Patrick Huber

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/3413893/publications.pdf Version: 2024-02-01



DATDICK HUBED

#	Article	IF	CITATIONS
1	How water wets and self-hydrophilizes nanopatterns of physisorbed hydrocarbons. Journal of Colloid and Interface Science, 2022, 606, 57-66.	5.0	1
2	Waferâ€Scale Electroactive Nanoporous Silicon: Large and Fully Reversible Electrochemoâ€Mechanical Actuation in Aqueous Electrolytes. Advanced Materials, 2022, 34, e2105923.	11.1	6
3	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	Ο
4	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
5	Impact of confinement and polarizability on dynamics of ionic liquids. Journal of Chemical Physics, 2022, 156, 064703.	1.2	7
6	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
7	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
8	Multiple glassy dynamics of a homologous series of triphenylene-based columnar liquid crystals – A study by broadband dielectric spectroscopy and advanced calorimetry. Journal of Molecular Liquids, 2022, 358, 119212.	2.3	2
9	Acoustically Induced Giant Synthetic Hall Voltages in Graphene. Physical Review Letters, 2022, 128, .	2.9	12
10	Side Chain Length-Dependent Dynamics and Conductivity in Self-Assembled Ion Channels. Journal of Physical Chemistry C, 2022, 126, 10995-11006.	1.5	4
11	Anisotropic confinement of chromophores induces second-order nonlinear optics in a nanoporous photonic metamaterial. Optics Letters, 2021, 46, 845.	1.7	7
12	Dynamics of water confined in mesopores with variable surface interaction. Journal of Chemical Physics, 2021, 154, 094505.	1.2	25
13	Adsorption from binary liquid solutions into mesoporous silica: a capacitance isotherm on 5CB nematogen/cyclohexane mixtures. Molecular Physics, 2021, 119, .	0.8	1
14	Liquid crystalline hydrazones revisited: dipolar interactions vs hydrogen bonding affecting mesomorphic properties. Liquid Crystals, 2021, 48, 1382-1391.	0.9	8
15	Synergistic and Competitive Adsorption of Hydrophilic Nanoparticles and Oil-Soluble Surfactants at the Oil–Water Interface. Langmuir, 2021, 37, 5659-5672.	1.6	20
16	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
17	Laser-excited elastic guided waves reveal the complex mechanics of nanoporous silicon. Nature Communications, 2021, 12, 3597.	5.8	23
18	Influence of Pore Surface Chemistry on the Rotational Dynamics of Nanoconfined Water. Journal of Physical Chemistry C, 2021, 125, 16864-16874.	1.5	13

#	Article	IF	CITATIONS
19	Paraelectric KH2PO4 nanocrystals in monolithic mesoporous silica: Structure and lattice dynamics. Journal of Alloys and Compounds, 2021, 868, 159177.	2.8	6
20	Dynamic Kerr and Pockels electro-optics of liquid crystals in nanopores for active photonic metamaterials. Nanoscale, 2021, 13, 18714-18725.	2.8	0
21	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
22	Giant electrochemical actuation in a nanoporous silicon-polypyrrole hybrid material. Science Advances, 2020, 6, .	4.7	26
23	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
24	Precursor Film Spreading during Liquid Imbibition in Nanoporous Photonic Crystals. Physical Review Letters, 2020, 125, 234502.	2.9	13
25	Probing the Electrolyte Transfer in Ultrathin Polypyrrole Films by In Situ X-ray Reflectivity and Electrochemistry. Langmuir, 2020, 36, 13448-13456.	1.6	5
26	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
27	Soft Matter and Biomaterials on the Nanoscale. , 2020, , .		1
28	Liquid Crystals Confined in Nanoporous Solids: From Fundamentals to Functionalities of Integrated Material Systems. , 2020, , 377-434.		0
29	Electrochemical Actuation in Porous Silicon. ECS Meeting Abstracts, 2020, MA2020-02, 1216-1216.	0.0	0
30	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
31	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
32	Nondestructive high-throughput screening of nanopore geometry in porous membranes by imbibition. Applied Physics Letters, 2019, 115, .	1.5	11
33	Collective orientational order and phase behavior of a discotic liquid crystal under nanoscale confinement. Nanoscale Advances, 2019, 1, 1104-1116.	2.2	19
34	Natural and Chemically Modified Post-Mining Clays—Structural and Surface Properties and Preliminary Tests on Copper Sorption. Minerals (Basel, Switzerland), 2019, 9, 704.	0.8	9
35	Self-assembly of liquid crystals in nanoporous solids for adaptive photonic metamaterials. Nanoscale, 2019, 11, 23304-23317.	2.8	23
36	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

