

# Clemens Barth

## List of Publications by Year in descending order

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57  
papers

2,375  
citations

201575

27  
h-index

197736

49  
g-index

58  
all docs

58  
docs citations

58  
times ranked

2014  
citing authors

#	ARTICLE	IF	CITATIONS
1	Imaging the atomic arrangements on the high-temperature reconstructed $\hat{1}\pm\text{-Al}_2\text{O}_3(0001)$ surface. <i>Nature</i> , 2001, 414, 54-57.	13.7	278
2	Recent Trends in Surface Characterization and Chemistry with High-Resolution Scanning Force Methods. <i>Advanced Materials</i> , 2011, 23, 477-501.	11.1	214
3	Unambiguous Interpretation of Atomically Resolved Force Microscopy Images of an Insulator. <i>Physical Review Letters</i> , 2001, 86, 2373-2376.	2.9	156
4	Atomic Resolution Imaging of the (001) Surface of UHV Cleaved MgO by Dynamic Scanning Force Microscopy. <i>Physical Review Letters</i> , 2003, 91, 196102.	2.9	150
5	Atomic Structures of Silicene Layers Grown on Ag(111): Scanning Tunneling Microscopy and Noncontact Atomic Force Microscopy Observations. <i>Scientific Reports</i> , 2013, 3, 2399.	1.6	137
6	Scanning Force Imaging of Atomic Size Defects on the $\text{CaF}_2(111)$ Surface. <i>Physical Review Letters</i> , 1999, 83, 768-771.	2.9	96
7	Contrast formation in atomic resolution scanning force microscopy on $\text{CaF}_2(111)$ : experiment and theory. <i>Journal of Physics Condensed Matter</i> , 2001, 13, 2061-2079.	0.7	93
8	Role of tip structure and surface relaxation in atomic resolution dynamic force microscopy: $\text{CaF}_2(111)$ as a reference surface. <i>Physical Review B</i> , 2002, 66, .	1.1	79
9	Topography and work function measurements of thin MgO(001) films on Ag(001) by nc-AFM and KPFM. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 3203.	1.3	75
10	Kelvin probe force microscopy on surfaces of UHV cleaved ionic crystals. <i>Nanotechnology</i> , 2006, 17, S155-S161.	1.3	64
11	Surface Double Layer on (001) Surfaces of Alkali Halide Crystals: A Scanning Force Microscopy Study. <i>Physical Review Letters</i> , 2007, 98, 136804.	2.9	62
12	Surface Structure of an Ultrathin Alumina Film on $\text{Ni}_3\text{Al}(111)$ : A Dynamic Scanning Force Microscopy Study. <i>Physical Review Letters</i> , 2006, 97, 126106.	2.9	60
13	Expeditive Syntheses of Functionalized Pentahelicenes and NC-AFM on Ag(001). <i>Organic Letters</i> , 2009, 11, 3846-3849.	2.4	49
14	A perfectly stoichiometric and flat $\text{CeO}_2(111)$ surface on a bulk-like ceria film. <i>Scientific Reports</i> , 2016, 6, 21165.	1.6	47
15	Surface preparation of hard ionic crystals by ultrahigh vacuum cleavage. <i>Review of Scientific Instruments</i> , 2005, 76, 083907.	0.6	45
16	AFM tip characterization by Kelvin probe force microscopy. <i>New Journal of Physics</i> , 2010, 12, 093024.	1.2	45
17	Kelvin Probe Force Microscopy on MgO(001) Surfaces and Supported Pd Nanoclusters. <i>Journal of Physical Chemistry C</i> , 2009, 113, 247-253.	1.5	42
18	Surface Stabilizes Ceria in Unexpected Stoichiometry. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6844-6851.	1.5	40

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19	Gold nanoclusters on alkali halide surfaces: Charging and tunneling. Applied Physics Letters, 2006, 89, 252119.	1.5	37
20	High-resolution imaging of gold clusters on KBr(001) surfaces investigated by dynamic scanning force microscopy. Nanotechnology, 2004, 15, 1264-1272.	1.3	36
21	High-resolution scanning force microscopy of gold nanoclusters on the KBr (001) surface. Physical Review B, 2006, 73, .	1.1	36
22	Imaging nanoclusters in the constant height mode of the dynamic SFM. Nanotechnology, 2006, 17, S128-S136.	1.3	33
23	Degradation of the CaF <sub>2</sub> (111) surface by air exposure. Surface Science, 1999, 439, 181-190.	0.8	32
24	Thin NaCl films on silver (001): island growth and work function. New Journal of Physics, 2012, 14, 103037.	1.2	32
25	Imaging the real shape of nanoclusters in scanning force microscopy. Journal of Applied Physics, 2008, 103, 054313.	1.1	31
26	Measuring Site-Specific Cluster-Surface Bond Formation. Journal of the American Chemical Society, 2005, 127, 17863-17866.	6.6	29
27	Kelvin Probe Force Microscopy in Surface Chemistry: Reactivity of Pd Nanoparticles on Highly Oriented Pyrolytic Graphite. ACS Catalysis, 2014, 4, 1838-1844.	5.5	29
28	Mechanisms of the Adsorption and Self-Assembly of Molecules with Polarized Functional Groups on Insulating Surfaces. Journal of Physical Chemistry C, 2014, 118, 14569-14578.	1.5	28
29	Resolving ions and vacancies at step edges on insulating surfaces. Surface Science, 2000, 470, L99-L103.	0.8	27
30	Preparation of regular arrays of bimetallic clusters with independent control of size and chemical composition. Faraday Discussions, 2008, 138, 407-420.	1.6	25
31	Characterization of Thin MgO Films on Ag(001) by Low-Energy Electron Diffraction and Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2011, 115, 8034-8041.	1.5	25
32	Two-Dimensional Nanostructured Growth of Nanoclusters and Molecules on Insulating Surfaces. Advanced Materials, 2012, 24, 3228-3232.	11.1	22
33	Imaging Suzuki Precipitates on NaCl:Mg <sup>2+</sup> (001) by Scanning Force Microscopy. Physical Review Letters, 2008, 100, 096101.	2.9	21
34	Chemical Identification of Ions in Doped NaCl by Scanning Force Microscopy. Physical Review Letters, 2009, 102, 256103.	2.9	21
35	Polarized Tips or Surfaces: Consequences in Kelvin Probe Force Microscopy. E-Journal of Surface Science and Nanotechnology, 2011, 9, 6-14.	0.1	20
36	Characterization of atomic step structures on CaF <sub>2</sub> (111) by their electric potential. Applied Physics Letters, 2012, 101, 051601.	1.5	18

