

# Hideki Tanaka

## List of Publications by Year in descending order

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61  
papers

2,073  
citations

304743

22  
h-index

233421

45  
g-index

63  
all docs

63  
docs citations

63  
times ranked

2044  
citing authors

#	ARTICLE	IF	CITATIONS
1	Novel Expansion/Shrinkage Modulation of 2D Layered MOF Triggered by Clathrate Formation with CO <sub>2</sub> Molecules. <i>Nano Letters</i> , 2006, 6, 2581-2584.	9.1	254
2	Quantum Effects on Hydrogen Isotope Adsorption on Single-Wall Carbon Nanohorns. <i>Journal of the American Chemical Society</i> , 2005, 127, 7511-7516.	13.7	189
3	Elastic layer-structured metal organic frameworks (ELMs). <i>Journal of Colloid and Interface Science</i> , 2009, 334, 1-7.	9.4	104
4	Storage of Hydrogen at 303 K in Graphite Slitlike Pores from Grand Canonical Monte Carlo Simulation. <i>Journal of Physical Chemistry B</i> , 2005, 109, 17174-17183.	2.6	101
5	High-throughput gas separation by flexible metal-organic frameworks with fast gating and thermal management capabilities. <i>Nature Communications</i> , 2020, 11, 3867.	12.8	99
6	Confinement in Carbon Nanospace-Induced Production of KI Nanocrystals of High-Pressure Phase. <i>Journal of the American Chemical Society</i> , 2011, 133, 10344-10347.	13.7	86
7	Adsorption-Induced Structural Transition of ZIF-8: A Combined Experimental and Simulation Study. <i>Journal of Physical Chemistry C</i> , 2014, 118, 8445-8454.	3.1	84
8	Grand Canonical Monte Carlo Simulation Study of Methane Adsorption at an Open Graphite Surface and in Slitlike Carbon Pores at 273 K. <i>Langmuir</i> , 2005, 21, 5639-5646.	3.5	83
9	Quantum Effects on Hydrogen Adsorption in Internal Nanospaces of Single-Wall Carbon Nanohorns. <i>Journal of Physical Chemistry B</i> , 2004, 108, 17457-17465.	2.6	75
10	Synthesis of zeolitic imidazolate framework-8 particles of controlled sizes, shapes, and gate adsorption characteristics using a central collision-type microreactor. <i>Chemical Engineering Journal</i> , 2017, 313, 724-733.	12.7	72
11	Graphene-based ordered framework with a diverse range of carbon polygons formed in zeolite nanochannels. <i>Carbon</i> , 2018, 129, 854-862.	10.3	70
12	Intrinsic Thermal Management Capabilities of Flexible Metal-Organic Frameworks for Carbon Dioxide Separation and Capture. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 41066-41077.	8.0	61
13	Free energy analysis for adsorption-induced lattice transition of flexible coordination framework. <i>Journal of Chemical Physics</i> , 2009, 130, 164707.	3.0	57
14	Force-driven reversible liquid-gas phase transition mediated by elastic nanosponges. <i>Nature Communications</i> , 2019, 10, 2559.	12.8	46
15	Simulation study for adsorption-induced structural transition in stacked-layer porous coordination polymers: Equilibrium and hysteretic adsorption behaviors. <i>Journal of Chemical Physics</i> , 2013, 138, 054708.	3.0	45
16	Understanding gate adsorption behaviour of CO <sub>2</sub> on elastic layer-structured metal-organic framework-11. <i>Dalton Transactions</i> , 2016, 45, 4193-4202.	3.3	43
17	Modeling and Visualization of CO <sub>2</sub> Adsorption on Elastic Layer-Structured Metal-Organic Framework-11: Toward a Better Understanding of Gate Adsorption Behavior. <i>Journal of Physical Chemistry C</i> , 2015, 119, 11533-11543.	3.1	41
18	Quantum Effects on Hydrogen Isotopes Adsorption in Nanopores. <i>Journal of Low Temperature Physics</i> , 2009, 157, 352-373.	1.4	38

