Abdelkader Kara

List of Publications by Year
in descending order

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85 papers	6,057 citations	147801 31 h-index	69250 77 g-index
85 all docs	85 docs citations	85 times ranked	5484 citing authors

#	Article	IF	Citations
1	Epitaxial growth of a silicene sheet. Applied Physics Letters, 2010, 97, .	3.3	1,233
2	Graphene-like silicon nanoribbons on Ag(110): A possible formation of silicene. Applied Physics Letters, 2010, 96, .	3.3	874
3	A review on silicene â€" New candidate for electronics. Surface Science Reports, 2012, 67, 1-18.	7.2	707
4	Evidence of graphene-like electronic signature in silicene nanoribbons. Applied Physics Letters, 2010, 96, .	3.3	555
5	Silicene, a promising new 2D material. Progress in Surface Science, 2015, 90, 46-83.	8.3	221
6	Physics and chemistry of silicene nano-ribbons. Applied Surface Science, 2009, 256, 524-529.	6.1	170
7	Trends in Adsorption Characteristics of Benzene on Transition Metal Surfaces: Role of Surface Chemistry and van der Waals Interactions. Journal of Physical Chemistry C, 2013, 117, 20572-20583.	3.1	147
8	Physics of Silicene Stripes. Journal of Superconductivity and Novel Magnetism, 2009, 22, 259-263.	1.8	142
9	Formation of one-dimensional self-assembled silicon nanoribbons on Au(110)-(2â€‰Ã—â€‰1). Applied Physics Letters, 2013, 102, .	3.3	116
10	Self-learning kinetic Monte Carlo method: Application to Cu(111). Physical Review B, 2005, 72, .	3.2	114
11	Epitaxial Synthesis of Blue Phosphorene. Small, 2018, 14, e1804066.	10.0	114
12	Stabilizing atomic Pt with trapped interstitial F in alloyed PtCo nanosheets for high-performance zinc-air batteries. Energy and Environmental Science, 2020, 13, 884-895.	30.8	99
13	Boosting alkaline hydrogen evolution: the dominating role of interior modification in surface electrocatalysis. Energy and Environmental Science, 2020, 13, 3110-3118.	30.8	87
14	Silicon nano-ribbons on Ag(110): a computational investigation. Journal of Physics Condensed Matter, 2010, 22, 045004.	1.8	65
15	Diffusion of small two-dimensional Cu islands on Cu(111) studied with a kinetic Monte Carlo method. Physical Review B, 2006, 73, .	3.2	58
16	Effect of van der Waals Interactions on the Adsorption of Olympicene Radical on Cu(111): Characteristics of Weak Physisorption versus Strong Chemisorption. Journal of Physical Chemistry C, 2013, 117, 2893-2902.	3.1	52
17	Cyanoâ€Functionalized Triarylamines on Au(111): Competing Intermolecular versus Molecule/Substrate Interactions. Advanced Materials Interfaces, 2014, 1, 1300025.	3.7	52
18	Multimorphism in molecular monolayers: Pentacene on Cu(110). Physical Review B, 2009, 79, .	3.2	51

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19	Comparative study of CO adsorption on flat, stepped, and kinked Au surfaces using density functional theory. Physical Review B, 2009, 79, .	3.2	50
20	Electronic Structure of an Organic/Metal Interface: Pentacene/Cu(110). Journal of Physical Chemistry C, 2012, 116, 23465-23471.	3.1	49
21	Atomic and electronic structures of the (<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 672 Td (xmlns:mml="http://www. of silicene sheet on Ag(1 1 1). Applied Surface Science, 2014, 303, 61-66.	6.1	49
22	Compelling experimental evidence of a Dirac cone in the electronic structure of a 2D Silicon layer. Scientific Reports, 2017, 7, 44400.	3.3	45
23	Calculated pre-exponential factors and energetics for adatom hopping on terraces and steps of Cu(100) and Cu(110). Surface Science, 2006, 600, 484-492.	1.9	43
24	Off-lattice self-learning kinetic Monte Carlo: application to 2D cluster diffusion on the fcc(111) surface. Journal of Physics Condensed Matter, 2009, 21, 084213.	1.8	37
25	Insight into the Effect of Long Range Interactions for the Adsorption of Benzene on Transition Metal (110) Surfaces. Journal of Physical Chemistry C, 2015, 119, 1886-1897.	3.1	37
26	Vibrational dynamics and thermodynamics of Ni(977). Journal of Chemical Physics, 1997, 106, 2031-2037.	3.0	36
27	Ab initiocalculations of multilayer relaxations of stepped Cu surfaces. Physical Review B, 2002, 65, .	3.2	36
28	An easy route to synthesize high-quality black phosphorus from amorphous red phosphorus. Materials Letters, 2019, 236, 56-59.	2.6	36
29	Local thermodynamic properties of a stepped metal surface: Cu(711). Physical Review B, 1996, 53, 15489-15492.	3.2	35
30	Adsorption of silicon on Au(110): An ordered two dimensional surface alloy. Applied Physics Letters, 2012, 101, .	3.3	34
31	On sulfur core level binding energies in thiol self-assembly and alternative adsorption sites: An experimental and theoretical study. Journal of Chemical Physics, 2015, 143, 104702.	3.0	34
32	Tailoring Electronic Structure Through Alloying: The AgnCu34â€“n(n= 0â€“34) Nanoparticle Family. Journal of Physical Chemistry C, 2012, 116, 281-291.	3.1	31
33	Size-dependent evolution of the atomic vibrational density of states and thermodynamic properties of isolated Fe nanoparticles. Physical Review B, 2012, 86, .	3.2	30
34	Cyanoâ€Functionalized Triarylamines on Coinage Metal Surfaces: Interplay of Intermolecular and Moleculeâ€“Substrate Interactions. Chemistry - A European Journal, 2016, 22, 581-589.	3.3	30
35	Energetics ofCOon stepped and kinked Cu surfaces: A comparative theoretical study. Physical Review B, 2006, 74, .	3.2	29
36	Thiophene Derivatives on Gold and Molecular Dissociation Processes. Journal of Physical Chemistry C, 2017, 121, 27923-27935.	3.1	29

