Carlo A Pignedoli

List of Publications by Year
in descending order

79 papers	7,996 citations	87723 38 h-index	64668 79 g-index
85 all docs	85 docs citations	85 times ranked	6391 citing authors

#	Article	IF	Citations
1	On-surface synthesis of graphene nanoribbons with zigzag edge topology. Nature, 2016, 531, 489-492.	13.7	1,154
2	Graphene nanoribbon heterojunctions. Nature Nanotechnology, 2014, 9, 896-900.	15.6	528
3	Two-Dimensional Polymer Formation on Surfaces: Insight into the Roles of Precursor Mobility and Reactivity. Journal of the American Chemical Society, 2010, 132, 16669-16676.	6.6	449
4	Electronic Structure of Atomically Precise Graphene Nanoribbons. ACS Nano, 2012, 6, 6930-6935.	7.3	410
5	Engineering of robust topological quantum phases in graphene nanoribbons. Nature, 2018, 560, 209-213.	13.7	397
6	Surface-assisted cyclodehydrogenation provides a synthetic route towards easily processable and chemically tailored nanographenes. Nature Chemistry, 2011, 3, 61-67.	6.6	395
7	Superlubricity of graphene nanoribbons on gold surfaces. Science, 2016, 351, 957-961.	6.0	302
8	On-Surface Synthesis and Characterization of 9-Atom Wide Armchair Graphene Nanoribbons. ACS Nano, 2017, 11, 1380-1388.	7.3	270
9	Topological frustration induces unconventional magnetism in a nanographene. Nature Nanotechnology, 2020, 15, 22-28.	15.6	227
10	Moleculesâ€“Oligomersâ€“Nanowiresâ€“Graphene Nanoribbons: A Bottom-Up Stepwise On-Surface Covalent Synthesis Preserving Long-Range Order. Journal of the American Chemical Society, 2015, 137, 1802-1808.	6.6	221
11	Termini of Bottom-Up Fabricated Graphene Nanoribbons. Journal of the American Chemical Society, 2013, 135, 2060-2063.	6.6	214
12	Giant edge state splitting at atomically precise graphene zigzag edges. Nature Communications, 2016, 7, 11507.	5.8	207
13	Materials Cloud, a platform for open computational science. Scientific Data, 2020, 7, 299.	2.4	189
14	Intraribbon Heterojunction Formation in Ultranarrow Graphene Nanoribbons. ACS Nano, 2012, 6, 2020-2025.	7.3	169
15	Synthesis and Characterization of Ï€-Extended Triangulene. Journal of the American Chemical Society, 2019, 141, 10621-10625.	6.6	165
16	Exciton-dominated optical response of ultra-narrow graphene nanoribbons. Nature Communications, 2014, 5, 4253.	5.8	155
17	Tailoring Bond Topologies in Open-Shell Graphene Nanostructures. ACS Nano, 2018, 12, 11917-11927.	7.3	118
18	Observation of fractional edge excitations in nanographene spin chains. Nature, 2021, 598, 287-292.	13.7	115

