Hakim Amara

List of Publications by Year
in descending order

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62 papers	2,458 citations	218381 26 h-index	197535 49 g-index
63 all docs	63 docs citations	63 times ranked	2868 citing authors

#	Article	IF	Citations
1	Effect of size on the surface energy of noble metal nanoparticles from analytical and numerical approaches. Physical Review B, 2022, 105, .	1.1	10
2	Simulation of thermodynamic properties of magnetic transition metals from an efficient tight-binding model: The case of cobalt and beyond. Physical Review B, 2022, 105, .	1.1	1
3	Colloidal synthesis of nanoparticles: from bimetallic to high entropy alloys. Nanoscale, 2022, 14, 9832-9841.	2.8	13
4	Size-dependent hydrogen trapping in palladium nanoparticles. Journal of Materials Chemistry A, 2021, 9, 10354-10363.	5.2	15
5	Quantitative In Situ Visualization of Thermal Effects on the Formation of Gold Nanocrystals in Solution. Advanced Materials, 2021, 33, e2102514.	11.1	15
6	Quantitative Study of Temperature Effects on The Nucleation and Growth of Gold Nanocrystals in Water. Microscopy and Microanalysis, 2021, 27, 29-30.	0.2	0
7	Morphology control of metallic nanoparticles supported on carbon substrates in catalytic conditions. Carbon, 2020, 159, 504-511.	5.4	9
8	Strain and electronic properties at the van der Waals interface of phosphorus/boron nitride heterobilayers. Physical Review B, 2020, 102, .	1.1	1
9	Selective shortening of gold nanorods: when surface functionalization dictates the reactivity of nanostructures. Nanoscale, 2020, 12, 22658-22667.	2.8	13
10	A deep learning approach for determining the chiral indices of carbon nanotubes from high-resolution transmission electron microscopy images. Carbon, 2020, 169, 465-474.	5.4	27
11	Revealing the Dynamics of Functional Nanomaterials in Their Formation and Application Media with Liquid and Gas-phase TEM. Microscopy and Microanalysis, 2020, 26, 196-198.	0.2	1
12	High density synthesis of topological point defects in graphene on 6Hâ€“SiC(0001Â¯). Carbon, 2020, 170, 174-181.	5.4	9
13	Quantitative insights into the growth mechanisms of nanopores in hexagonal boron nitride. Physical Review Materials, 2020, 4, .	0.9	8
14	Tuning bimetallic catalysts for a selective growth of SWCNTs. Nanoscale, 2019, 11, 4091-4100.	2.8	16
15	Revealing the Surface Energetics and Reactivity of Bimetallic Copper-Gold Catalyst Nanoparticles by In Situ Environmental TEM. Microscopy and Microanalysis, 2019, 25, 33-34.	0.2	1
16	Exciton interference in hexagonal boron nitride. Physical Review B, 2018, 97, .	1.1	23
17	Direct Measurement of the Surface Energy of Bimetallic Nanoparticles: Evidence of Vegardâ€™s Rulelike Dependence. Physical Review Letters, 2018, 120, 025901.	2.9	19
18	Growth modes and chiral selectivity of single-walled carbon nanotubes. Nanoscale, 2018, 10, 6744-6750.	2.8	67

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19	Direct and indirect excitons in boron nitride polymorphs: A story of atomic configuration and electronic correlation. Physical Review B, 2018, 98, .	1.1	63
20	Entropy-driven stability of chiral single-walled carbon nanotubes. Science, 2018, 362, 212-215.	6.0	75
21	Two-photon absorption in two-dimensional materials: The case of hexagonal boron nitride. Physical Review B, 2018, 98, .	1.1	22
22	Ni2C surface carbide to catalyze low-temperature graphene growth. Physical Review B, 2018, 97, .	1.1	2
23	Excitons in few-layer hexagonal boron nitride: Davydov splitting and surface localization. 2D Materials, 2018, 5, 045017.	2.0	63
24	Probing the role of carbon solubility in transition metal catalyzing single-walled carbon nanotubes growth. Carbon, 2017, 120, 226-232.	5.4	37
25	Modeling the Growth of Single-Wall Carbon Nanotubes. Topics in Current Chemistry, 2017, 375, 55.	3.0	26
26	Structural Properties of Double-Walled Carbon Nanotubes Driven by Mechanical Interlayer Coupling. ACS Nano, 2017, 11, 4840-4847.	7.3	21
27	Linking growth mode to lengths of single-walled carbon nanotubes. Carbon, 2017, 113, 231-236.	5.4	75
28	Magnetism as indirect tool for carbon content assessment in nickel nanoparticles. Journal of Applied Physics, 2017, 122, 213902.	1.1	2
29	Excitons in boron nitride single layer. Physical Review B, 2016, 94, .	1.1	68
30	Size Dependent Phase Diagrams of Nickel-Carbon Nanoparticles. Physical Review Letters, 2015, 115, 205502.	2.9	54
31	Charge transfer and electronic doping in nitrogen-doped graphene. Scientific Reports, 2015, 5, 14564.	1.6	79
32	Electronic Interaction between Nitrogen Atoms in Doped Graphene. ACS Nano, 2015, 9, 670-678.	7.3	69
33	Key roles of carbon solubility in single-walled carbon nanotube nucleation and growth. Nanoscale, 2015, 7, 20284-20289.	2.8	27
34	Interdependency of Subsurface Carbon Distribution and Grapheneâ€“Catalyst Interaction. Journal of the American Chemical Society, 2014, 136, 13698-13708.	6.6	95
35	Magnetism: the driving force of order in CoPt, a first-principles study. Journal of Physics Condensed Matter, 2013, 25, 056005.	0.7	26
36	Random vs realistic amorphous carbon models for high resolution microscopy and electron diffraction. Journal of Applied Physics, 2013, 114, .	1.1	18

