

# Daniel A Higgins

## List of Publications by Year in descending order

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111  
papers

3,158  
citations

186265

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189892

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113  
all docs

113  
docs citations

113  
times ranked

2742  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fluorescence Microscopic Investigations of Molecular Dynamics in Self-Assembled Nanostructures. <i>Chemical Record</i> , 2021, 21, 1417-1429.	5.8	4
2	Dysregulation of the AP2M1 phosphorylation cycle by LRRK2 impairs endocytosis and leads to dopaminergic neurodegeneration. <i>Science Signaling</i> , 2021, 14, .	3.6	11
3	Single Molecule Spectroscopy Studies of Acid-Base Chemical Gradients Using Nile Red as a Probe of Local Surface Acidity. <i>Langmuir</i> , 2021, 37, 12138-12147.	3.5	3
4	Nanoconfinement and Mass Transport in Silica Mesopores: the Role of Charge at the Single Molecule and Single Pore Levels. <i>Analytical Chemistry</i> , 2020, 92, 1416-1423.	6.5	18
5	Fluorescence spectroscopy studies of crossed aldol reactions: a reactive Nile red dye reveals catalyst-dependent product formation. <i>Catalysis Science and Technology</i> , 2020, 10, 5579-5592.	4.1	1
6	Influences of Hydrogen Bonding-Based Stabilization of Bolaamphiphile Layers on Molecular Diffusion within Organic Nanotubes Having Inner Carboxyl Groups. <i>Langmuir</i> , 2020, 36, 6145-6153.	3.5	11
7	On the Importance of Silane Infusion Order on the Microscopic and Macroscopic Properties of Multifunctional Charge Gradients. <i>ACS Omega</i> , 2020, 5, 21897-21905.	3.5	2
8	Exploring Microenvironment Acidity Inside the Solvent-Filled Pores of Mesoporous Silica Thin Films via Single-Molecule Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 20333-20341.	3.1	3
9	Diffusion Behavior of Differently Charged Molecules in Self-Assembled Organic Nanotubes Studied Using Imaging Fluorescence Correlation Spectroscopy. <i>Langmuir</i> , 2019, 35, 7783-7790.	3.5	9
10	Optical Microscopic Techniques for Synthetic Polymer Characterization. <i>Analytical Chemistry</i> , 2019, 91, 405-424.	6.5	24
11	Probing the Local Dielectric Constant of Plasmid DNA in Solution and Adsorbed on Chemically Graded Aminosilane Surfaces. <i>Journal of Physical Chemistry B</i> , 2018, 122, 2307-2313.	2.6	5
12	pH and Surface Charge Switchability on Bifunctional Charge Gradients. <i>Langmuir</i> , 2018, 34, 663-672.	3.5	10
13	Vapor-Phase Plotting of Organosilane Chemical Gradients. <i>Langmuir</i> , 2018, 34, 9665-9672.	3.5	3
14	Base Layer Influence on Protonated Aminosilane Gradient Wettability. <i>Langmuir</i> , 2017, 33, 4207-4215.	3.5	14
15	Single Molecule Catch and Release: Potential-Dependent Plasmid DNA Adsorption along Chemically Graded Electrode Surfaces. <i>Langmuir</i> , 2017, 33, 8651-8662.	3.5	11
16	Organosilane Chemical Gradients: Progress, Properties, and Promise. <i>Langmuir</i> , 2017, 33, 13719-13732.	3.5	14
17	Spectroscopic imaging studies of nanoscale polarity and mass transport phenomena in self-assembled organic nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 20040-20048.	2.8	17
18	Early breast cancer screening using iron/iron oxide-based nanoplatfoms with sub-femtomolar limits of detection. <i>Beilstein Journal of Nanotechnology</i> , 2016, 7, 364-373.	2.8	21