#	Article	IF	CITATIONS
37	AFM Study of Elastic Module of Physical-Vapor-Deposited Phospholipid Membranes. Biophysical Journal, 2018, 114, 105a.	0.2	0
38	Quantized Self-Assembly of Discotic Rings in a Liquid Crystal Confined in Nanopores. Physical Review Letters, 2018, 120, 067801.	2.9	42
39	Dynamics and ionic conductivity of ionic liquid crystals forming a hexagonal columnar mesophase. Physical Chemistry Chemical Physics, 2018, 20, 5626-5635.	1.3	31
40	Molecular Ordering of Nematic Liquid Crystals in Tubular Nanopores: Tailoring of Optical Anisotropy at the Nanoscale by Polymer Pore-surface Grafting. , 2018, , .		0
41	Application of retardation-modulation polarimetry in studies of nanocomposite materials. , 2018, , .		1
42	Elastocapillarity in nanopores: Sorption strain from the actions of surface tension and surface stress. Physical Review Materials, 2018, 2, .	0.9	18
43	The structural and surface properties of natural and modified coal gangue. Journal of Environmental Management, 2017, 190, 80-90.	3.8	111
44	Adsorption-induced deformation of nanoporous materials—A review. Applied Physics Reviews, 2017, 4, .	5.5	189
45	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
46	Annealing effect on thermodynamic and physical properties of mesoporous silicon: A simulation and nitrogen sorption study. AIP Conference Proceedings, 2016, , .	0.3	0
47	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
48	Dynamic mechanical analysis of supercooled water in nanoporous confinement. Europhysics Letters, 2016, 115, 46001.	0.7	10
49	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>-hexand Physical Review F, 2016, 93, 013102</mml:mtext></mml:mrow></mml:math 	e <td>ext⁴⁷/mml:m</td>	ext ⁴⁷ /mml:m
50	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
51	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
52	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
53	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
54	Elastic response of mesoporous silicon to capillary pressures in the pores. Applied Physics Letters, 2015, 106, .	1.5	64

#	Article	IF	CITATIONS
55	pH-Dependent Selective Protein Adsorption into Mesoporous Silica. Journal of Physical Chemistry C, 2015, 119, 27072-27079.	1.5	62
56	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
57	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
58	Inhomogeneous relaxation dynamics and phase behaviour of a liquid crystal confined in a nanoporous solid. Soft Matter, 2015, 11, 3176-3187.	1.2	15
59	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
60	Solid phases of spatially nanoconfined oxygen: A neutron scattering study. Journal of Chemical Physics, 2014, 140, 024705.	1.2	6
61	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
62	Self-Assembly of Gold Nanoparticles at the Oil–Vapor Interface: From Mono- to Multilayers. Langmuir, 2014, 30, 13176-13181.	1.6	10
63	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
64	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
65	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
66	Spatial Variation of Molecular Dynamics in the Nanoconfined Glass-Former Methanol. Journal of Physical Chemistry C, 2014, 118, 12548-12554.	1.5	10
67	Switchable imbibition in nanoporous gold. Nature Communications, 2014, 5, 4237.	5.8	102
68	Spontaneous Formation of Nanopatterns in Velocity-Dependent Dip-Coated Organic Films: From Dragonflies to Stripes. ACS Nano, 2014, 8, 9954-9963.	7.3	30
69	Protein Adsorption into Mesopores: A Combination of Electrostatic Interaction, Counterion Release, and van der Waals Forces. Langmuir, 2014, 30, 2729-2737.	1.6	61
70	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
71	Molecular ordering of the discotic liquid crystal HAT6 confined in mesoporous solids. Microporous and Mesoporous Materials, 2014, 197, 26-32.	2.2	13
72	Thermotropic nematic order upon nanocapillary filling. Physical Review E, 2013, 87, 042502.	0.8	21

#	Article	IF	CITATIONS
73	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
74	Influence of nanoconfinement on the nematic behavior of liquid crystals. Physical Review E, 2012, 86, 021701.	0.8	28
75	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
76	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
77	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
78	Absolute determination of the orientational order quality in a columnar discotic liquid crystal. Materials Research Society Symposia Proceedings, 2011, 1349, 151701.	0.1	0
79	LSND reloaded. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 696, 359-361.	1.5	13
80	Transition from van der Waals to H Bond Dominated Interaction inn-Propanol Physisorbed on Graphite. Physical Review Letters, 2011, 106, 156103.	2.9	3
81	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
82	Size-dependent freezing of n-alcohols in silicon nanochannels. European Physical Journal: Special Topics, 2010, 189, 239-249.	1.2	14
83	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
84	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
85	Thermotropic nematic and smectic order in silica glass nanochannels. Applied Physics Letters, 2010, 97,	1.5	41
86	Criticality of an isotropic-to-smectic transition induced by anisotropic quenched disorder. Physical Review E, 2010, 81, 031703.	0.8	27
87	Collective molecular reorientation of a calamitic liquid crystal (12CB) confined in alumina nanochannels. Physical Review E, 2010, 82, 011706.	0.8	31
88	Polymer Dynamics in Nanochannels of Porous Silicon: A Neutron Spin Echo Study. Macromolecules, 2010, 43, 8162-8169.	2.2	32
89	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
90	Polymorphism of the glass former ethanol confined in mesoporous silicon. Philosophical Magazine Letters, 2010, 90, 481-491.	0.5	7