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37	CO Chemisorption on Ultrathin MgO-Supported Palladium Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2017, 121, 5551-5564.	1.5	17
38	Stability of Ultrathin Ceria Films on Pt(111) Exposed to Air and Treated in Redox Cycles. <i>Journal of Physical Chemistry C</i> , 2018, 122, 25954-25963.	1.5	15
39	Revealing Carbon Phenomena at Palladium Nanoparticles by Analyzing the Work Function. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4360-4370.	1.5	15
40	Defect mediated manipulation of nanoclusters on an insulator. <i>Scientific Reports</i> , 2013, 3, 1270.	1.6	14
41	NaCl(001) surfaces nanostructured by Suzuki precipitates: a scanning force microscopy study. <i>New Journal of Physics</i> , 2009, 11, 043003.	1.2	13
42	KCl ultra-thin films with polar and non-polar surfaces grown on Si(111)7 Å— 7. <i>Scientific Reports</i> , 2015, 5, 8223.	1.6	10
43	Carbon Precursor Structures and Graphene on Palladium Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2018, 122, 522-529.	1.5	9
44	TEM-assisted dynamic scanning force microscope imaging of (001) antigorite: Surfaces and steps on a modulated silicate. <i>American Mineralogist</i> , 2010, 95, 673-685.	0.9	8
45	Charging C60 islands with the AFM tip. <i>Nanoscale</i> , 2016, 8, 411-419.	2.8	7
46	Cleaved surfaces of d-AlNiCo and $\frac{1}{4}$ -AlPdMn. <i>Journal of Non-Crystalline Solids</i> , 2004, 334-335, 491-494.	1.5	6
47	Oxygen Adsorption on Graphene-Encapsulated Palladium Nanoparticles Imaged by Kelvin Probe Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 24615-24625.	1.5	6
48	Morphology, Work Function, and Silver Ad-Structures of High-Temperature Grown Ultrathin MgO Films on Ag(001). <i>Journal of Physical Chemistry C</i> , 2015, 119, 23990-23995.	1.5	5
49	Ultrathin magnesia films as support for molecules and metal clusters: Tuning reactivity by thickness and composition. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1001-1015.	0.7	3
50	Defects on Bulk MgO(001) Imaged by nc-AFM. <i>Springer Series in Surface Sciences</i> , 2015, , 215-239.	0.3	3
51	High-temperature oxidation and reduction of the inverse ceria/Cu(111) catalyst characterized by LEED, STM, nc-AFM and KPFM. <i>Journal of Physics Condensed Matter</i> , 2021, 34, .	0.7	2
52	Contrast Mechanisms on Insulating Surfaces. <i>Nanoscience and Technology</i> , 2002, , 305-347.	1.5	2
53	Bimetallic Nanoparticles, Grown Under UHV on Insulators, Studied by Scanning Probe Microscopy. <i>Engineering Materials</i> , 2012, , 25-68.	0.3	1
54	Surfaces: Two-Dimensional Nanostructured Growth of Nanoclusters and Molecules on Insulating Surfaces ( <i>Adv. Mater.</i> 24/2012). <i>Advanced Materials</i> , 2012, 24, 3146-3146.	11.1	1

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55	Atomic Structure, Order and Disorder on High Temperature Reconstructed $\hat{1}\pm$ -Al <sub>2</sub> O <sub>3</sub> (0001). Nanoscience and Technology, 2002, , 135-145.	1.5	1
56	Collective amplification of nearby nanoparticles in the Coulomb blockade restricted charging of a single nanoparticle. New Journal of Physics, 2021, 23, 123009.	1.2	1
57	Manipulation of Metal Nanoparticles on Insulating Surfaces. Advances in Atom and Single Molecule Machines, 2015, , 93-110.	0.0	0