## Patrick Huber

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/3413893/publications.pdf

Version: 2024-02-01

		126708	149479
133	3,756	33	56
papers	citations	h-index	g-index
135	135	135	3141
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Soft matter in hard confinement: phase transition thermodynamics, structure, texture, diffusion and flow in nanoporous media. Journal of Physics Condensed Matter, 2015, 27, 103102.	0.7	205
2	Adsorption-induced deformation of nanoporous materialsâ€"A review. Applied Physics Reviews, 2017, 4, .	5.5	189
3	Capillary rise of water in hydrophilic nanopores. Physical Review E, 2009, 79, 067301.	0.8	157
4	The structural and surface properties of natural and modified coal gangue. Journal of Environmental Management, 2017, 190, 80-90.	3.8	111
5	Anomalous front broadening during spontaneous imbibition in a matrix with elongated pores. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10245-10250.	3.3	110
6	Knudsen Diffusion in Silicon Nanochannels. Physical Review Letters, 2008, 100, 064502.	2.9	103
7	Continuous Paranematic-to-Nematic Ordering Transitions of Liquid Crystals in Tubular Silica Nanochannels. Physical Review Letters, 2008, 101, 187801.	2.9	103
8	Switchable imbibition in nanoporous gold. Nature Communications, 2014, 5, 4237.	5.8	102
9	Adsorption-desorption isotherms and x-ray diffraction of Ar condensed into a porous glass matrix. Physical Review B, 1999, 60, 12657-12665.	1.1	100
10	Quenching of lamellar ordering in an n -alkane embedded in nanopores. Europhysics Letters, 2004, 65, 351-357.	0.7	86
11	X-ray study of the liquid potassium surface: Structure and capillary wave excitations. Physical Review B, 2003, 67, .	1.1	81
12	Rheology of liquids in nanopores: A study on the capillary rise of water, n-Hexadecane and n-Tetracosane in mesoporous silica. European Physical Journal: Special Topics, 2007, 141, 101-105.	1.2	79
13	Preferred orientations and stability of medium lengthn-alkanes solidified in mesoporous silicon. Physical Review E, 2007, 75, 021607.	0.8	76
14	Small-angle x-ray diffraction of Kr in mesoporous silica: Effects of microporosity and surface roughness. Physical Review B, 2005, 72, .	1,1	69
15	Elastic response of mesoporous silicon to capillary pressures in the pores. Applied Physics Letters, 2015, 106, .	1.5	64
16	Spontaneous Imbibition Dynamics of an <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -Alkane in Nanopores: Evidence of Meniscus Freezing and Monolayer Sticking. Physical Review Letters, 2009, 103, 174501.	2.9	63
17	pH-Dependent Selective Protein Adsorption into Mesoporous Silica. Journal of Physical Chemistry C, 2015, 119, 27072-27079.	1.5	62
18	Structural transformations of even-numberedn-alkanes confined in mesopores. Physical Review E, 2006, 74, 031610.	0.8	61

#	Article	IF	CITATIONS
19	Protein Adsorption into Mesopores: A Combination of Electrostatic Interaction, Counterion Release, and van der Waals Forces. Langmuir, 2014, 30, 2729-2737.	1.6	61
20	Capillary rise dynamics of liquid hydrocarbons in mesoporous silica as explored by gravimetry, optical and neutron imaging: Nano-rheology and determination of pore size distributions from the shape of imbibition fronts. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 496, 13-27.	2.3	49
21	Tuning the pore wall morphology of mesoporous silicon from branchy to smooth, tubular by chemical treatment. Journal of Applied Physics, 2008, 103, .	1.1	48