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37	Adsorption and diffusion on a phosphorene monolayer: a DFT study. Journal of Solid State Electrochemistry, 2018, 22, 11-16.	2.5	28
38	Structural relaxations, vibrational dynamics and thermodynamics of vicinal surfaces. Journal of Physics Condensed Matter, 2003, 15, S3197-S3226.	1.8	27
39	Adsorption of thiophene on transition metal surfaces with the inclusion of van der Waals effects. Surface Science, 2018, 669, 121-129.	1.9	25
40	Origin of quasi-constant pre-exponential factors for adatom diffusion on Cu and Ag surfaces. Physical Review B, 2007, 76, .	3.2	24
41	Flat epitaxial quasi-1D phosphorene chains. Nature Communications, 2021, 12, 5160.	12.8	22
42	Parallel kinetic Monte Carlo simulations of Ag(111) island coarsening using a large database. Journal of Physics Condensed Matter, 2009, 21, 084214.	1.8	21
43	Efficient production of few-layer black phosphorus by liquid-phase exfoliation. Royal Society Open Science, 2020, 7, 201210.	2.4	21
44	Silicene Nanoribbons on an Insulating Thin Film. Advanced Functional Materials, 2021, 31, 2007013.	14.9	21
45	Comparative study of anharmonicity: Ni(111), Cu(111), and Ag(111). Physical Review B, 2002, 66, .	3.2	20
46	Electronic structure of thec(2Ã—2)O/Cu(001)system. Physical Review B, 2002, 66, .	3.2	20
47	Role of Long-Range Interactions for the Structure and Energetics of Olympicene Radical Adsorbed on Au(111) and Pt(111) Surfaces. Journal of Physical Chemistry C, 2015, 119, 25408-25419.	3.1	19
48	A van der Waals Inclusive Density Functional Theory Study of the Nature of Bonding for Thiophene Adsorption on Ni(100) and Cu(100) Surfaces. Journal of Physical Chemistry C, 2017, 121, 6090-6103.	3.1	19
49	Off-lattice pattern recognition scheme for kinetic Monte Carlo simulations. Journal of Computational Physics, 2012, 231, 3548-3560.	3.8	17
50	Long jumps contribution to the adatom diffusion process near the step edge: The case of Ag/Cu(110). Physica Status Solidi (B): Basic Research, 2014, 251, 838-844.	1.5	16
51	On the role of long range interactions for the adsorption of sexithiophene on Ag(110) surface. Journal of Chemical Physics, 2014, 140, 144703.	3.0	16
52	Self-diffusion of small Ni clusters on the Ni(111) surface: A self-learning kinetic Monte Carlo study. Physical Review B, 2013, 88, .	3.2	14
53	Dynamics of Cu monomer, dimer and trimer on Ag (110) (1â€‰Ã—â€‰2) missingâ€row reconstructed surface. Surface and Interface Analysis, 2013, 45, 1702-1708.	1.8	14
54	The crossover from collective motion to periphery diffusion for two-dimensional adatom-islands on Cu(111). Journal of Physics Condensed Matter, 2011, 23, 462201.	1.8	12

