Ugo Valbusa

List of Publications by Year
in descending order

95 papers	3,587 citations	101543 36 h-index	149698 56 g-index
96 all docs	96 docs citations	96 times ranked	3445 citing authors

#	Article	IF	Citations
1	Nanostructuring surfaces by ion sputtering. Journal of Physics Condensed Matter, 2002, 14, 8153-8175.	1.8	377
2	Permeability thickness dependence of polydimethylsiloxane (PDMS) membranes. Journal of Membrane Science, 2015, 481, 1-8.	8.2	175
3	Selective adsorption of 1H2 and 2H2 on the (0001) graphite surface. Surface Science, 1980, 93, 515-525.	1.9	147
4	The contact mechanics of fractal surfaces. Nature Materials, 2003, 2, 233-236.	27.5	102
5	Angular dependence of dipole scattering cross section: Surface-plasmon losses on Ag(100). Physical Review Letters, 1990, 64, 2398-2401.	7.8	96
6	Surface plasmon on Ag(110): Observation of linear and positive dispersion and strong azimuthal anisotropy. Physical Review Letters, 1992, 69, 2122-2125.	7.8	75
7	Apparatus for adsorption studies. Review of Scientific Instruments, 1991, 62, 2172-2176.	1.3	74
8	Interactions of single-wall carbon nanotubes with endothelial cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2010, 6, 277-288.	3.3	72
9	Is Ion Sputtering Always a â€œNegative Homoepitaxial Depositionâ€?. Physical Review Letters, 2001, 86, 838-841.	7.8	71
10	Surface-plasmon spectrum of Ag(001) measured by high-resolution angle-resolved electron-energy-loss spectroscopy. Physical Review B, 1990, 42, 2835-2841.	3.2	67
11	Order versus Disorder: in vivo bone formation within osteoconductive scaffolds. Scientific Reports, 2012, 2, 274.	3.3	67
12	Low-temperature dissocation ofO2on Ag(110): Surface disorder and reconstruction. Physical Review B, 1994, 49, 5113-5116.	3.2	66
13	Azimuthal dependence of sticking probability ofO2on Ag(110). Physical Review Letters, 1994, 72, 510-513.	7.8	64
14	Determination of the Interatomic Potential of Krypton. Physical Review A, 1973, 8, 2409-2416.	2.5	61
15	Self-affine properties of cluster-assembled carbon thin films. Surface Science, 2000, 444, L1-L6.	1.9	57
16	Oxygen adsorption on Ag(111). Surface Science, 1995, 339, 291-296.	1.9	55
17	Ripples and ripples: from sandy deserts to ion-sputtered surfaces. New Journal of Physics, 2005, 7, 122-122.	2.9	54
18	Accurate He-Ag(110) interaction potential determination by selective adsorption. Surface Science, 1982, 120, L447-L452.	1.9	53

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19	Comment on â€˜â€˜Surface-plasmon energy and dispersion on Ag single crystalsâ€™â€™. Physical Review Letters, 1991, 67, 3197-3197.	7.8	53
20	Adatom Ascending at Step Edges and Faceting on fcc Metal (110) Surfaces. Physical Review Letters, 2004, 92, 106102.	7.8	52
21	Stereodynamic Effects in the Adsorption of Ethylene onto a Metal Surface. Angewandte Chemie - International Edition, 2004, 43, 5200-5203.	13.8	50
22	Patterning polycrystalline thin films by defocused ion beam: The influence of initial morphology on the evolution of self-organized nanostructures. Journal of Applied Physics, 2008, 104, .	2.5	50
23	Energy dependence of the differential collision cross section for hydrogen at thermal energies. Chemical Physics Letters, 1972, 17, 137-141.	2.6	49
24	Temperature dependence of surface plasmons on Ag(001). Physical Review B, 1992, 45, 1399-1402.	3.2	49
25	DNA detection with a polymeric nanochannel device. Lab on A Chip, 2011, 11, 2961.	6.0	48
26	Diffractive scattering of H atoms from an ordered xenon overlayer adsorbed on the (0001) surface of graphite. Physical Review B, 1981, 24, 2307-2310.	3.2	47
27	Oxygen interaction with disordered and nanostructured Ag(001) surfaces. Journal of Chemical Physics, 2001, 115, 3346-3355.	3.0	47
28	Tuning surface reactivity byin situsurface nanostructuring. Journal of Chemical Physics, 2000, 112, 6840-6843.	3.0	43
29	Preparation and properties of macroporous brushite bone cements. Acta Biomaterialia, 2009, 5, 2161-2168.	8.3	43
30	DNA-functionalized solid state nanopore for biosensing. Nanotechnology, 2010, 21, 145102.	2.6	42
31	Structural Depinning of Ne Monolayers on Pb atT<6.5â€‰â€‰K. Physical Review Letters, 2006, 96, 216101.	7.8	41
32	â€œDNA-Dressed NAnoporeâ€•for complementary sequence detection. Biosensors and Bioelectronics, 2011, 29, 125-131.	10.1	41
33	Anharmonic shift in the stretching frequency of O2 chemisorbed on Ag (110). Surface Science, 1994, 314, L904-L908.	1.9	40
34	Surface vibrations of atoms physisorbed on a crystal surface: monolayer and bilayer xenon on (0001) graphite. Chemical Physics Letters, 1983, 94, 247-249.	2.6	39
35	Uniaxial magnetic anisotropy tuned by nanoscale ripple formation: Ion-sculpting of Co/Cu(001) thin films. Applied Physics Letters, 2004, 84, 762-764.	3.3	38
36	Modulating DNA Translocation by a Controlled Deformation of a PDMS Nanochannel Device. Scientific Reports, 2012, 2, 791.	3.3	38