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19	Anomaly of CH <sub>4</sub> Molecular Assembly Confined in Single-Wall Carbon Nanohorn Spaces. <i>Journal of the American Chemical Society</i> , 2011, 133, 2022-2024.	13.7	33
20	Quantum Molecular Sieving Effects of H <sub>2</sub> and D <sub>2</sub> on Bundled and Nonbundled Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2012, 116, 20918-20922.	3.1	31
21	Reversible Pore Size Control of Elastic Microporous Material by Mechanical Force. <i>Chemistry - A European Journal</i> , 2013, 19, 13009-13016.	3.3	23
22	Fluids in nanospaces: molecular simulation studies to find out key mechanisms for engineering. <i>Adsorption</i> , 2014, 20, 213-223.	3.0	23
23	Selective molecular-gating adsorption in a novel copper-based metal-organic framework. <i>Journal of Materials Chemistry A</i> , 2018, 6, 5910-5918.	10.3	23
24	Structural mechanism of reactivation with steam of pitch-based activated carbon fibers. <i>Journal of Colloid and Interface Science</i> , 2020, 578, 422-430.	9.4	22
25	Ultrapervious 2D-channeled graphene-wrapped zeolite molecular sieving membranes for hydrogen separation. <i>Science Advances</i> , 2022, 8, eabl3521.	10.3	21
26	Mechanism of Kinetically Controlled Capillary Condensation in Nanopores: A Combined Experimental and Monte Carlo Approach. <i>ACS Nano</i> , 2017, 11, 269-276.	14.6	20
27	Fast continuous measurement of synchrotron powder diffraction synchronized with controlling gas and vapour pressures at beamline BL02B2 of ÅSPRING-8. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 616-624.	2.4	20
28	Dependence of adsorption-induced structural transition on framework structure of porous coordination polymers. <i>Journal of Chemical Physics</i> , 2014, 140, 044707.	3.0	19
29	Capillary condensation in mesoporous silica with surface roughness. <i>Adsorption</i> , 2013, 19, 631-641.	3.0	18
30	Adsorption separation of heavier isotope gases in subnanometer carbon pores. <i>Nature Communications</i> , 2021, 12, 546.	12.8	18
31	A flexible two-dimensional layered metal-organic framework functionalized with (trifluoromethyl)trifluoroborate: synthesis, crystal structure, and adsorption/separation properties. <i>Dalton Transactions</i> , 2020, 49, 3692-3699.	3.3	17
32	High-density monolithic pellets of double-sided graphene fragments based on zeolite-templated carbon. <i>Journal of Materials Chemistry A</i> , 2021, 9, 7503-7507.	10.3	17
33	New approach to determination of surface heterogeneity of adsorbents and catalysts from the temperature programmed desorption (TPD) technique: One step beyond the condensation approximation (CA) method. <i>Journal of Colloid and Interface Science</i> , 2005, 291, 334-344.	9.4	16
34	Structural adsorption mechanism of chloroform in narrow micropores of pitch-based activated carbon fibres. <i>Carbon</i> , 2021, 171, 681-688.	10.3	16
35	Critical energy barrier for capillary condensation in mesopores: Hysteresis and reversibility. <i>Journal of Chemical Physics</i> , 2016, 144, 164705.	3.0	15
36	Free energy calculations for adsorption-induced deformation of flexible metal-organic frameworks. <i>Current Opinion in Chemical Engineering</i> , 2019, 24, 19-25.	7.8	15

