Ultrafast Formation of a Long-Lived Charge-Separated State in a Ru-Loaded Poly(3-hexylthiophene) Light-Harvesting Polymer. Journal of Physical Chemistry Letters, 2013, 4, 2269-2273.	4.6	22
71	Ultrafast Dynamics of Single-Walled Carbon Nanotubes Dispersed in Polymer Films. Journal of Physical Chemistry A, 2005, 109, 289-292.	2.5	21
72	Base-Induced Phototautomerization in 7-Hydroxy-4-(trifluoromethyl)coumarin. Journal of Physical Chemistry B, 2012, 116, 14886-14891.	2.6	21

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73	Morphology and chain aggregation dependence of optical gain in thermally annealed films of the conjugated polymer poly[2-methoxy-5-(2â€²-ethylhexyloxy)-p-phenylene vinylene]. Journal of Applied Physics, 2013, 113, 233509.	2.5	21
74	Characterizing the Ultrafast Charge Carrier Trapping Dynamics in Single ZnO Rods Using Two-Photon Emission Microscopy. Journal of Physical Chemistry C, 2011, 115, 10806-10816.	3.1	20
75	Ultrafast, Light-Induced Electron Transfer in a Perylene Diimide Chromophore-Donor Assembly on TiO₂. Journal of Physical Chemistry Letters, 2015, 6, 4736-4742.	4.6	20
76	Completing a Charge Transport Chain for Artificial Photosynthesis. Journal of the American Chemical Society, 2018, 140, 9823-9826.	13.7	20
77	Solar Fuels and Next Generation Photovoltaics: The UNC-CH Energy Frontier Research Center. Catalysis Letters, 2011, 141, 1-7.	2.6	18
78	Ultrafast Carrier Dynamics of Silicon Nanowire Ensembles: The Impact of Geometrical Heterogeneity on Charge Carrier Lifetime. Journal of Physical Chemistry C, 2014, 118, 8626-8633.	3.1	18
79	Tunable Energy Transfer Rates via Control of Primary, Secondary, and Tertiary Structure of a Coiled Coil Peptide Scaffold. Inorganic Chemistry, 2012, 51, 11324-11338.	4.0	17
80	Probing Intrawire, Interwire, and Diameter-Dependent Variations in Silicon Nanowire Surface Trap Density with Pumpâ€“Probe Microscopy. Nano Letters, 2017, 17, 5956-5961.	9.1	17
81	Observation of Phonon Propagation in Germanium Nanowires Using Femtosecond Pumpâ€“Probe Microscopy. ACS Photonics, 2019, 6, 2213-2222.	6.6	17
82	Application of time-resolved near-infrared spectroscopy (TRNIR) to the metal-to-ligand charge transfer (MLCT) excited state(s) of. Chemical Physics, 2006, 326, 71-78.	1.9	15
83	Competing Pathways in the photo-Proton-Coupled Electron Transfer Reduction of		

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91	Distance Dependence of Intrahelix Ru^{II}* to Os^{II} Polypyridyl Excited-State Energy Transfer in Oligoproline Assemblies. Journal of Physical Chemistry B, 2013, 117, 6352-6363.	2.6	10
92	Hybrid Standing Wave and Whispering Gallery Modes in Needle-Shaped ZnO Rods: Simulation of Emission Microscopy Images Using Finite Difference Frequency Domain Methods with a Focused Gaussian Source. Journal of Physical Chemistry C, 2013, 117, 10653-10660.	3.1	10
93	Intrinsic optical gain in thin films of a conjugated polymer under picosecond excitation. Applied Physics Letters, 2013, 103, .	3.3	10
94	Pathways Following Electron Injection: Medium Effects and Cross-Surface Electron Transfer in a Ruthenium-Based, Chromophoreâ€“Catalyst Assembly on TiO₂. Journal of Physical Chemistry C, 2018, 122, 13017-13026.	3.1	10
95	Ultrafast kinetics of supramolecules with a Ru(II)- or Os(II)-polypyridyl light absorber, cis-Rh(III)Cl2-polypyridyl electron collector, and 2,3-bis(2-pyridyl)pyrazine bridge. Inorganica Chimica Acta, 2017, 454, 266-274.	2.4	8
96	Role of Macromolecular Structure in the Ultrafast Energy and Electron Transfer Dynamics of a Light-Harvesting Polymer. Journal of Physical Chemistry B, 2016, 120, 7937-7948.	2.6	7
97	Intrinsic gain and gain degradation modulated by excitation pulse width in a semiconducting conjugated polymer. Optics and Laser Technology, 2017, 94, 77-85.	4.6	7
98	Five Wave Mixing: Surface-Specific Transient Grating Spectroscopy as a Probe of Low Frequency Intermolecular Adsorbate Motion. Physical Review Letters, 2000, 85, 1906-1909.	7.8	5
99	Interfacial Dynamics within an Organic Chromophore-Based Water Oxidation Molecular Assembly. ACS Applied Materials & Interfaces, 2017, 9, 16651-16659.	8.0	5
100	Ultrafast Energy Transfer in Fully Conjugated Thiophene-Benzothiadiazole Capped Poly(Phenylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.1	5
101	Photoinduced Electron Transfer in Nucleic Acid Molten Salts. Journal of Physical Chemistry B, 2003, 107, 6469-6473.	2.6	4
102	A Semiconductorâ€Mediatorâ€Catalyst Artificial Photosynthetic System for Photoelectrochemical Water Oxidation. Chemistry - A European Journal, 2022, 28, e202102630.	3.3	4
103	"Partial Derivatives: Are You Kidding?": Teaching Thermodynamics Using Virtual Substance. ACS Symposium Series, 2007, , 194-206.	0.5	2
104	The University of North Carolina Energy Frontier Research Center: Center for Solar Fuels. ACS Energy Letters, 2016, 1, 872-874.	17.4	1
105	The Synthesis and Characterization of Energy-Conducting Polymers with Pendant Inorganic Chromophores. Materials Research Society Symposia Proceedings, 2004, 847, 411.	0.1	0
106	Ultrafast Transient Absorption Spectroscopy Investigations of Excited State Dynamics in SWNT/Polymer Composites. Materials Research Society Symposia Proceedings, 2004, 858, 312.	0.1	0
107	Ruthenium Dyes, Charge Transfer, and the Sun. ECS Meeting Abstracts, 2021, MA2021-01, 1812-1812.	0.0	0
108	It Is Good to Be Flexible: Energy Transport Facilitated by Conformational Fluctuations in Light-Harvesting Polymers. Journal of Physical Chemistry B, 2021, 125, 5885-5896.	2.6	0