

Jonas Björk

List of Publications by Year in descending order

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77
papers

4,618
citations

94269

37
h-index

98622

67
g-index

80
all docs

80
docs citations

80
times ranked

5342
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of extrinsic and intrinsic perturbations on the electronic structure of graphene: Retaining an effective primitive cell band structure by band unfolding. <i>Physical Review B</i> , 2014, 89, .	1.1	424
2	Homo-coupling of terminal alkynes on a noble metal surface. <i>Nature Communications</i> , 2012, 3, 1286.	5.8	350
3	Adsorption of Aromatic and Anti-Aromatic Systems on Graphene through π - π Stacking. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 3407-3412.	2.1	344
4	Unfolding spinor wave functions and expectation values of general operators: Introducing the unfolding-density operator. <i>Physical Review B</i> , 2015, 91, .	1.1	274
5	Mechanisms of Halogen-Based Covalent Self-Assembly on Metal Surfaces. <i>Journal of the American Chemical Society</i> , 2013, 135, 5768-5775.	6.6	216
6	On-Surface Synthesis of Carbon-Based Scaffolds and Nanomaterials Using Terminal Alkynes. <i>Accounts of Chemical Research</i> , 2015, 48, 2140-2150.	7.6	186
7	Synthesis of Extended Graphdiyne Wires by Vicinal Surface Templating. <i>Nano Letters</i> , 2014, 14, 1891-1897.	4.5	165
8	Tailoring Bicomponent Supramolecular Nanoporous Networks: Phase Segregation, Polymorphism, and Glasses at the Solid-Liquid Interface. <i>Journal of the American Chemical Society</i> , 2009, 131, 13062-13071.	6.6	134
9	Structure and local reactivity of the Au(111) surface reconstruction. <i>Physical Review B</i> , 2013, 87, .	1.1	125
10	Van der Waals interactions and the limits of isolated atom models at interfaces. <i>Nature Communications</i> , 2016, 7, 11559.	5.8	111
11	Zippering Up: Cooperativity Drives the Synthesis of Graphene Nanoribbons. <i>Journal of the American Chemical Society</i> , 2011, 133, 14884-14887.	6.6	110
12	Comparing Graphene Growth on Cu(111) versus Oxidized Cu(111). <i>Nano Letters</i> , 2015, 15, 917-922.	4.5	107
13	Synthesis of Surface Covalent Organic Frameworks via Dimerization and Cyclotrimerization of Acetyls. <i>Journal of the American Chemical Society</i> , 2015, 137, 4904-4907.	6.6	98
14	Aggregation and Contingent Metal/Surface Reactivity of 1,3,8,10-tetraazaperopyrene (TAPP) on Cu(111). <i>Chemistry - A European Journal</i> , 2010, 16, 2079-2091.	1.7	89
15	Exploration of pyrazine-embedded antiaromatic polycyclic hydrocarbons generated by solution and on-surface azomethine ylide homocoupling. <i>Nature Communications</i> , 2017, 8, 1948.	5.8	88
16	The Role of Kinetics versus Thermodynamics in Surface-Assisted Ullmann Coupling on Gold and Silver Surfaces. <i>Journal of the American Chemical Society</i> , 2019, 141, 4824-4832.	6.6	83
17	Density functional theory based screening of ternary alkali-transition metal borohydrides: A computational material design project. <i>Journal of Chemical Physics</i> , 2009, 131, 014101.	1.2	77
18	Tracking and Removing Br during the On-Surface Synthesis of a Graphene Nanoribbon. <i>Journal of Physical Chemistry C</i> , 2015, 119, 486-493.	1.5	77