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37	Surface nanostructuring and optical activation of lithium fluoride crystals by ion beam irradiation. Applied Physics Letters, 2006, 88, 103116.	3.3	37
38	Rainbow scattering and the intermolecular potential of argon. Chemical Physics Letters, 1970, 7, 303-305.	2.6	33
39	H-Ar potential from high-resolution differential cross-section measurements at thermal energy. Physical Review A, 1976, 13, 584-594.	2.5	33
40	Study of the Ag(110) surface by He diffraction. Surface Science, 1983, 126, 695-701.	1.9	33
41	Hydrogen atom scattering from physisorbed overlayers. Surface Science, 1985, 155, 499-534.	1.9	33
42	Collision induced desorption and dissociation of O2 chemisorbed on Ag(001). Journal of Chemical Physics, 1998, 109, 2490-2502.	3.0	33
43	Contact mechanics and friction of fractal surfaces probed by atomic force microscopy. Wear, 2003, 254, 917-923.	3.1	33
44	Surface instabilities in granular matter and ion-sputtered surfaces. Physica A: Statistical Mechanics and Its Applications, 2004, 332, 548-558.	2.6	33
45	Deformation and Adhesion of Elastomer Poly(dimethylsiloxane) Colloidal AFM Probes. Langmuir, 2007, 23, 9293-9302.	3.5	33
46	DNA manipulation with elastomeric nanostructures fabricated by soft-moulding of a FIB-patterned stamp. Lab on A Chip, 2011, 11, 2625.	6.0	33
47	Friction force microscopy investigation of nanostructured carbon films. Carbon, 2002, 40, 883-890.	10.3	30
48	Surface phonons in graphite (001). Surface Science, 1986, 178, 545-552.	1.9	28
49	Simultaneous Electro-Optical Tracking for Nanoparticle Recognition and Counting. Nano Letters, 2015, 15, 5696-5701.	9.1	28
50	C60 thin films on Ag(001): an STM study. Carbon, 1999, 37, 727-732.	10.3	27
51	Nanotechnology Applications in Medicine. Tumori, 2008, 94, 206-215.	1.1	27
52	Applications of metal surfaces nanostructured by ion beam sputtering. Journal of Physics Condensed Matter, 2009, 21, 224022.	1.8	27
53	Plastic ingestion in aquatic-associated bird species in southern Portugal. Marine Pollution Bulletin, 2018, 126, 413-418.	5.0	27
54	Engineered Kidney Tubules for Modeling Patient-Specific Diseases and Drug Discovery. EBioMedicine, 2018, 33, 253-268.	6.1	27

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55	Coverage dependence of the O-Ag (110) vibration. Surface Science, 1994, 317, L1120-L1123.	1.9	26
56	Submonolayer homoepitaxial growth on Ag(110). Surface Science, 2001, 487, 49-54.	1.9	26
57	Optically addressable single molecule magnet behaviour of vacuum-sprayed ultrathin films. Journal of Materials Chemistry, 2008, 18, 109-115.	6.7	26
58	Nano-holes as standard leak elements. Measurement: Journal of the International Measurement Confederation, 2014, 58, 335-341.	5.0	26
59	Rayleigh wave dispersion on Ag(100) along the â€˜100â€‰ direction. Physical Review B, 1990, 41, 12905-12907.	3.2	24
60	Conformations of DNA in Triangular Nanochannels. Macromolecules, 2013, 46, 4198-4206.	4.8	24
61	Ion induced spinodal dewetting of thin solid films. Applied Physics Letters, 2012, 100, 223113.	3.3	23
62	A simple and compact mechanical velocity selector of use to analyze/select molecular alignment in supersonic seeded beams. Review of Scientific Instruments, 2004, 75, 349-354.	1.3	22
63	Stretching of DNA confined in nanochannels with charged walls. Biomicrofluidics, 2014, 8, 064121.	2.4	21
64	Atom scattering as a quantitative surface probe: Noble-gas monolayer and bilayer adsorbed on graphite. Physical Review B, 1984, 30, 4203-4206.	3.2	20
65	New insights on the stereodynamics of ethylene adsorption on an oxygen-precovered silver surface. Journal of Chemical Physics, 2005, 123, 224709.	3.0	19
66	Gas permeation through rubbery polymer nano-corrugated membranes. Scientific Reports, 2018, 8, 6345.	3.3	19
67	Surface analysis of paper documents damaged by foxing. Applied Physics A: Materials Science and Processing, 2004, 79, 383-387.	2.3	18
68	Unexpected Behavior of the Surface Composition of PtRh Alloys during Chemical Reaction. Journal of the American Chemical Society, 2005, 127, 5671-5674.	13.7	18
69	Atomic force microscopy and X-ray photoelectron spectroscopy characterization of low-energy ion sputtered mica. Surface Science, 2007, 601, 2735-2739.	1.9	18
70	Size and functional tuning of solid state nanopores by chemical functionalization. Nanotechnology, 2012, 23, 435301.	2.6	15
71	Interfacial dynamics of the rhomboidal pyramid pattern on ion-eroded Cu(110). Physical Review B, 2006, 73, .	3.2	14
72	Selective protein detection with a dsLNA-functionalized nanopore. Biosensors and Bioelectronics, 2015, 64, 219-226.	10.1	14