22	Evidence of a Sticky Boundary Layer in Nanochannels: A Neutron Spin Echo Study of <i>n</i> -Hexatriacontane and Poly(ethylene oxide) Confined in Porous Silicon. Journal of Physical Chemistry Letters, 2010, 1, 3116-3121.	2.1	48
23	Hydraulic transport across hydrophilic and hydrophobic nanopores: Flow experiments with water and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>n</mml:mi><mml:mtext>-hexane Physical Review E. 2016. 93. 013102.</mml:mtext></mml:mrow></mml:math>	0.8 mml:mtex	t>
24	Structure and Phase Behavior of a Discotic Columnar Liquid Crystal Confined in Nanochannels. Journal of Physical Chemistry C, 2012, 116, 18990-18998.	1.5	45
25	Freezing and melting of Ar in mesopores studied by optical transmission. Physical Review B, 2003, 67, .	1.1	44
26	Imbibition in mesoporous silica: rheological concepts and experiments on water and a liquid crystal. Journal of Physics Condensed Matter, 2011, 23, 184109.	0.7	42
27	Quantized Self-Assembly of Discotic Rings in a Liquid Crystal Confined in Nanopores. Physical Review Letters, 2018, 120, 067801.	2.9	42
28	Thermotropic nematic and smectic order in silica glass nanochannels. Applied Physics Letters, 2010, 97,	1.5	41
29	Vibrational density of states of triphenylene based discotic liquid crystals: dependence on the length of the alkyl chain. Physical Chemistry Chemical Physics, 2014, 16, 7324-7333.	1.3	39
30	Crystallization of medium-length 1-alcohols in mesoporous silicon: An x-ray diffraction study. Physical Review E, 2008, 77, 042602.	0.8	38
31	Rich polymorphism of a rod-like liquid crystal (8CB) confined in two types of unidirectional nanopores. European Physical Journal E, 2008, 26, 261-273.	0.7	37
32	Pairing Interactions and Gibbs Adsorption at the Liquid Bi-In Surface: A Resonant X-Ray Reflectivity Study. Physical Review Letters, 2001, 86, 1538-1541.	2.9	35
33	Preferred orientation of <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"> <mml:mi> n</mml:mi> </mml:math> -hexane crystallized in silicon nanochannels: A combined x-ray diffraction and sorption isotherm study. Physical Review E, 2009, 79, 032601.	0.8	35
34	Thermodynamic and Structural Investigations of Condensates of Small Molecules in Mesopores. Zeitschrift Fur Physikalische Chemie, 2008, 222, 257-285.	1.4	34
35	Diffraction study of solid oxygen embedded in porous glasses. Physical Review B, 2001, 64, .	1.1	33
36	Thermotropic orientational order of discotic liquid crystals in nanochannels: an optical polarimetry study and a Landau–de Gennes analysis. Soft Matter, 2014, 10, 4522-4534.	1.2	33

#	Article	IF	CITATIONS
37	SolidN2and CO in nanoporous glasses. Physical Review B, 1999, 60, 12666-12674.	1.1	32
38	Melting and Freezing of Argon in a Granular Packing of Linear Mesopore Arrays. Physical Review Letters, 2008, 100, 175701.	2.9	32
39	Polymer Dynamics in Nanochannels of Porous Silicon: A Neutron Spin Echo Study. Macromolecules, 2010, 43, 8162-8169.	2.2	32
40	Phase transitions and molecular dynamics of <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>n</mml:mi></mml:math> -hexadecanol confined in silicon nanochannels. Physical Review B, 2009, 79, .	1.1	31
41	Collective molecular reorientation of a calamitic liquid crystal (12CB) confined in alumina nanochannels. Physical Review E, 2010, 82, 011706.	0.8	31
42	Dynamics and ionic conductivity of ionic liquid crystals forming a hexagonal columnar mesophase. Physical Chemistry Chemical Physics, 2018, 20, 5626-5635.	1.3	31
43	Spontaneous Formation of Nanopatterns in Velocity-Dependent Dip-Coated Organic Films: From Dragonflies to Stripes. ACS Nano, 2014, 8, 9954-9963.	7.3	30