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37	The subtracting pore effect method for an accurate and reliable surface area determination of porous carbons. <i>Carbon</i> , 2021, 175, 77-86.	10.3	15
38	Comprehensive Modeling of Capillary Condensation in Open-Ended Nanopores: Equilibrium, Metastability, and Spinodal. <i>Journal of Physical Chemistry C</i> , 2017, 121, 26877-26886.	3.1	13
39	Highly Crystalline Ni <sup>2+</sup> /Co Layered Double Hydroxide Fabricated via Topochemical Transformation with a High Adsorption Capacity for Nitrate Ions. <i>Inorganic Chemistry</i> , 2019, 58, 15710-15719.	4.0	13
40	Determination of phase equilibria in confined systems by open pore cell Monte Carlo method. <i>Journal of Chemical Physics</i> , 2013, 138, 084709.	3.0	12
41	Free Energy Analysis for Adsorption-Induced Structural Transition of Colloidal Zeolitic Imidazolate Framework-8 Particles. <i>Journal of Physical Chemistry C</i> , 2017, 121, 20366-20374.	3.1	12
42	In silico synthesis of carbon molecular sieves for high-performance air separation. <i>Carbon</i> , 2019, 141, 626-634.	10.3	11
43	The Long and Bright Path of a Lanthanide MOF: From Basics towards the Application. <i>Chemistry - A European Journal</i> , 2021, 27, 7376-7382.	3.3	10
44	Slacking of Gate Adsorption Behavior on Metal-Organic Frameworks under an External Force. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 30213-30223.	8.0	10
45	CH <sub>3</sub> vs CHCl <sub>2</sub> Binary Competitive Adsorption Equilibria in Graphitic Slit Pores: Monte Carlo Simulations and Breakthrough Curve Experiments. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 6440-6450.	3.7	8
46	Efficiency of Thermal Management Using Phase-Change Material for Nonisothermal Adsorption Process. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 14485-14495.	3.7	8
47	Physicochemical Understanding of the Impact of Pore Environment and Species of Adsorbates on Adsorption Behaviour. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 20504-20510.	13.8	8
48	Hydrogen Isotope Separation in Carbon Nanopores. <i>Journal of Chemical Engineering of Japan</i> , 2011, 44, 355-363.	0.6	6
49	Potential theory for gate adsorption on soft porous crystals. <i>Molecular Simulation</i> , 2015, 41, 1329-1338.	2.0	6
50	High-Performance Carbon Molecular Sieves for the Separation of Propylene and Propane. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 17878-17888.	8.0	5
51	Low-temperature hydrogen-graphite system revisited: Experimental study and Monte Carlo simulation. <i>Journal of Chemical Physics</i> , 2019, 151, 024704.	3.0	4
52	Highly oxidation-resistant graphene-based porous carbon as a metal catalyst support. <i>Carbon Trends</i> , 2021, 3, 100029.	3.0	4
53	Synthesis of zeolite-templated carbons for methane storage: A molecular simulation study. <i>Tanso</i> , 2018, 2018, 197-203.	0.1	4
54	Central metal dependent modulation of induced-fit gas uptake in molecular porphyrin solids. <i>Chemical Communications</i> , 2018, 54, 7822-7825.	4.1	2

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55	What is the Smallest Atom as a Probe for Characterizing Nanostructures?. Journal of Physical Chemistry C, 2018, 122, 15446-15455.	3.1	2
56	Diffusion phenomena of propane and propylene in colloidal zeolitic imidazolate Framework-8 particles. Journal of the Taiwan Institute of Chemical Engineers, 2018, 90, 79-84.	5.3	1
57	CO2 Storage on Metal-Organic Frameworks. Green Energy and Technology, 2019, , 331-358.	0.6	1
58	Physicochemical Understanding of the Impact of Pore Environment and Species of Adsorbates on Adsorption Behaviour. Angewandte Chemie, 2021, 133, 20667-20673.	2.0	1
59	Enhancement in the Charge-Transfer Kinetics of Pseudocapacitive Iridium-Doped Layered Manganese Oxide. Inorganic Chemistry, 2022, 61, 4566-4571.	4.0	1
60	Liquid exfoliation of five-coordinate layered titanate $K_2Ti_2O_5$ single crystals in water. CrystEngComm, 2022, 24, 5112-5119.	2.6	1
61	Apatite-Graphene Interface Channel-Aided Rapid and Selective $H_2$ Permeation. Journal of Physical Chemistry C, 2022, 126, 3653-3660.	3.1	0