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19	Separation of transition and heavy metals using stationary phase gradients and thin layer chromatography. <i>Journal of Chromatography A</i> , 2016, 1446, 141-148.	3.7	16
20	Cooperative Effects in Aligned and Opposed Multicomponent Charge Gradients Containing Strongly Acidic, Weakly Acidic, and Basic Functional Groups. <i>Langmuir</i> , 2016, 32, 3836-3847.	3.5	17
21	Single-Molecule Tracking Study of the Permeability and Transverse Width of Individual Cylindrical Microdomains in Solvent-Swollen Polystyrene- <i>block</i> -poly(ethylene oxide) Films. <i>Journal of Physical Chemistry B</i> , 2016, 120, 12177-12183.	2.6	9
22	Molecular Combing of $\lambda$ -DNA using Self-Propelled Water Droplets on Wettability Gradient Surfaces. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 24265-24272.	8.0	24
23	Imaging fluorescence correlation spectroscopy studies of dye diffusion in self-assembled organic nanotubes. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16766-16774.	2.8	21
24	Spectroscopic and Polarization-Dependent Single-Molecule Tracking Reveal the One-Dimensional Diffusion Pathways in Surfactant-Templated Mesoporous Silica. <i>Journal of Physical Chemistry C</i> , 2016, 120, 715-723.	3.1	25
25	Characterization of Porous Materials by Fluorescence Correlation Spectroscopy Super-resolution Optical Fluctuation Imaging. <i>ACS Nano</i> , 2015, 9, 9158-9166.	14.6	80
26	Single-Molecule Investigations of Morphology and Mass Transport Dynamics in Nanostructured Materials. <i>Annual Review of Analytical Chemistry</i> , 2015, 8, 193-216.	5.4	50
27	Single-Molecule Perspective on Mass Transport in Condensed Water Layers over Gradient Self-Assembled Monolayers. <i>Journal of Physical Chemistry C</i> , 2015, 119, 9418-9428.	3.1	24
28	Single-Molecule Studies of Acidity Distributions in Mesoporous Aluminosilicate Thin Films. <i>Langmuir</i> , 2015, 31, 5667-5675.	3.5	12
29	Fluorescence Recovery after Photobleaching and Single-Molecule Tracking Measurements of Anisotropic Diffusion within Identical Regions of a Cylinder-Forming Diblock Copolymer Film. <i>Analytical Chemistry</i> , 2015, 87, 5802-5809.	6.5	25
30	Amine-phenyl multi-component gradient stationary phases. <i>Journal of Chromatography A</i> , 2015, 1410, 190-199.	3.7	16
31	Dimensionality of Diffusion in Flow-Aligned Surfactant-Templated Mesoporous Silica: A Single Molecule Tracking Study of Pore Wall Permeability. <i>Journal of Physical Chemistry C</i> , 2015, 119, 26101-26110.	3.1	10
32	Nanoplatforms for highly sensitive fluorescence detection of cancer-related proteases. <i>Photochemical and Photobiological Sciences</i> , 2014, 13, 231-240.	2.9	25
33	Trajectory-Profile-Guided Single Molecule Tracking for Assignment of One-Dimensional Diffusion Trajectories. <i>Analytical Chemistry</i> , 2014, 86, 10820-10827.	6.5	9
34	Chelation Gradients for Investigation of Metal Ion Binding at Silica Surfaces. <i>Langmuir</i> , 2014, 30, 10019-10027.	3.5	13
35	Single-Molecule Spectroscopic Imaging Studies of Polarity Gradients Prepared by Infusion-Withdrawal Dip-Coating. <i>Journal of Physical Chemistry C</i> , 2014, 118, 6423-6432.	3.1	20
36	Single-Molecule Tracking Studies of Flow-Induced Microdomain Alignment in Cylinder-Forming Polystyrene- <i>b</i> -Poly(ethylene oxide) Diblock Copolymer Films. <i>Journal of Physical Chemistry B</i> , 2014, 118, 11406-11415.	2.6	14