44	Molecular dynamics of n-hexane: A quasi-elastic neutron scattering study on the bulk and spatially nanochannel-confined liquid. Journal of Chemical Physics, 2012, 136, 124505.	1.2	28
45	Influence of nanoconfinement on the nematic behavior of liquid crystals. Physical Review E, 2012, 86, 021701.	0.8	28
46	Paranematic-to-nematic ordering of a binary mixture of rodlike liquid crystals confined in cylindrical nanochannels. Physical Review E, 2014, 89, 062501.	0.8	28
47	Criticality of an isotropic-to-smectic transition induced by anisotropic quenched disorder. Physical Review E, 2010, 81, 031703.	0.8	27
48	Capillarity-Driven Oil Flow in Nanopores: Darcy Scale Analysis of Lucas–Washburn Imbibition Dynamics. Transport in Porous Media, 2019, 126, 599-614.	1.2	26
49	Giant electrochemical actuation in a nanoporous silicon-polypyrrole hybrid material. Science Advances, 2020, 6, .	4.7	26
50	Short-range wetting at liquid gallium-bismuth alloy surfaces: X-ray measurements and square-gradient theory. Physical Review B, 2003, 68, .	1.1	25
51	Dynamics of water confined in mesopores with variable surface interaction. Journal of Chemical Physics, 2021, 154, 094505.	1.2	25
52	Liquid n-hexane condensed in silica nanochannels: A combined optical birefringence and vapor sorption isotherm study. Physical Review B, 2009, 80, .	1.1	23
53	Self-assembly of liquid crystals in nanoporous solids for adaptive photonic metamaterials. Nanoscale, 2019, 11, 23304-23317.	2.8	23
54	Laser-excited elastic guided waves reveal the complex mechanics of nanoporous silicon. Nature Communications, 2021, 12, 3597.	5.8	23

#	Article	IF	Citations
55	Effect of Etching Parameter on Pore Size and Porosity of Electrochemically Formed Nanoporous Silicon. Journal of Nanomaterials, 2007, 2007, 1-4.	1.5	22
56	A ferroelectric liquid crystal confined in cylindrical nanopores: reversible smectic layer buckling, enhanced light rotation and extremely fast electro-optically active Goldstone excitations. Nanoscale, 2017, 9, 19086-19099.	2.8	22
57	Tetra Point Wetting at the Free Surface of Liquid Ga-Bi. Physical Review Letters, 2002, 89, 035502.	2.9	21
58	Thermotropic nematic order upon nanocapillary filling. Physical Review E, 2013, 87, 042502.	0.8	21
59	Synergistic and Competitive Adsorption of Hydrophilic Nanoparticles and Oil-Soluble Surfactants at the Oil–Water Interface. Langmuir, 2021, 37, 5659-5672.	1.6	20
60	Collective orientational order and phase behavior of a discotic liquid crystal under nanoscale confinement. Nanoscale Advances, 2019, 1, 1104-1116.	2.2	19
61	Are solidified fillings of mesopores basically bulk-like except for the geometric confinement?. European Physical Journal E, 2003, 12, 51-56.	0.7	18
62	Elastocapillarity in nanopores: Sorption strain from the actions of surface tension and surface stress. Physical Review Materials, $2018$ , $2$ , .	0.9	18
63	Faraday Instability in a Surface-Frozen Liquid. Physical Review Letters, 2005, 94, 184504.	2.9	16
64	Capillary condensation, freezing, and melting in silica nanopores: A sorption isotherm and scanning calorimetry study on nitrogen in mesoporous SBA-15. Physical Review B, 2012, 85, .	1.1	16
65	Chiral Phases of a Confined Cholesteric Liquid Crystal: Anchoring-Dependent Helical and Smectic Self-Assembly in Nanochannels. Journal of Physical Chemistry C, 2016, 120, 11727-11738.	1.5	16
66	Molecular dynamics of pyrene based discotic liquid crystals confined in nanopores probed by incoherent quasielastic neutron scattering. RSC Advances, 2014, 4, 59358-59369.	1.7	15