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19	Computational study of the adsorption and dissociation of phenol on Pt and Rh surfaces. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 5849.	1.3	74
20	Unraveling the Mechanism of the Covalent Coupling Between Terminal Alkynes on a Noble Metal. <i>Journal of Physical Chemistry C</i> , 2014, 118, 3181-3187.	1.5	73
21	Towards Design Rules for Covalent Nanostructures on Metal Surfaces. <i>Chemistry - A European Journal</i> , 2014, 20, 928-934.	1.7	68
22	On-surface photopolymerization of two-dimensional polymers ordered on the mesoscale. <i>Nature Chemistry</i> , 2021, 13, 730-736.	6.6	68
23	Thermal selectivity of intermolecular versus intramolecular reactions on surfaces. <i>Nature Communications</i> , 2016, 7, 11002.	5.8	66
24	Controlling the Dimensionality of On-Surface Coordination Polymers via Endo- or Exoligation. <i>Journal of the American Chemical Society</i> , 2014, 136, 9355-9363.	6.6	65
25	STM fingerprint of molecule-atom interactions in a self-assembled metal-organic surface coordination network on Cu(111). <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 8815.	1.3	62
26	On-surface synthesis of a two-dimensional porous coordination network: Unraveling adsorbate interactions. <i>Physical Review B</i> , 2014, 90, .	1.1	61
27	Hierarchical Dehydrogenation Reactions on a Copper Surface. <i>Journal of the American Chemical Society</i> , 2018, 140, 6076-6082.	6.6	53
28	Covalent coupling via dehalogenation on Ni(111) supported boron nitride and graphene. <i>Chemical Communications</i> , 2015, 51, 2440-2443.	2.2	52
29	Reaction mechanisms for on-surface synthesis of covalent nanostructures. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 083002.	0.7	47
30	Adsorption of Large Hydrocarbons on Coinage Metals: A van der Waals Density Functional Study. <i>ChemPhysChem</i> , 2014, 15, 2851-2858.	1.0	45
31	Photoinduced C-C Reactions on Insulators toward Photolithography of Graphene Nanoarchitectures. <i>Journal of the American Chemical Society</i> , 2014, 136, 4651-4658.	6.6	45
32	1,3-Diiodobenzene on Cu(111) - an exceptional case of on-surface Ullmann coupling. <i>Chemical Communications</i> , 2015, 51, 13301-13304.	2.2	44
33	On-Surface Synthesis of Ethynylene-Bridged Anthracene Polymers. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6559-6563.	7.2	44
34	Steering On-Surface Self-Assembly of High-Quality Hydrocarbon Networks with Terminal Alkynes. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3987-3995.	1.5	40
35	Functionalizing MXenes by Tailoring Surface Terminations in Different Chemical Environments. <i>Chemistry of Materials</i> , 2021, 33, 9108-9118.	3.2	40
36	Unusual Deprotonated Alkynyl Hydrogen Bonding in Metal-Supported Hydrocarbon Assembly. <i>Journal of Physical Chemistry C</i> , 2015, 119, 9669-9679.	1.5	39

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37	Post-Synthetic Decoupling of On-Surface-Synthesized Covalent Nanostructures from Ag(111). <i>Angewandte Chemie - International Edition</i> , 2016, 55, 7650-7654.	7.2	39
38	Interplay of Chemical and Electronic Structure on the Single-Molecule Level in 2D Polymerization. <i>ACS Nano</i> , 2016, 10, 11511-11518.	7.3	35
39	Topological Dynamics in Supramolecular Rotors. <i>Nano Letters</i> , 2014, 14, 4461-4468.	4.5	31
40	Investigation of 2D Boridene from First Principles and Experiments. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	31
41	Interplay of weak interactions in the atom-by-atom condensation of xenon within quantum boxes. <i>Nature Communications</i> , 2015, 6, 6071.	5.8	30
42	On-Surface Polymerization of 1,6-Dibromo-3,8-diiodopyrene—A Comparative Study on Au(111) Versus Ag(111) by STM, XPS, and NEXAFS. <i>Journal of Physical Chemistry C</i> , 2018, 122, 5967-5977.	1.5	29
43	Direct Formation of C=C Double-Bonded Structural Motifs by On-Surface Dehalogenative Homocoupling of <i>gem</i> -Dibromomethyl Molecules. <i>ACS Nano</i> , 2018, 12, 7959-7966.	7.3	24
44	Substrate-Modulated Synthesis of Metal-Organic Hybrids by Tunable Multiple Aryl-Metal Bonds. <i>Journal of the American Chemical Society</i> , 2022, 144, 8214-8222.	6.6	24
45	Visualization and thermodynamic encoding of single-molecule partition function projections. <i>Nature Communications</i> , 2015, 6, 6210.	5.8	23
46	Thermodynamics of an Electrocyclic Ring-Closure Reaction on Au(111). <i>Journal of Physical Chemistry C</i> , 2016, 120, 21716-21721.	1.5	23
47	Long-Range Orientational Self-Assembly, Spatially Controlled Deprotonation, and Off-Centered Metalation of an Expanded Porphyrin. <i>Journal of the American Chemical Society</i> , 2017, 139, 14129-14136.	6.6	23
48	Efficient Lanthanide Catalyzed Debromination and Oligomeric Length-Controlled Ullmann Coupling of Aryl Halides. <i>Journal of Physical Chemistry C</i> , 2017, 121, 8033-8041.	1.5	22
49	Structure and stability of weakly chemisorbed ethene adsorbed on low-index Cu surfaces: performance of density functionals with van der Waals interactions. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 424217.	0.7	19
50	Terminal Alkyne Coupling on a Corrugated Noble Metal Surface: From Controlled Precursor Alignment to Selective Reactions. <i>Chemistry - A European Journal</i> , 2017, 23, 15588-15593.	1.7	19
51	Configuring Electronic States in an Atomically Precise Array of Quantum Boxes. <i>Small</i> , 2016, 12, 3757-3763.	5.2	16
52	On-Surface Synthesis of Ethynylene-Bridged Anthracene Polymers. <i>Angewandte Chemie</i> , 2019, 131, 6631-6635.	1.6	16
53	Evolution of adsorption heights in the on-surface synthesis and decoupling of covalent organic networks on Ag(111) by normal-incidence X-ray standing wave. <i>Nanoscale Horizons</i> , 2021, 7, 51-62.	4.1	15
54	The influence of <i>ortho</i> -methyl substitution in organometallic self-assembly—a comparative study on Cu(111) vs. Ag(111). <i>Chemical Communications</i> , 2018, 54, 9745-9748.	2.2	14

