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	Fe-Phthalocyanine on Cu(111) and Ag(111): A DFT+vdWs investigation. Surface Science, 2022, 716, 121961.	1.9	6
2	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
3	First steps of blue phosphorene growth on Au(1 1 1). Materials Today: Proceedings, 2021, 39, 1153-1156.	1.8	4
4	Silicene Nanoribbons on an Insulating Thin Film. Advanced Functional Materials, 2021, 31, 2007013.	14.9	21
5	Coverage-dependent adsorption of small gas molecules on black phosphorene: a DFT study. Surface Science, 2021, 710, 121860.	1.9	11
6	Flat epitaxial quasi-1D phosphorene chains. Nature Communications, 2021, 12, 5160.	12.8	22
7	Electron beam analysis induces Cl vacancy defects in a NaCl thin film. Nanotechnology, 2021, 33, .	2.6	4
8	Stability, Electronic Structure and Thermodynamic Properties of Nanostructured MgH2 Thin Films. Energies, 2021, 14, 7737.	3.1	6
9	A coverage dependent study of the adsorption of pyridine on the (111) coinage metal surfaces. Surface Science, 2020, 693, 121525.	1.9	12
10	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
11	Exfoliation and re-aggregation mechanisms of black phosphorus: A molecular dynamics study. Applied Surface Science, 2020, 507, 144826.	6.1	12
12	Efficient production of few-layer black phosphorus by liquid-phase exfoliation. Royal Society Open Science, 2020, 7, 201210.	2.4	21
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	Phosphorus Pentamers: Floating Nanoflowers form a 2D Network. Advanced Functional Materials, 2020, 30, 2004531.	14.9	12
15	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
16	Computational study of the adsorption of bimetallic clusters on alumina substrate. Surface Science, 2020, 700, 121682.	1.9	2
17	Chemisorption characteristics of pyridine on Rh, Pd, Pt and Ni(1â€‰1â€‰1). Electronic Structure, 2020, 2, 015001.	2.8	2
18	Tip-induced oxidation of silicene nano-ribbons. Nanoscale Advances, 2020, 2, 2309-2314.	4.6	4

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19	Blue phosphorene reactivity on the Au(111) surface. Nanotechnology, 2020, 31, 495602.	2.6	4
20	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
21	Triphenyleneâ€Derived Electron Acceptors and Donors on Ag(111): Formation of Intermolecular Chargeâ€Transfer Complexes with Common Unoccupied Molecular States. Small, 2019, 15, e1901741.	10.0	10
22	Exploring thiophene desulfurization: The adsorption of thiophene on transition metal surfaces. Surface Science, 2019, 686, 30-38.	1.9	6
23	An easy route to synthesize high-quality black phosphorus from amorphous red phosphorus. Materials Letters, 2019, 236, 56-59.	2.6	36
24	Growth of Dihydrotetraazapentacene Layers on Cu(110). Journal of Physical Chemistry C, 2018, 122, 10828-10834.	3.1	5
25	Adsorption of thiophene on transition metal surfaces with the inclusion of van der Waals effects. Surface Science, 2018, 669, 121-129.	1.9	25
26	Adsorption and diffusion on a phosphorene monolayer: a DFT study. Journal of Solid State Electrochemistry, 2018, 22, 11-16.	2.5	28
27	Blue Phosphorene: Epitaxial Synthesis of Blue Phosphorene (Small 51/2018). Small, 2018, 14, 1870249.	10.0	3
28	Competing adsorption mechanisms of pyridine on Cu, Ag, Au, and Pt(110) surfaces. Journal of Chemical Physics, 2018, 149, 214703.	3.0	9
29	Epitaxial Synthesis of Blue Phosphorene. Small, 2018, 14, e1804066.	10.0	114
30	Silicon nanoparticles synthesis from calcium disilicide by redox assisted chemical exfoliation. Materials Today Communications, 2018, 16, 281-284.	1.9	6
31	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
32	Compelling experimental evidence of a Dirac cone in the electronic structure of a 2D Silicon layer. Scientific Reports, 2017, 7, 44400.	3.3	45
33	Atomic Structure of Submonolayer NaCl Grown on Ag(110) Surface. Journal of Physical Chemistry C, 2017, 121, 20272-20278.	3.1	9
34	Thiophene Derivatives on Gold and Molecular Dissociation Processes. Journal of Physical Chemistry C, 2017, 121, 27923-27935.	3.1	29
35	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
36	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