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37	Elongation, Alignment, and Guided Electrophoretic Migration of ds-DNA in Flow-Aligned Hexagonal F127 Gels. <i>Journal of Physical Chemistry B</i> , 2014, 118, 4151-4159.	2.6	8
38	Molecular Length Dependence of Single Molecule Wobbling within Surfactant- and Solvent-Filled Silica Mesopores. <i>Journal of Physical Chemistry C</i> , 2013, 117, 15438-15446.	3.1	19
39	Fabrication of Surface Charge Gradients in Open-Tubular Capillaries and Their Characterization by Spatially Resolved Pulsed Streaming Potential Measurements. <i>Langmuir</i> , 2013, 29, 15260-15265.	3.5	6
40	Investigation of Fluorescence Emission from CdSe Nanorods in PMMA and P3HT/PMMA Films. <i>Journal of Physical Chemistry C</i> , 2013, 117, 18818-18828.	3.1	2
41	Following Single Molecules to a Better Understanding of Self-Assembled One-Dimensional Nanostructures. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 3095-3103.	4.6	30
42	Single Molecule Wobbling in Cylindrical Mesopores. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3668-3673.	3.1	21
43	Single Molecule Tracking Studies of Flow-Aligned Mesoporous Silica Monoliths: Aging-Time Dependence of Pore Order. <i>Journal of Physical Chemistry B</i> , 2013, 117, 4222-4230.	2.6	17
44	Direct Synthesis of Aqueous Quantum Dots through 4,4'-Bipyridine-Based Twin Ligand Strategy. <i>Inorganic Chemistry</i> , 2012, 51, 4521-4526.	4.0	6
45	Aminoalkoxysilane Reactivity in Surface Amine Gradients Prepared by Controlled-Rate Infusion. <i>Langmuir</i> , 2012, 28, 16091-16098.	3.5	28
46	Formation of Self-Organized Nanoporous Anodic Oxide from Metallic Gallium. <i>Langmuir</i> , 2012, 28, 13705-13711.	3.5	26
47	Fluorescence Quenching Studies of Potential-Dependent DNA Reorientation Dynamics at Glassy Carbon Electrode Surfaces. <i>Journal of the American Chemical Society</i> , 2012, 134, 14467-14475.	13.7	10
48	Single-Molecule Tracking Studies of Millimeter-Scale Cylindrical Domain Alignment in Polystyrene-Poly(ethylene oxide) Diblock Copolymer Films Induced by Solvent Vapor Penetration. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 1968-1973.	4.6	35
49	Investigation of Charge Transfer Interactions in CdSe Nanorod P3HT/PMMA Blends by Optical Microscopy. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3153-3160.	3.1	7
50	Trajectory angle determination in one dimensional single molecule tracking data by orthogonal regression analysis. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 1827.	2.8	39
51	Profile Control in Surface Amine Gradients Prepared by Controlled-Rate Infusion. <i>Langmuir</i> , 2011, 27, 1867-1873.	3.5	26
52	Novel Optical Probes for Advanced Chemical Imaging. <i>Analytical Chemistry</i> , 2011, 83, 8048-8049.	6.5	2
53	Spatiotemporal Evolution of Fixed and Mobile Dopant Populations in Silica Thin-Film Gradients as Revealed by Single Molecule Tracking. <i>Journal of Physical Chemistry C</i> , 2011, 115, 728-735.	3.1	12
54	Multiple Diffusion Pathways in Pluronic F127 Mesophases Revealed by Single Molecule Tracking and Fluorescence Correlation Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2011, 115, 12736-12743.	2.6	36

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55	Continuous stationary phase gradients for planar chromatographic media. <i>Journal of Chromatography A</i> , 2011, 1218, 9406-9413.	3.7	20
56	Fluorescence Spectroscopy Studies of Silica Film Polarity Gradients Prepared by Infusion-Withdrawal Dip-Coating. <i>Chemistry of Materials</i> , 2010, 22, 2970-2977.	6.7	20
57	Electrokinetic trapping using titania nanoporous membranes fabricated using sol-gel chemistry on microfluidic devices. <i>Electrophoresis</i> , 2009, 30, 3160-3167.	2.4	26
58	Aggregation and Its Influence on Macroscopic In-Plane Organization in Thin Films of Electrostatically Self-Assembled Perylene-Diimide/Polyelectrolyte Nanofibers. <i>Langmuir</i> , 2009, 25, 1188-1195.	3.5	13
59	Single-Molecule Studies of Oligomer Extraction and Uptake of Dyes in Poly(dimethylsiloxane) Films. <i>Analytical Chemistry</i> , 2009, 81, 10089-10096.	6.5	12
60	What can be learned from single molecule spectroscopy? Applications to sol-gel-derived silica materials. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 66-82.	2.8	52
61	Electrostatic Self-Assembly of Ordered Perylene-Diimide/Polyelectrolyte Nanofibers in Fluidic Devices: from Nematic Domains to Macroscopic Alignment. <i>Langmuir</i> , 2009, 25, 13045-13051.	3.5	10
62	Grayscale Patterning of Polymer Thin Films with Nanometer Precision by Direct-Write Multiphoton Photolithography. <i>Langmuir</i> , 2008, 24, 8939-8943.	3.5	10
63	Single Molecule Studies of Solvent-Dependent Diffusion and Entrapment in Poly(dimethylsiloxane) Thin Films. <i>Analytical Chemistry</i> , 2008, 80, 9726-9734.	6.5	6
64	Electrodeposited Silicate Films: Importance of Supporting Electrolyte. <i>Analytical Chemistry</i> , 2008, 80, 651-656.	6.5	35
65	Following the Growth Process in Macroporous Methylsilsesquioxane Films at the Single Macropore Level by Confocal Correlation Spectroscopy. <i>Chemistry of Materials</i> , 2007, 19, 6528-6535.	6.7	6
66	Molecular Orientation and Its Influence on Autocorrelation Amplitudes in Single-Molecule Imaging Experiments. <i>Analytical Chemistry</i> , 2007, 79, 6465-6472.	6.5	15
67	(Role) Playing Politics in an Environmental Chemistry Lecture Course. <i>Journal of Chemical Education</i> , 2007, 84, 241.	2.3	13
68	Direct-Write Multiphoton Photolithography: A Systematic Study of the Etching Behaviors in Various Commercial Polymers. <i>Langmuir</i> , 2007, 23, 12406-12412.	3.5	15
69	Probing Chemical Interactions at the Single-Molecule Level in Mesoporous Silica Thin Films. <i>Journal of Physical Chemistry C</i> , 2007, 111, 6772-6780.	3.1	24
70	High-resolution direct-write multiphoton photolithography in poly(methylmethacrylate) films. <i>Applied Physics Letters</i> , 2006, 88, 184101.	3.3	18
71	Single Molecule Spectroscopy Studies of Diffusion in Mesoporous Silica Thin Films. <i>Journal of Physical Chemistry B</i> , 2006, 110, 9164-9170.	2.6	72
72	Preparation and Characterization of Nanofibrous Perylene-Diimide-Polyelectrolyte Composite Thin Films. <i>Chemistry of Materials</i> , 2006, 18, 5937-5943.	6.7	20

