

Tevfik Onur Mentés

List of Publications by Year in descending order

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115
papers

3,977
citations

109264

35
h-index

128225

60
g-index

115
all docs

115
docs citations

115
times ranked

5059
citing authors

#	ARTICLE	IF	CITATIONS
1	Room-temperature chiral magnetic skyrmions in ultrathin magnetic nanostructures. Nature Nanotechnology, 2016, 11, 449-454.	15.6	829
2	Photoemission electron microscopy with chemical sensitivity: SPELEEM methods and applications. Surface and Interface Analysis, 2006, 38, 1554-1557.	0.8	151
3	Observation of Bloch-point domain walls in cylindrical magnetic nanowires. Physical Review B, 2014, 89, .	1.1	149
4	Current-Driven Skyrmion Dynamics and Drive-Dependent Skyrmion Hall Effect in an Ultrathin Film. Physical Review Applied, 2019, 12, .	1.5	111
5	Thermal Stability of Corrugated Epitaxial Graphene Grown on Re(0001). Physical Review Letters, 2011, 106, 216101.	2.9	106
6	Spectromicroscopy of single and multilayer graphene supported by a weakly interacting substrate. Physical Review B, 2008, 78, .	1.1	105
7	Fragmentation of magnetism in artificial kagome dipolar spin ice. Nature Communications, 2016, 7, 11446.	5.8	99
8	Current-induced vortex nucleation and annihilation in vortex domain walls. Applied Physics Letters, 2006, 88, 232507.	1.5	85
9	Cathode lens spectromicroscopy: methodology and applications. Beilstein Journal of Nanotechnology, 2014, 5, 1873-1886.	1.5	82
10	Relationship between Nonadiabaticity and Damping in Permalloy Studied by Current Induced Spin Structure Transformations. Physical Review Letters, 2008, 100, 066603.	2.9	78
11	Corrugation in Exfoliated Graphene: An Electron Microscopy and Diffraction Study. ACS Nano, 2010, 4, 4879-4889.	7.3	78
12	Coexistence of multiple silicene phases in silicon grown on Ag(111). Journal of Physics Condensed Matter, 2014, 26, 185001.	0.7	73
13	Magnetism in nanometer-thick magnetite. Physical Review B, 2012, 85, .	1.1	71
14	Nanobubbles at GPa Pressure under Graphene. Nano Letters, 2015, 15, 6162-6169.	4.5	65
15	In-Plane Magnetic Domains and Néel-like Domain Walls in Thin Flakes of the Room Temperature CrTe ₂ Van der Waals Ferromagnet. ACS Applied Materials & Interfaces, 2020, 12, 30702-30710.	4.0	63
16	Image blur and energy broadening effects in XPEEM. Ultramicroscopy, 2011, 111, 1447-1454.	0.8	59
17	Tuning the electronic structure of monolayer graphene/ $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \text{Mo} \langle \text{mml:mi} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \text{mathvariant="normal"} \rangle \text{S} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle \text{van der Waals heterostructures via interlayer twist. Physical Review B, 2015, 92, .}$	1.1	56
18	Generation of Ultrashort Coherent Vacuum Ultraviolet Pulses Using Electron Storage Rings: A New Bright Light Source for Experiments. Physical Review Letters, 2008, 101, 053902.	2.9	55