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19	On-surface light-induced generation of higher acenes and elucidation of their open-shell character. Nature Communications, 2019, 10, 861.	5.8	114
20	Open-Shell Nonbenzenoid Nanographenes Containing Two Pairs of Pentagonal and Heptagonal Rings. Journal of the American Chemical Society, 2019, 141, 12011-12020.	6.6	112
21	Bottom-Up Synthesis of Heteroatom-Doped Chiral Graphene Nanoribbons. Journal of the American Chemical Society, 2018, 140, 9104-9107.	6.6	110
22	Toward GW Calculations on Thousands of Atoms. Journal of Physical Chemistry Letters, 2018, 9, 306-312.	2.1	104
23	Large magnetic exchange coupling in rhombus-shaped nanographenes with zigzag periphery. Nature Chemistry, 2021, 13, 581-586.	6.6	104
24	On-surface synthesis of a nitrogen-embedded buckybowl with inverse Stoneâ€“Throwerâ€“Wales topology. Nature Communications, 2018, 9, 1714.	5.8	98
25	Collective Allâ€Carbon Magnetism in Triangulene Dimers**. Angewandte Chemie - International Edition, 2020, 59, 12041-12047.	7.2	96
26	Adsorption of Small Hydrocarbons on the Three-Fold PdGa Surfaces: The Road to Selective Hydrogenation. Journal of the American Chemical Society, 2014, 136, 11792-11798.	6.6	90
27	Electronic band dispersion of graphene nanoribbons via Fourier-transformed scanning tunneling spectroscopy. Physical Review B, 2015, 91, .	1.1	85
28	On-Surface Synthesis of Heptacene Organometallic Complexes. Journal of the American Chemical Society, 2017, 139, 11658-11661.	6.6	83
29	On-Surface Synthesis of Antiaromatic and Open-Shell Indeno[2,1-b]fluorene Polymers and Their Lateral Fusion into Porous Ribbons. Journal of the American Chemical Society, 2019, 141, 12346-12354.	6.6	71
30	On-surface synthesis and characterization of individual polyacetylene chains. Nature Chemistry, 2019, 11, 924-930.	6.6	67
31	Coupled Spin States in Armchair Graphene Nanoribbons with Asymmetric Zigzag Edge Extensions. Nano Letters, 2020, 20, 6429-6436.	4.5	64
32	Synthesis and characterization of [7]triangulene. Nanoscale, 2021, 13, 1624-1628.	2.8	62
33	On-Surface Synthesis of a Nonplanar Porous Nanographene. Journal of the American Chemical Society, 2019, 141, 7726-7730.	6.6	61
34	On-Surface Synthesis of Indenofluorene Polymers by Oxidative Five-Membered Ring Formation. Journal of the American Chemical Society, 2018, 140, 3532-3536.	6.6	60
35	On-Surface Synthesis of Non-Benzenoid Nanographenes by Oxidative Ring-Closure and Ring-Rearrangement Reactions. Journal of the American Chemical Society, 2020, 142, 13565-13572.	6.6	58
36	Isolated Pd Sites on the Intermetallic PdGa(111) and PdGa($ar 1$$ar 1$$ar 1$) Model Catalyst Surfaces. Angewandte Chemie - International Edition, 2012, 51, 9339-9343.	7.2	47

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37	Onâ€Surface Synthesis and Characterization of Triply Fused Porphyrinâ€“Graphene Nanoribbon Hybrids. Angewandte Chemie - International Edition, 2020, 59, 1334-1339.	7.2	47
38	Massive Dirac Fermion Behavior in a Low Bandgap Graphene Nanoribbon Near a Topological Phase Boundary. Advanced Materials, 2020, 32, e1906054.	11.1	44
39	Graphene Nanoribbons Derived from Zigzag Edge-Encased Poly(para-2,9-dibenzo[bc,kl]coronenylene) Polymer Chains. Journal of the American Chemical Society, 2019, 141, 2843-2846.	6.6	40
40	AiiDAlab â€“ an ecosystem for developing, executing, and sharing scientific workflows. Computational Materials Science, 2021, 188, 110165.	1.4	40
41	Negatively Curved Warped Nanographene Self-Assembled on Metal Surfaces. Journal of the American Chemical Society, 2019, 141, 13158-13164.	6.6	38
42	Large-Cavity Coronoids with Different Inner and Outer Edge Structures. Journal of the American Chemical Society, 2020, 142, 12046-12050.	6.6	38
43	Ensemble Effect Evidenced by CO Adsorption on the 3-Fold PdGa Surfaces. Journal of Physical Chemistry C, 2014, 118, 12260-12265.	1.5	34
44	On-surface polyarylene synthesis by cycloaromatization of isopropyl substituents. , 2022, 1, 289-296.		31
45	On-Surface Synthesis of Oligo(indenoindene). Journal of the American Chemical Society, 2020, 142, 12925-12929.	6.6	29
46	Lightwave-driven scanning tunnelling spectroscopy of atomically precise graphene nanoribbons. Nature Communications, 2021, 12, 6794.	5.8	29
47	On-surface synthesis of singly and doubly porphyrin-capped graphene nanoribbon segments. Chemical Science, 2021, 12, 247-252.	3.7	27
48	On-surface synthesis and characterization of nitrogen-substituted undecacenes. Nature Communications, 2022, 13, 511.	5.8	26
49	On-surface synthesis of polyazulene with 2,6-connectivity. Chemical Communications, 2019, 55, 13466-13469.	2.2	23
50	Onâ€Surface Synthesis of Cumuleneâ€Containing Polymers via Twoâ€Step Dehalogenative Homocoupling of Dibromomethyleneâ€Functionalized Tribenzoazulene. Angewandte Chemie - International Edition, 2020, 59, 13281-13287.	7.2	23
51	Collective Allâ€Carbon Magnetism in Triangulene Dimers**. Angewandte Chemie, 2020, 132, 12139-12145.	1.6	23
52	On-Surface Synthesis and Characterization of Super-nonazethrene. Journal of Physical Chemistry Letters, 2021, 12, 8314-8319.	2.1	22
53	On-surface synthesis of super-heptazethrene. Chemical Communications, 2020, 56, 7467-7470.	2.2	21
54	Graphene nanoribbons with mixed cove-cape-zigzag edge structure. Carbon, 2021, 175, 50-59.	5.4	20