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73	Exploring Dynamics in Photorefractive Polymer-Dispersed Liquid Crystals Using Near-Field Scanning Optical Microscopy. ACS Symposium Series, 2005, , 25-37.	0.5	1
74	Single-Molecule Studies of Diffusion by Oligomer-Bound Dyes in Organically Modified Solâˆ“Gel-Derived Silicate Films. Analytical Chemistry, 2005, 77, 486-494.	6.5	40
75	Optical Microscopy Studies of Dynamics within Individual Polymer-Dispersed Liquid Crystal Droplets. Accounts of Chemical Research, 2005, 38, 137-145.	15.6	41
76	Self-Assembled Photoactive Polyelectrolyte/Perylene-Diimide Composites. Langmuir, 2005, 21, 4149-4155.	3.5	14
77	Gaining Insight into the Nanoscale Properties of Solâˆ“Gel-Derived Silicate Thin Films by Single-Molecule Spectroscopy. Langmuir, 2005, 21, 9023-9031.	3.5	16
78	Phase Separation in Class II Organically Modified Silicate Films As Probed by Phase-Imaging Atomic Force Microscopy. Langmuir, 2005, 21, 6137-6141.	3.5	10
79	Electric-field-induced dynamics in radial liquid crystal droplets studied by multiphoton-excited fluorescence microscopy. Applied Physics Letters, 2004, 84, 4014-4016.	3.3	20
80	Synchrotron infrared microspectroscopy reveals localized heterogeneities in an organically modified silicate film. Vibrational Spectroscopy, 2004, 35, 153-158.	2.2	11
81	Single-Molecule Spectroscopy Studies of Microenvironmental Acidity in Silicate Thin Films. Journal of the American Chemical Society, 2004, 126, 13838-13844.	13.7	30
82	Enhanced Photorefractivity from Ion-Doped Polymer-Dispersed Liquid Crystals. Journal of Physical Chemistry B, 2004, 108, 16050-16055.	2.6	10
83	Exploring the Photorefractive Effect in Polymer-Dispersed Liquid Crystals Using Near-Field Scanning Optical Microscopy. Journal of Physical Chemistry B, 2003, 107, 14211-14218.	2.6	6
84	Watching molecules reorient in liquid crystal droplets with multiphoton-excited fluorescence microscopy. Journal of Chemical Physics, 2003, 119, 3935-3942.	3.0	22
85	Direct method for monitoring two-beam coupling in photorefractive materials. Review of Scientific Instruments, 2002, 73, 2103-2107.	1.3	8
86	Optics up close and personal. Nature Materials, 2002, 1, 83-85.	27.5	2
87	Scanning Probe Microscopy Studies of Mesostructured Nonstoichiometric Polyelectrolyteâˆ“Surfactant Complexes. Langmuir, 2002, 18, 6259-6265.	3.5	4
88	Single Molecule Studies of Dynamics in Polymer Thin Films and at Surfaces:Â Effect of Ambient Relative Humidity. Journal of Physical Chemistry B, 2002, 106, 10306-10315.	2.6	41
89	Single-Molecule Spectroscopic Studies of Nanoscale Heterogeneity in Organically Modified Silicate Thin Films. Chemistry of Materials, 2002, 14, 3734-3744.	6.7	40
90	Simultaneous Near-Field Optical Birefringence and Fluorescence Contrast Applied to the Study of Dye-Doped Polymer-Dispersed Liquid Crystals. Journal of Physical Chemistry B, 2001, 105, 5874-5882.	2.6	22