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37	Silicene, a promising new 2D material. Progress in Surface Science, 2015, 90, 46-83.	8.3	221
38	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
39	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
40	Cyanoâ€Functionalized Triarylamines on Au(111): Competing Intermolecular versus Molecule/Substrate Interactions. Advanced Materials Interfaces, 2014, 1, 1300025.	3.7	52
41	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
42	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
43	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
44	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
45	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
46	Atomic and electronic structures of the (<mml:math) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 392 Td (xmlns:mml="http://www.w3.org/199 of silicene sheet on Ag(1 1 1). Applied Surface Science, 2014, 303, 61-66.	6.1	49
47	Kinetically driven shape changes in early stages of two-dimensional island coarsening: Ag/Ag(111). Physical Review B, 2013, 88, .	3.2	5
48	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
49	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
50	Formation of one-dimensional self-assembled silicon nanoribbons on Au(110)-(2â€‰Ã—â€‰1). Applied Physics Letters, 2013, 102, .	3.3	116
51	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
52	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
53	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
54	Diffusion of Ag dimer on Cu (110) by dissociation-reassociation and concerted jump processes. , 2012, , .		2

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55	Electronic Structure of an Organic/Metal Interface: Pentacene/Cu(110). Journal of Physical Chemistry C, 2012, 116, 23465-23471.	3.1	49
56	Extended pattern recognition scheme for self-learning kinetic Monte Carlo simulations. Journal of Physics Condensed Matter, 2012, 24, 354004.	1.8	5
57	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
58	Adsorption of silicon on Au(110): An ordered two dimensional surface alloy. Applied Physics Letters, 2012, 101, .	3.3	34
59	A review on silicene â€" New candidate for electronics. Surface Science Reports, 2012, 67, 1-18.	7.2	707
60	Off-lattice pattern recognition scheme for kinetic Monte Carlo simulations. Journal of Computational Physics, 2012, 231, 3548-3560.	3.8	17
61	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
62	Island-size selectivity during 2D Ag island coarsening on Ag(111). Journal of Physics Condensed Matter, 2011, 23, 262001.	1.8	4
63	Epitaxial growth of a silicene sheet. Applied Physics Letters, 2010, 97, .	3.3	1,233
64	Graphene-like silicon nanoribbons on Ag(110): A possible formation of silicene. Applied Physics Letters, 2010, 96, .	3.3	874
65	Evidence of graphene-like electronic signature in silicene nanoribbons. Applied Physics Letters, 2010, 96, .	3.3	555
66	Silicon nano-ribbons on Ag(110): a computational investigation. Journal of Physics Condensed Matter, 2010, 22, 045004.	1.8	65
67	Comparative study of CO adsorption on flat, stepped, and kinked Au surfaces using density functional theory. Physical Review B, 2009, 79, .	3.2	50
68	Multimorphism in molecular monolayers: Pentacene on Cu(110). Physical Review B, 2009, 79, .	3.2	51
69	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
70	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
71	Physics of Silicene Stripes. Journal of Superconductivity and Novel Magnetism, 2009, 22, 259-263.	1.8	142
72	Physics and chemistry of silicene nano-ribbons. Applied Surface Science, 2009, 256, 524-529.	6.1	170

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73	Graphene-like Silicon Nano-ribbons on the Silver (110) Surface. , 2008, , .		0
74	Origin of quasi-constant pre-exponential factors for adatom diffusion on Cu and Ag surfaces. Physical Review B, 2007, 76, .	3.2	24
75	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
76	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
77	Energetics ofCOon stepped and kinked Cu surfaces: A comparative theoretical study. Physical Review B, 2006, 74, .	3.2	29
78	Self-learning kinetic Monte Carlo method: Application to Cu(111). Physical Review B, 2005, 72, .	3.2	114
79	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
80	Structural relaxations, vibrational dynamics and thermodynamics of vicinal surfaces. Journal of Physics Condensed Matter, 2003, 15, S3197-S3226.	1.8	27
81	Comparative study of anharmonicity: Ni(111), Cu(111), and Ag(111). Physical Review B, 2002, 66, .	3.2	20
82	Electronic structure of thec(2Ã—2)O/Cu(001)system. Physical Review B, 2002, 66, .	3.2	20
83	Ab initiocalculations of multilayer relaxations of stepped Cu surfaces. Physical Review B, 2002, 65, .	3.2	36
84	Vibrational dynamics and thermodynamics of Ni(977). Journal of Chemical Physics, 1997, 106, 2031-2037.	3.0	36
85	Local thermodynamic properties of a stepped metal surface: Cu(711). Physical Review B, 1996, 53, 15489-15492.	3.2	35