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55	A coverage dependent study of the adsorption of pyridine on the (111) coinage metal surfaces. Surface Science, 2020, 693, 121525.	1.9	12
56	Exfoliation and re-aggregation mechanisms of black phosphorus: A molecular dynamics study. Applied Surface Science, 2020, 507, 144826.	6.1	12
57	Phosphorus Pentamers: Floating Nanoflowers form a 2D Network. Advanced Functional Materials, 2020, 30, 2004531.	14.9	12
58	Coverage-dependent adsorption of small gas molecules on black phosphorene: a DFT study. Surface Science, 2021, 710, 121860.	1.9	11
59	TriphenyleneâEDerived Electron Acceptors and Donors on Ag(111): Formation of Intermolecular ChargeâETransfer Complexes with Common Unoccupied Molecular States. Small, 2019, 15, e1901741.	10.0	10
60	Atomic Structure of Submonolayer NaCl Grown on Ag(110) Surface. Journal of Physical Chemistry C, 2017, 121, 20272-20278.	3.1	9
61	Competing adsorption mechanisms of pyridine on Cu, Ag, Au, and Pt(110) surfaces. Journal of Chemical Physics, 2018, 149, 214703.	3.0	9
62	Strain-engineered p-type to n-type transition in mono-, bi-, and tri-layer black phosphorene. Journal of Applied Physics, 2020, 127, 225703.	2.5	9
63	Diffusion processes of trimers on missing row surfaces: $$mathrm{Cu }_{3}/mathrm{Ag }(110)$$ Cu 3 / Ag (110) and $$mathrm{Ag }_{3}/mathrm{Cu }(110)$$ Ag 3 / Cu (110). Optical and Quantum Electronics, 2014, 46, 15-22.	3.3	8
64	Silicon nanoparticles synthesis from calcium disilicide by redox assisted chemical exfoliation. Materials Today Communications, 2018, 16, 281-284.	1.9	6
65	Exploring thiophene desulfurization: The adsorption of thiophene on transition metal surfaces. Surface Science, 2019, 686, 30-38.	1.9	6
66	Fe-Phthalocyanine on Cu(111) and Ag(111): A DFT+vdWs investigation. Surface Science, 2022, 716, 121961.	1.9	6
67	Stability, Electronic Structure and Thermodynamic Properties of Nanostructured MgH2 Thin Films. Energies, 2021, 14, 7737.	3.1	6
68	Extended pattern recognition scheme for self-learning kinetic Monte Carlo simulations. Journal of Physics Condensed Matter, 2012, 24, 354004.	1.8	5
69	Kinetically driven shape changes in early stages of two-dimensional island coarsening: Ag/Ag(111). Physical Review B, 2013, 88, .	3.2	5
70	Growth of Dihydrotetraazapentacene Layers on Cu(110). Journal of Physical Chemistry C, 2018, 122, 10828-10834.	3.1	5
71	Using DFT Models of Thiophene Adsorption at Transition Metal Interfaces to Interpret Periodic Trends in Thiophene Hydrodesulfurization on Transition Metal Sulfides. Catalysis Letters, 2019, 149, 2953-2960.	2.6	5
72	Island-size selectivity during 2D Ag island coarsening on Ag(111). Journal of Physics Condensed Matter, 2011, 23, 262001.	1.8	4

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73	In-Depth Atomic Structure of the Pentacene/Cu(110) Interface in the Monolayer Coverage Regime: Theory and X-ray Diffraction Results. Journal of Physical Chemistry C, 2014, 118, 27815-27822.	3.1	4
74	First steps of blue phosphorene growth on Au(1 1 1). Materials Today: Proceedings, 2021, 39, 1153-1156.	1.8	4
75	Tip-induced oxidation of silicene nano-ribbons. Nanoscale Advances, 2020, 2, 2309-2314.	4.6	4
76	Blue phosphorene reactivity on the Au(111) surface. Nanotechnology, 2020, 31, 495602.	2.6	4
77	Electron beam analysis induces Cl vacancy defects in a NaCl thin film. Nanotechnology, 2021, 33, .	2.6	4
78	Blue Phosphorene: Epitaxial Synthesis of Blue Phosphorene (Small 51/2018). Small, 2018, 14, 1870249.	10.0	3
79	DFT Investigation of Ammonia Formation via a Langmuirâ€“Hinshelwood Mechanism on Mo-Terminated Î´-MoN(0001). ACS Omega, 2022, 7, 4277-4285.	3.5	3
80	Diffusion of Ag dimer on Cu (110) by dissociation-reassociation and concerted jump processes. , 2012, , .		2
81	Computational study of the adsorption of bimetallic clusters on alumina substrate. Surface Science, 2020, 700, 121682.	1.9	2
82	Chemisorption characteristics of pyridine on Rh, Pd, Pt and Ni(1â€‰1â€‰1). Electronic Structure, 2020, 2, 015001.	2.8	2
83	Cluster Diffusion and Coalescence on Metal Surfaces: applications of a Self-learning Kinetic Monte-Carlo method. Materials Research Society Symposia Proceedings, 2004, 859, 1.	0.1	1
84	Self-Assembly: Cyano-Functionalized Triarylamines on Au(111): Competing Intermolecular versus Molecule/Substrate Interactions (Adv. Mater. Interfaces 1/2014). Advanced Materials Interfaces, 2014, 1, n/a-n/a.	3.7	1
85	Graphene-like Silicon Nano-ribbons on the Silver (110) Surface. , 2008, , .		0