#	Article	IF	CITATIONS
91	Phase transitions and molecular dynamics of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi>-hexadecanol confined in silicon nanochannels. Physical Review B, 2009, 79, .</mml:math 	1.1	31
92	Spontaneous Imbibition Dynamics of an <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"><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
93	Preferred orientation of <mml:math <br="" xmlns:mml="http://www.w3.org/1998/Math/MathML">display="inline"><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
94	Liquid n-hexane condensed in silica nanochannels: A combined optical birefringence and vapor sorption isotherm study. Physical Review B, 2009, 80, .	1.1	23
95	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
96	Capillary rise of water in hydrophilic nanopores. Physical Review E, 2009, 79, 067301.	0.8	157
97	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
98	Knudsen Diffusion in Silicon Nanochannels. Physical Review Letters, 2008, 100, 064502.	2.9	103
99	Crystallization of medium-length 1-alcohols in mesoporous silicon: An x-ray diffraction study. Physical Review E, 2008, 77, 042602.	0.8	38
100	Continuous Paranematic-to-Nematic Ordering Transitions of Liquid Crystals in Tubular Silica Nanochannels. Physical Review Letters, 2008, 101, 187801.	2.9	103
101	Melting and Freezing of Argon in a Granular Packing of Linear Mesopore Arrays. Physical Review Letters, 2008, 100, 175701.	2.9	32
102	Dynamics and critical damping of capillary waves in an ionic liquid. Physical Review E, 2008, 77, 060601.	0.8	14
103	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
104	Thermodynamic and Structural Investigations of Condensates of Small Molecules in Mesopores. Zeitschrift Fur Physikalische Chemie, 2008, 222, 257-285.	1.4	34
105	Thermodynamic and Structural Investigations of Condensates of Small Molecules in Mesopores. , 2008, , 33-61.		0
106	Effect of Etching Parameter on Pore Size and Porosity of Electrochemically Formed Nanoporous Silicon. Journal of Nanomaterials, 2007, 2007, 1-4.	1.5	22
107	Preferred orientations and stability of medium lengthn-alkanes solidified in mesoporous silicon. Physical Review E, 2007, 75, 021607.	0.8	76
108	Nucleation and growth of copper on mesoporous silicon by immersion plating. Journal Physics D: Applied Physics, 2007, 40, 2864-2869.	1.3	14

#	Article	IF	CITATIONS
109	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
110	Structural transformations of even-numberedn-alkanes confined in mesopores. Physical Review E, 2006, 74, 031610.	0.8	61
111	Triple Point Behavior of Ar and N2 in Mesopores. Journal of Low Temperature Physics, 2005, 140, 91-103.	0.6	13
112	Solidified Fillings of Nanopores. Materials Research Society Symposia Proceedings, 2005, 876, 1.	0.1	0
113	Capillary sublimation of Ar in mesoporous glass. Physical Review B, 2005, 71, .	1.1	10
114	Small-angle x-ray diffraction of Kr in mesoporous silica: Effects of microporosity and surface roughness. Physical Review B, 2005, 72, .	1.1	69
115	Spontaneous Imbibition of Liquids into Nanopores. Materials Research Society Symposia Proceedings, 2005, 899, 1.	0.1	2
116	Faraday Instability in a Surface-Frozen Liquid. Physical Review Letters, 2005, 94, 184504.	2.9	16
117	Optical Transmission Measurements on Phase Transitions of O2and CO in Mesoporous Glass. Journal of Low Temperature Physics, 2004, 134, 1043-1053.	0.6	8
118	Quenching of lamellar ordering in an n -alkane embedded in nanopores. Europhysics Letters, 2004, 65, 351-357.	0.7	86
119	Are solidified fillings of mesopores basically bulk-like except for the geometric confinement?. European Physical Journal E, 2003, 12, 51-56.	0.7	18
120	Short-range wetting at liquid gallium-bismuth alloy surfaces: X-ray measurements and square-gradient theory. Physical Review B, 2003, 68, .	1.1	25
121	X-ray study of the liquid potassium surface: Structure and capillary wave excitations. Physical Review B, 2003, 67, .	1.1	81
122	How do rod-like molecules freeze and arrange in mesopores?. Journal of Physics Condensed Matter, 2003, 15, S309-S314.	0.7	6
123	Freezing and melting of Ar in mesopores studied by optical transmission. Physical Review B, 2003, 67, .	1.1	44
124	Tetra Point Wetting at the Free Surface of Liquid Ga-Bi. Physical Review Letters, 2002, 89, 035502.	2.9	21
125	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
126	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

#	Article	IF	CITATIONS
127	Solid Ar, N2, CO, and O2 in Nanopores. Journal of Low Temperature Physics, 2001, 122, 313-322.	0.6	14
128	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
129	Diffraction study of solid oxygen embedded in porous glasses. Physical Review B, 2001, 64, .	1.1	33
130	SolidN2and CO in nanoporous glasses. Physical Review B, 1999, 60, 12666-12674.	1.1	32
131	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
132	Adsorption Isotherms and Infrared Spectroscopy Study of Nitrogen Condensed in Porous Glasses. Journal of Low Temperature Physics, 1998, 113, 19-29.	0.6	9
133	Phases and phase transitions of KPF6. Ferroelectrics, 1997, 203, 211-219.	0.3	5