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73	Bioactive surfaces for antibody-antigen complex detection by Atomic Force Microscopy. Journal of Physics: Conference Series, 2013, 439, 012001.	0.4	13
74	Fabrication of stable nanopatterns on metals. Applied Physics Letters, 2002, 81, 2632-2634.	3.3	11
75	Label-free quantification of activated NF-ÎºB in biological samples by atomic force microscopy. Biosensors and Bioelectronics, 2010, 25, 2490-2496.	10.1	11
76	Mechanical squeezing of an elastomeric nanochannel device: numerical simulations and ionic current characterization. Microfluidics and Nanofluidics, 2013, 14, 21-30.	2.2	11
77	Nanotechnology applications in medicine. Tumori, 2008, 94, 206-15.	1.1	10
78	Role of substrate morphology in ion induced dewetting of thin solid films. Applied Surface Science, 2014, 315, 432-439.	6.1	8
79	Integrating Microstructured Electrospun Scaffolds in an Open Microfluidic System for in Vitro Studies of Human Patient-Derived Primary Cells. ACS Biomaterials Science and Engineering, 2020, 6, 3649-3663.	5.2	8
80	The Role of Surfaces in Gas Transport Through Polymer Membranes. Polymers, 2019, 11, 910.	4.5	7
81	Fast three-dimensional nanoscale metrology in dual-beam FIBâ€“SEM instrumentation. Ultramicroscopy, 2009, 109, 1338-1342.	1.9	6
82	Label-free, atomic force microscopy-based mapping of DNA intrinsic curvature for the nanoscale comparative analysis of bent duplexes. Nucleic Acids Research, 2012, 40, e84-e84.	14.5	6
83	Nanostructuring polymers by soft lithography templates realized via ion sputtering. Nanotechnology, 2005, 16, 2714-2717.	2.6	5
84	Binding force measurement of NF-ÎºBâ€“ODNs interaction: An AFM based decoy and drug testing tool. Biosensors and Bioelectronics, 2011, 28, 158-165.	10.1	4
85	Electrical biosensing with synthetic nanopores and nanochannels. Current Opinion in Electrochemistry, 2021, 29, 100754.	4.8	4
86	Morphological and Tribological Characterization of Rough Surfaces by Atomic Force Microscopy. Nanoscience and Technology, 2006, , 261-298.	1.5	3
87	Junction gap breakdown-based fabrication of polydimethylsiloxane ionic rectifiers. Journal of Micromechanics and Microengineering, 2020, 30, 025004.	2.6	3
88	Probing the Role of Nanoroughness in Contact Mechanics by Atomic Force Microscopy. Advances in Science and Technology, 2006, 51, 90.	0.2	2
89	Crystals of the hydrogenase maturation factor HypF N-terminal domain grown in microgravity, display improved internal order. Journal of Crystal Growth, 2011, 314, 246-251.	1.5	2
90	Fabrication of Elastomeric Nanofluidic Devices for Manipulation of Long DNA Molecules. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2009, , 134-140.	0.3	1

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91	Symmetric curvature descriptors for label-free analysis of DNA. Scientific Reports, 2015, 4, 6459.	3.3	1
92	Nanostructuring Rh(110) Surfaces by Ion Etching. Materials Research Society Symposia Proceedings, 2006, 960, 1.	0.1	0
93	The Role of Nanoroughness in Contact Mechanics. Nanoscience and Technology, 2007, , 345-359.	1.5	0
94	Atomic Force Microscopy for DNA SNP Identification. Nanoscience and Technology, 2012, , 79-98.	1.5	0
95	Nanotechnology for Life Sciences. Nanoscience and Nanotechnology Letters, 2013, 5, 1132-1140.	0.4	0