67	Inhomogeneous relaxation dynamics and phase behaviour of a liquid crystal confined in a nanoporous solid. Soft Matter, 2015, 11, 3176-3187.	1.2	15
68	Solid Ar, N2, CO, and O2 in Nanopores. Journal of Low Temperature Physics, 2001, 122, 313-322.	0.6	14
69	Nucleation and growth of copper on mesoporous silicon by immersion plating. Journal Physics D: Applied Physics, 2007, 40, 2864-2869.	1.3	14
70	Dynamics and critical damping of capillary waves in an ionic liquid. Physical Review E, 2008, 77, 060601.	0.8	14
71	Size-dependent freezing of n-alcohols in silicon nanochannels. European Physical Journal: Special Topics, 2010, 189, 239-249.	1.2	14
72	Triple Point Behavior of Ar and N2 in Mesopores. Journal of Low Temperature Physics, 2005, 140, 91-103.	0.6	13

#	Article	IF	CITATIONS
73	Quenching of Reducing Properties of Mesoporous Silicon and Its Use as Template for Metal/Semiconductor Deposition. Journal of the Electrochemical Society, 2010, 157, D172.	1.3	13
74	LSND reloaded. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 696, 359-361.	1.5	13
75	Molecular ordering of the discotic liquid crystal HAT6 confined in mesoporous solids. Microporous and Mesoporous Materials, 2014, 197, 26-32.	2.2	13
76	Formation of Periodically Arranged Nanobubbles in Mesopores: Capillary Bridge Formation and Cavitation during Sorption and Solidification in an Hierarchical Porous SBA-15 Matrix. Langmuir, 2016, 32, 2928-2936.	1.6	13
77	Precursor Film Spreading during Liquid Imbibition in Nanoporous Photonic Crystals. Physical Review Letters, 2020, 125, 234502.	2.9	13
78	Influence of Pore Surface Chemistry on the Rotational Dynamics of Nanoconfined Water. Journal of Physical Chemistry C, 2021, 125, 16864-16874.	1.5	13
79	lonic liquid dynamics in nanoporous carbon: A pore-size- and temperature-dependent neutron spectroscopy study on supercapacitor materials. Physical Review Materials, 2020, 4, .	0.9	13
80	Thermotropic interface and core relaxation dynamics of liquid crystals in silica glass nanochannels: a dielectric spectroscopy study. Physical Chemistry Chemical Physics, 2015, 17, 22115-22124.	1.3	12
81	Multiple glassy dynamics in dipole functionalized triphenylene-based discotic liquid crystals revealed by broadband dielectric spectroscopy and advanced calorimetry – assessment of the molecular origin. Physical Chemistry Chemical Physics, 2019, 21, 18265-18277.	1.3	12
82	Acoustically Induced Giant Synthetic Hall Voltages in Graphene. Physical Review Letters, 2022, 128, .	2.9	12
83	Nondestructive high-throughput screening of nanopore geometry in porous membranes by imbibition. Applied Physics Letters, $2019,115,.$	1.5	11
84	Structure of Water at Hydrophilic and Hydrophobic Interfaces: Raman Spectroscopy of Water Confined in Periodic Mesoporous (Organo)Silicas. Journal of Physical Chemistry C, 2022, 126, 3520-3531.	1.5	11
85	Capillary sublimation of Ar in mesoporous glass. Physical Review B, 2005, 71, .	1.1	10
86	Self-Assembly of Gold Nanoparticles at the Oil–Vapor Interface: From Mono- to Multilayers. Langmuir, 2014, 30, 13176-13181.	1.6	10
87	Spatial Variation of Molecular Dynamics in the Nanoconfined Glass-Former Methanol. Journal of Physical Chemistry C, 2014, 118, 12548-12554.	1.5	10
88	Dynamic mechanical analysis of supercooled water in nanoporous confinement. Europhysics Letters, 2016, 115, 46001.	0.7	10
89	Molecular dynamics and electrical conductivity of Guanidinium based ionic liquid crystals: Influence of cation headgroup configuration. Journal of Molecular Liquids, 2021, 330, 115666.	2.3	10