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55	Intermolecular Hybridization Creating Nanopore Orbital in a Supramolecular Hydrocarbon Sheet. <i>Nano Letters</i> , 2016, 16, 4274-4281.	4.5	13
56	Controlled-Atmosphere Flame Fusion Single-Crystal Growth of Non-Noble fcc, hcp, and bcc Metals Using Copper, Cobalt, and Iron. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 13246-13252.	7.2	13
57	Controlled-Atmosphere Flame Fusion Growth of Nickel Poly-oriented Spherical Single Crystals—Unraveling Decades of Impossibility. <i>Electrocatalysis</i> , 2020, 11, 1-13.	1.5	12
58	Adsorption and Organization of the Organic Radical 3-Carboxyproxyl on a Cu(110) Surface: A Combined STM, RAIRS, and DFT Study. <i>Journal of Physical Chemistry C</i> , 2009, 113, 13223-13230.	1.5	11
59	Termination-Accelerated Electrochemical Nitrogen Fixation on Single-Atom Catalysts Supported by MXenes. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2800-2807.	2.1	11
60	C-H activation of light alkanes on MXenes predicted by hydrogen affinity. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18622-18630.	1.3	10
61	Ho-Mediated Alkyne Reactions at Low Temperatures on Ag(111). <i>Chemistry - A European Journal</i> , 2018, 24, 16126-16135.	1.7	9
62	Abiotic Formation of an Amide Bond via Surface-Supported Direct Carboxyl-Amine Coupling. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	9
63	Melting of Hydrogen Bonds in Uracil Derivatives Probed by Infrared Spectroscopy and ab Initio Molecular Dynamics. <i>Journal of Physical Chemistry B</i> , 2012, 116, 4626-4633.	1.2	8
64	Postsynthetische Entkopplung oberflächensynthetisierter kovalenter Nanostrukturen von Ag(111). <i>Angewandte Chemie</i> , 2016, 128, 7780-7784.	1.6	8
65	Surface-Assisted Synthesis of N-Containing Conjugated Polymers. <i>Advanced Science</i> , 2022, 9, .	5.6	7
66	Steering Self-Assembly of Three-Dimensional Iptycenes on Au(111) by Tuning Molecule-Surface Interactions. <i>Angewandte Chemie - International Edition</i> , 2022, , .	7.2	6
67	Phase Transitions in Confinements: Controlling Solid to Fluid Transitions of Xenon Atoms in an On-Surface Network. <i>Small</i> , 2019, 15, e1803169.	5.2	5
68	Kinetic and Thermodynamic Considerations in On-Surface Synthesis. <i>Advances in Atom and Single Molecule Machines</i> , 2018, , 19-34.	0.0	5
69	Structure-activity correlation of Ti ₂ CT ₂ MXenes for C-H activation. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 235201.	0.7	5
70	Watching nanostructure growth: kinetically controlled diffusion and condensation of Xe in a surface metal organic network. <i>Nanoscale</i> , 2019, 11, 4895-4903.	2.8	4
71	Quantum Tunneling Mediated Interfacial Synthesis of a Benzofuran Derivative. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11285-11290.	7.2	3
72	Controlled-Atmosphere Flame Fusion Single-Crystal Growth of Non-Noble fcc, hcp, and bcc Metals Using Copper, Cobalt, and Iron. <i>Angewandte Chemie</i> , 2020, 132, 13348-13354.	1.6	1

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73	Quantum Tunneling Mediated Interfacial Synthesis of a Benzofuran Derivative. <i>Angewandte Chemie</i> , 2019, 131, 11407-11412.	1.6	0
74	InnenrÄ¼cktitelbild: Onâ€Surface Synthesis of Ethynyleneâ€Bridged Anthracene Polymers (<i>Angew. Chem.</i>) Tj ETQq0,0 0 rgBTj /Overlock	1.6	0
75	Formation Mechanisms of Covalent Nanostructures from Density Functional Theory. <i>Advances in Atom and Single Molecule Machines</i> , 2016, , 269-287.	0.0	0
76	Abiotic Formation of Amide Bond via Surfaceâ€Supported Direct Carboxylâ€Amine Coupling. <i>Angewandte Chemie</i> , 0, , .	1.6	0
77	Steering Selfâ€Assembly of Threeâ€Dimensional Iptycenes on Au(111) by Tuning Moleculeâ€Surface Interactions. <i>Angewandte Chemie</i> , 0, , .	1.6	0