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37	Atomistic modelling of CVD synthesis of carbon nanotubes and graphene. Nanoscale, 2013, 5, 6662.	2.8	88
38	Computational studies of catalyst-free single walled carbon nanotube growth. Journal of Chemical Physics, 2013, 139, 054308.	1.2	1
39	Role of defect healing on the chirality of single-wall carbon nanotubes. Physical Review B, 2012, 85, .	1.1	18
40	Carbon solubility in nickel nanoparticles: A grand canonical Monte Carlo study. Physica Status Solidi (B): Basic Research, 2012, 249, 2629-2634.	0.7	26
41	Computational studies of graphene growth mechanisms. Physical Review B, 2012, 85, .	1.1	20
42	Long-range interactions between substitutional nitrogen dopants in graphene: Electronic properties calculations. Physical Review B, 2012, 86, .	1.1	91
43	Importance of Carbon Solubility and Wetting Properties of Nickel Nanoparticles for Single Wall Nanotube Growth. Physical Review Letters, 2012, 109, 185501.	2.9	85
44	Evidence of Correlation between Catalyst Particles and the Single-Wall Carbon Nanotube Diameter: A First Step towards Chirality Control. Physical Review Letters, 2012, 108, 195503.	2.9	119
45	Imaging the symmetry breaking of molecular orbitals in single-wall carbon nanotubes. Physical Review B, 2010, 81, .	1.1	8
46	Nickel-Assisted Healing of Defective Graphene. ACS Nano, 2010, 4, 6114-6120.	7.3	79
47	Aluminum and vacancies in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>-iron: Dissolution, diffusion, and clustering. Physical Review B, 2010, 81, .	1.1	53
48	Density functional theory and tight binding-based dynamical studies of carbon metal systems of relevance to carbon nanotube growth. Nano Research, 2009, 2, 774-782.	5.8	7
49	Spin-Unrestricted Calculations of Bare-Edged Nanographenes Using DFT and Many-Body Perturbation Theory. Journal of Chemical Theory and Computation, 2009, 5, 1719-1722.	2.3	12
50	Computational Studies of Metalâ^'Carbon Nanotube Interfaces for Regrowth and Electronic Transport. Nano Letters, 2009, 9, 1117-1120.	4.5	31
51	Early Stages in the Nucleation Process of Carbon Nanotubes. ACS Nano, 2009, 3, 511-516.	7.3	75
52	Tight-binding potential for atomistic simulations of carbon interacting with transition metals: Application to the Ni-C system. Physical Review B, 2009, 79, .	1.1	109
53	Interaction of carbon clusters with Ni(100): Application to the nucleation of carbon nanotubes. Surface Science, 2008, 602, 77-83.	0.8	21
54	Understanding the Nucleation Mechanisms of Carbon Nanotubes in Catalytic Chemical Vapor Deposition. Physical Review Letters, 2008, 100, 056105.	2.9	141

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55	A Tight-Binding Grand Canonical Monte Carlo Study of the Catalytic Growth of Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2008, 8, 6099-6104.	0.9	8
56	INVESTIGATION OF THE POLARIZABILITY AND OF THE LOCAL ELECTRIC FIELD OF FULLERENES WITH VARIOUS SHAPES AND DEFECTS USING A MONOPOLE-DIPOLE INTERACTION MODEL. , 2007, , .		0
57	Catalytically Assisted Tip Growth Mechanism for Single-Wall Carbon Nanotubes. ACS Nano, 2007, 1, 202-207.	7.3	44
58	Scanning tunneling microscopy fingerprints of point defects in graphene: A theoretical prediction. Physical Review B, 2007, 76, .	1.1	164
59	Study of the polarizability of fullerenes with a monopoleâ€“dipole interaction model. Diamond and Related Materials, 2007, 16, 2145-2149.	1.8	19
60	Characterization of single-walled carbon nanotubes containing defects from their local vibrational densities of states. Carbon, 2007, 45, 349-356.	5.4	24
61	Formation of carbon nanostructures on nickel surfaces: A tight-binding grand canonical Monte Carlo study. Physical Review B, 2006, 73, .	1.1	73
62	Nucleation and Growth of Single-Walled Nanotubes: The Role of Metallic Catalysts. Journal of Nanoscience and Nanotechnology, 2004, 4, 346-359.	0.9	71