90	Adsorption Isotherms and Infrared Spectroscopy Study of Nitrogen Condensed in Porous Glasses. Journal of Low Temperature Physics, 1998, 113, 19-29.	0.6	9

#	Article	IF	CITATIONS
91	Towards bio-silicon interfaces: Formation of an ultra-thin self-hydrated artificial membrane composed of dipalmitoylphosphatidylcholine (DPPC) and chitosan deposited in high vacuum from the gas-phase. Journal of Chemical Physics, 2014, 141, 104201.	1.2	9
92	Natural and Chemically Modified Post-Mining Claysâ€"Structural and Surface Properties and Preliminary Tests on Copper Sorption. Minerals (Basel, Switzerland), 2019, 9, 704.	0.8	9
93	Optical Transmission Measurements on Phase Transitions of O2and CO in Mesoporous Glass. Journal of Low Temperature Physics, 2004, 134, 1043-1053.	0.6	8
94	High-resolution dielectric study reveals pore-size-dependent orientational order of a discotic liquid crystal confined in tubular nanopores. Physical Review E, 2015, 92, 012503.	0.8	8
95	Electrical Conductivity and Multiple Glassy Dynamics of Crown Ether-Based Columnar Liquid Crystals. Journal of Physical Chemistry B, 2020, 124, 8728-8739.	1.2	8
96	Liquid crystalline hydrazones revisited: dipolar interactions vs hydrogen bonding affecting mesomorphic properties. Liquid Crystals, 2021, 48, 1382-1391.	0.9	8
97	Comparison of the Monolayer Formation of Fluorinated and Nonfluorinated Amphiphilic Block Copolymers at the Airâ^'Water Interface. Journal of Physical Chemistry B, 2009, 113, 11841-11847.	1.2	7
98	Orientational order in liquids upon condensation in nanochannels: An optical birefringence study on rodlike and disclike molecules in monolithic mesoporous silica. Physical Review B, 2010, 82, .	1.1	7
99	Polymorphism of the glass former ethanol confined in mesoporous silicon. Philosophical Magazine Letters, 2010, 90, 481-491.	0.5	7
100	Two-Step Freezing in Alkane Monolayers on Colloidal Silica Nanoparticles: From a Stretched-Liquid to an Interface-Frozen State. Journal of Physical Chemistry B, 2016, 120, 7522-7528.	1.2	7
101	Anisotropic confinement of chromophores induces second-order nonlinear optics in a nanoporous photonic metamaterial. Optics Letters, 2021, 46, 845.	1.7	7
102	Impact of confinement and polarizability on dynamics of ionic liquids. Journal of Chemical Physics, 2022, 156, 064703.	1.2	7
103	Wetting behavior at the free surface of a liquid gallium–bismuth alloy: an X-ray reflectivity study close to the bulk monotectic point. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2002, 206, 515-520.	2.3	6
104	Wetting of hydrocarbon liquid surfaces by fluorocarbon vapor: a microscopic study. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2002, 206, 293-297.	2.3	6
105	How do rod-like molecules freeze and arrange in mesopores?. Journal of Physics Condensed Matter, 2003, 15, S309-S314.	0.7	6
106	Solid phases of spatially nanoconfined oxygen: A neutron scattering study. Journal of Chemical Physics, 2014, 140, 024705.	1.2	6
107	Paraelectric KH2PO4 nanocrystals in monolithic mesoporous silica: Structure and lattice dynamics. Journal of Alloys and Compounds, 2021, 868, 159177.	2.8	6
108	Waferâ€Scale Electroactive Nanoporous Silicon: Large and Fully Reversible Electrochemoâ€Mechanical Actuation in Aqueous Electrolytes. Advanced Materials, 2022, 34, e2105923.	11.1	6

#	Article	IF	Citations
109	Phases and phase transitions of KPF6. Ferroelectrics, 1997, 203, 211-219.	0.3	5
110	Probing the Electrolyte Transfer in Ultrathin Polypyrrole Films by In Situ X-ray Reflectivity and Electrochemistry. Langmuir, 2020, 36, 13448-13456.	1.6	5