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91	Templated Droplets and Ordered Arrays in Polymer-Dispersed Liquid-Crystal Films. <i>Chemistry of Materials</i> , 2001, 13, 2281-2287.	6.7	34
92	Near-Field Scanning Optical Microscopy Studies of a Fluorescent Polyelectrolyte-Surfactant Complex. <i>Langmuir</i> , 2001, 17, 6051-6055.	3.5	6
93	Nanoscale Properties and Matrix-Dopant Interactions in Dye-Doped Organically Modified Silicate Thin Films. <i>Chemistry of Materials</i> , 2001, 13, 2713-2721.	6.7	48
94	Nanometer-scale resolution and depth discrimination in near-field optical microscopy studies of electric-field-induced molecular reorientation dynamics. <i>Journal of Chemical Physics</i> , 2000, 112, 7839-7847.	3.0	22
95	Multiphoton-Excited Fluorescence Imaging and Photochemical Modification of Dye-Doped Polystyrene Microsphere Arrays. <i>Chemistry of Materials</i> , 2000, 12, 1372-1377.	6.7	20
96	Toroidal Droplet Formation in Polymer-Dispersed Liquid Crystal Films. <i>Journal of the American Chemical Society</i> , 2000, 122, 6801-6802.	13.7	41
97	Single-Molecule Studies of Sol-Gel-Derived Silicate Films. Microenvironments and Film-Drying Conditions. <i>Journal of Physical Chemistry B</i> , 2000, 104, 9973-9980.	2.6	39
98	Characterization of Molecular Scale Environments in Polymer Films by Single Molecule Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2000, 104, 212-219.	2.6	103
99	Electric-field-induced ion migration in polymer-dispersed liquid-crystal films observed by near-field scanning optical microscopy. <i>Applied Physics Letters</i> , 1999, 75, 430-432.	3.3	13
100	Polymer-Dispersed Liquid Crystal Films Studied by Near-Field Scanning Optical Microscopy. <i>Langmuir</i> , 1998, 14, 1945-1950.	3.5	29
101	Near-Field Scanning Optical Microscopy Studies of Electric-Field-Induced Molecular Reorientation Dynamics. <i>Journal of Physical Chemistry A</i> , 1998, 102, 7558-7563.	2.5	23
102	Microheterogeneity in Dye-Doped Silicate and Polymer Films. <i>Journal of Physical Chemistry B</i> , 1998, 102, 7231-7237.	2.6	48
103	Local dynamics in polymer-dispersed liquid crystals studied by near-field scanning optical microscopy. <i>Applied Physics Letters</i> , 1998, 73, 3515-3517.	3.3	16
104	Near-Field Optical Studies of Thin-Film Mesostructured Organic Materials. <i>Accounts of Chemical Research</i> , 1997, 30, 204-212.	15.6	91
105	A Molecular Yarn: Near-Field Optical Studies of Self-Assembled, Flexible, Fluorescent Fibers. <i>Journal of the American Chemical Society</i> , 1996, 118, 4049-4058.	13.7	128
106	Optical second-harmonic generation measurements of molecular adsorption and orientation at the liquid/liquid electrochemical interface. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 1411.	1.7	88
107	Optical second harmonic generation as a probe of surface chemistry. <i>Chemical Reviews</i> , 1994, 94, 107-125.	47.7	551
108	Second harmonic generation measurements of molecular orientation and coadsorption at the interface between two immiscible electrolyte solutions. <i>Chemical Physics Letters</i> , 1993, 213, 485-490.	2.6	55

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109	Observation of photoinduced electron transfer at a liquid-liquid interface by optical second harmonic generation. <i>Journal of the American Chemical Society</i> , 1993, 115, 5342-5343.	13.7	73
110	Resonant second harmonic generation studies of p-nitrophenol adsorption at condensed-phase interfaces. <i>Langmuir</i> , 1992, 8, 1994-2000.	3.5	79
111	Investigation of Molecular Diffusion at Block Copolymer Thin Films Using Maximum Entropy Method-Based Fluorescence Correlation Spectroscopy and Single Molecule Tracking. <i>Journal of Fluorescence</i> , 0, , .	2.5	4