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55	Water Formation for the Metalation of Porphyrin Molecules on Oxidized Cu(111). Chemistry - A European Journal, 2016, 22, 14672-14677.	1.7	18
56	Band Gap of Atomically Precise Graphene Nanoribbons as a Function of Ribbon Length and Termination. ChemPhysChem, 2019, 20, 2348-2353.	1.0	17
57	Growth Optimization and Device Integration of Narrowâ€Bandgap Graphene Nanoribbons. Small, 2022, 18, .	5.2	17
58	Phase constitution and interface structure of nano-sized Ag-Cu/AlN multilayers: Experiment and ab initio modeling. Applied Physics Letters, 2012, 101, .	1.5	16
59	Hidden Beneath the Surface: Origin of the Observed Enantioselective Adsorption on PdGa(111). Journal of the American Chemical Society, 2018, 140, 1401-1408.	6.6	16
60	Onâ€Surface Synthesis of Cumuleneâ€Containing Polymers via Twoâ€Step Dehalogenative Homocoupling of Dibromomethyleneâ€Functionalized Tribenzoazulene. Angewandte Chemie, 2020, 132, 13383-13389.	1.6	15
61	Overcoming Steric Hindrance in Arylâ€Aryl Homocoupling via Onâ€Surface Copolymerization. ChemPhysChem, 2019, 20, 2360-2366.	1.0	14
62	On-surface activation of benzylic C-H bonds for the synthesis of pentagon-fused graphene nanoribbons. Nano Research, 2021, 14, 4754-4759.	5.8	14
63	Onâ€surface synthesis of porous graphene nanoribbons containing nonplanar [14]annulene pores. Journal of Polymer Science, 2022, 60, 1912-1917.	2.0	14
64	A simple approach for describing metal-supported cyclohexaphenylene dehydrogenation. European Physical Journal B, 2010, 75, 65-70.	0.6	11
65	Role of negatively charged defects in the lattice contraction of Alâ€“Siâ€“N. Applied Physics Letters, 2010, 96, .	1.5	11
66	Onâ€Surface Synthesis and Characterization of Triply Fused Porphyrinâ€“Graphene Nanoribbon Hybrids. Angewandte Chemie, 2020, 132, 1350-1355.	1.6	11
67	Atomic-resolution differential phase contrast STEM on ferroelectric materials: A mean-field approach. Physical Review B, 2020, 101, .	1.1	11
68	Nearâ€Enantiopure Trimerization of 9â€Ethynylphenanthrene on a Chiral Metal Surface. Angewandte Chemie - International Edition, 2020, 59, 18179-18183.	7.2	9
69	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math>-orbital continuum model accounting for the tip shape in simulated scanning tunneling microscope images. Physical Review B, 2011, 84, .	1.1	8
70	Asymmetric azide-alkyne Huisgen cycloaddition on chiral metal surfaces. Communications Chemistry, 2021, 4, .	2.0	7
71	Metallic carbon nanotube quantum dots with broken symmetries as a platform for tunable terahertz detection. Applied Physics Reviews, 2021, 8, .	5.5	5
72	On-surface synthesis of Ï€-conjugated ladder-type polymers comprising nonbenzenoid moieties. RSC Advances, 2021, 11, 23437-23441.	1.7	5

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73	Reaction Pathway toward Seven-Atom-Wide Armchair Graphene Nanoribbon Formation and Identification of Intermediate Species on Au(111). Journal of Physical Chemistry C, 2020, 124, 16009-16018.	1.5	3
74	Mapping the Structure of Oxygen-Doped Wurtzite Aluminum Nitride Coatings from Ab Initio Random Structure Search and Experiments. ACS Applied Materials & Interfaces, 2021, 13, 5762-5771.	4.0	3
75	InnenrÃ¼cktitelbild: Onâ€Surface Synthesis and Characterization of Triply Fused Porphyrinâ€“Graphene Nanoribbon Hybrids (Angew. Chem. 3/2020). Angewandte Chemie, 2020, 132, 1371-1371.	1.6	2
76	Nearâ€Enantiopure Trimerization of 9â€Ethynylphenanthrene on a Chiral Metal Surface. Angewandte Chemie, 2020, 132, 18336-18340.	1.6	2
77	Electronic Structure of Atomically Precise Graphene Nanoribbons. , 2018, , 1-35.		1
78	Electronic Structure of Atomically Precise Graphene Nanoribbons. , 2019, , 1-35.		0
79	Electronic Structure of Atomically Precise Graphene Nanoribbons. , 2020, , 685-719.		0