111	Statistical Analysis of Submicron X-ray Tomography Data on Polymer Imbibition into Arrays of Cylindrical Nanopores. Journal of Physical Chemistry C, 2021, 125, 26731-26743.	1.5	4
112	On the issue of textured crystallization of Ba(NO3)2 in mesoporous SiO2: Raman spectroscopy and lattice dynamics analysis. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 275, 121157.	2.0	4
113	Side Chain Length-Dependent Dynamics and Conductivity in Self-Assembled Ion Channels. Journal of Physical Chemistry C, 2022, 126, 10995-11006.	1.5	4
114	Transition from van der Waals to H Bond Dominated Interaction inn-Propanol Physisorbed on Graphite. Physical Review Letters, 2011, 106, 156103.	2.9	3
115	Surface Morphology of Vapor-Deposited Chitosan: Evidence of Solid-State Dewetting during the Formation of Biopolymer Films. Biomacromolecules, 2016, 17, 1142-1149.	2.6	3
116	Spontaneous Imbibition of Liquids into Nanopores. Materials Research Society Symposia Proceedings, 2005, 899, 1.	0.1	2
117	Assessment of nanoparticle immersion depth at liquid interfaces from chemically equivalent macroscopic surfaces. Journal of Colloid and Interface Science, 2022, 611, 670-683.	5.0	2
118	Multiple glassy dynamics of a homologous series of triphenylene-based columnar liquid crystals $\hat{a} \in \text{``A}$ study by broadband dielectric spectroscopy and advanced calorimetry. Journal of Molecular Liquids, 2022, 358, 119212.	2.3	2
119	Application of retardation-modulation polarimetry in studies of nanocomposite materials., 2018,,.		1
120	Adsorption from binary liquid solutions into mesoporous silica: a capacitance isotherm on 5CB nematogen/cyclohexane mixtures. Molecular Physics, 2021, $119$ , .	0.8	1
121	How water wets and self-hydrophilizes nanopatterns of physisorbed hydrocarbons. Journal of Colloid and Interface Science, 2022, 606, 57-66.	5.0	1
122	Soft Matter and Biomaterials on the Nanoscale. , 2020, , .		1
123	Solidified Fillings of Nanopores. Materials Research Society Symposia Proceedings, 2005, 876, 1.	0.1	0
124	Absolute determination of the orientational order quality in a columnar discotic liquid crystal. Materials Research Society Symposia Proceedings, 2011, 1349, 151701.	0.1	0
125	Annealing effect on thermodynamic and physical properties of mesoporous silicon: A simulation and nitrogen sorption study. AIP Conference Proceedings, 2016, , .	0.3	0
126	AFM Study of Elastic Module of Physical-Vapor-Deposited Phospholipid Membranes. Biophysical Journal, 2018, 114, 105a.	0.2	0

#	Article	IF	CITATIONS
127	Molecular Ordering of Nematic Liquid Crystals in Tubular Nanopores: Tailoring of Optical Anisotropy at the Nanoscale by Polymer Pore-surface Grafting. , 2018, , .		0
128	Liquid Crystals Confined in Nanoporous Solids: From Fundamentals to Functionalities of Integrated Material Systems. , 2020, , 377-434.		0
129	Dynamic Kerr and Pockels electro-optics of liquid crystals in nanopores for active photonic metamaterials. Nanoscale, 2021, 13, 18714-18725.	2.8	0
130	Thermodynamic and Structural Investigations of Condensates of Small Molecules in Mesopores. , 2008, , 33-61.		0
131	Waferâ€Scale Electroactive Nanoporous Silicon: Large and Fully Reversible Electrochemoâ€Mechanical Actuation in Aqueous Electrolytes (Adv. Mater. 1/2022). Advanced Materials, 2022, 34, .	11.1	0
132	Electrochemical Actuation in Porous Silicon. ECS Meeting Abstracts, 2020, MA2020-02, 1216-1216.	0.0	0
133	Electrolyte Transfer at a Liquid-Solid Polypyrrole Interface Quantified By in Situ X-Ray Reflectometry. ECS Meeting Abstracts, 2020, MA2020-02, 3174-3174.	0.0	0