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19	Effect of oxygen adsorption on the local properties of epitaxial graphene on SiC (0001). Physical Review B, 2012, 86, .	1.1	49
20	Magnetic skyrmions in confined geometries: Effect of the magnetic field and the disorder. Journal of Magnetism and Magnetic Materials, 2018, 455, 3-8.	1.0	48
21	Making angle-resolved photoemission measurements on corrugated monolayer crystals: Suspended exfoliated single-crystal graphene. Physical Review B, 2011, 84, .	1.1	47
22	Temperature-Driven Reversible Rippling and Bonding of a Graphene Superlattice. ACS Nano, 2013, 7, 6955-6963.	7.3	47
23	Bloch-point-mediated topological transformations of magnetic domain walls in cylindrical nanowires. Physical Review B, 2019, 99, .	1.1	45
24	Fast Domain Wall Motion Governed by Topology and Årsted Fields in Cylindrical Magnetic Nanowires. Physical Review Letters, 2019, 123, 217201.	2.9	45
25	Domain-Wall Depinning Assisted by Pure Spin Currents. Physical Review Letters, 2010, 105, 076601.	2.9	44
26	Oxidation Pathways in Bicomponent Ultrathin Iron Oxide Films. Journal of Physical Chemistry C, 2012, 116, 11539-11547.	1.5	44
27	Full field electron spectromicroscopy applied to ferroelectric materials. Journal of Applied Physics, 2013, 113, .	1.1	43
28	Fine tuning of graphene-metal adhesion by surface alloying. Scientific Reports, 2013, 3, 2430.	1.6	43
29	Low energy electron diffraction and low energy electron microscopy microspot \hat{V} analysis of the (4Å-4)O structure on Ag(111): Surface oxide or reconstruction?. Journal of Chemical Physics, 2007, 127, 134706.	1.2	42
30	Unraveling the Dynamic Nanoscale Reducibility (Ce^{4+} \hat{r} Ce^{3+}) of CeO_x \hat{r} Ru in Hydrogen Activation. Advanced Materials Interfaces, 2015, 2, 1500314.	1.9	42
31	Electronic properties of single-layer tungsten disulfide on epitaxial graphene on silicon carbide. Nanoscale, 2017, 9, 16412-16419.	2.8	39
32	Extrinsic screening of ferroelectric domains in $\text{Pb}(\text{Zr}_{0.48}\text{Ti}_{0.52})\text{O}_3$. Applied Physics Letters, 2010, 97, .	1.5	38
33	Bottom-up approach for the low-cost synthesis of graphene-alumina nanosheet interfaces using bimetallic alloys. Nature Communications, 2014, 5, 5062.	5.8	37
34	Synchrotron-based photoelectron microscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 601, 195-202.	0.7	36
35	Formation of Regular Surface-Supported Mesostructures with Periodicity Controlled by Chemical Reaction Rate. Journal of Physical Chemistry B, 2006, 110, 19108-19111.	1.2	35
36	Enhanced Electrocatalytic Activity in GaSe and InSe Nanosheets: The Role of Surface Oxides. Advanced Functional Materials, 2020, 30, 2005466.	7.8	35

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37	Angle-resolved X-ray photoemission electron microscopy. Journal of Electron Spectroscopy and Related Phenomena, 2012, 185, 323-329.	0.8	34
38	Kinetic pathways to the magnetic charge crystal in artificial dipolar spin ice. Physical Review B, 2014, 90, .	1.1	34
39	Surface compositional gradients of InAs ⁺ GaAs quantum dots. Applied Physics Letters, 2005, 87, 223106.	1.5	29
40	Size distribution of magnetic charge domains in thermally activated but out-of-equilibrium artificial spin ice. Scientific Reports, 2014, 4, 5702.	1.6	29
41	Morphology and composition of Au catalysts on Ge(111) obtained by thermal dewetting. Physical Review B, 2011, 84, .	1.1	27
42	Scaling of spin relaxation and angular momentum dissipation in permalloy nanowires. Physical Review B, 2009, 80, .	1.1	26
43	Surface antiferromagnetic domain imaging using low-energy unpolarized electrons. Physical Review B, 2011, 84, .	1.1	25
44	Quantitative analysis of shadow x-ray magnetic circular dichroism photoemission electron microscopy. Physical Review B, 2015, 92, .	1.1	25
45	Inelastic mean free path from reflectivity of slow electrons. Physical Review B, 2013, 87, .	1.1	24
46	One-dimensional Au on TiO ₂ . Journal of Physics Condensed Matter, 2007, 19, 082202.	0.7	22
47	Stress induced Stripe Formation in $\text{Pd}/\text{W}(110)$ Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 327 Td (stretchy="false")	2.9	22
48	The Bottom-up Growth of Edge Specific Graphene Nanoribbons. Nano Letters, 2014, 14, 6080-6086.	4.5	22
49	Surface modification of oxides by electron-stimulated desorption for growth-mode control of metal films: Experiment and density-functional calculations. Physical Review B, 2007, 76, .	1.1	21
50	Reversible switching of in-plane polarized ferroelectric domains in BaTiO ₃ (001) with very low energy electrons. Scientific Reports, 2014, 4, 6792.	1.6	20
51	In situ growth of epitaxial cerium tungstate (100) thin films. Physical Chemistry Chemical Physics, 2011, 13, 7083.	1.3	19
52	Unraveling the Structural and Electronic Properties at the WSe ₂ –Graphene Interface for a Rational Design of van der Waals Heterostructures. ACS Applied Nano Materials, 2018, 1, 1131-1140.	2.4	19
53	Fe intercalation under graphene and hexagonal boron nitride in-plane heterostructure on Pt(111). Carbon, 2018, 134, 274-282.	5.4	19
54	Kinetics of the evolution of InAs/GaAs quantum dots to quantum rings: A combined x-ray, atomic force microscopy, and photoluminescence study. Physical Review B, 2009, 80, .	1.1	17

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55	Reconstruction of magnetization density in two-dimensional samples from soft X-ray speckle patterns using the multiple-wavelength anomalous diffraction method. <i>Journal of Synchrotron Radiation</i> , 2002, 9, 90-95.	1.0	16
56	Strain relaxation in small adsorbate islands: O on W(110). <i>Physical Review B</i> , 2008, 77, .	1.1	16
57	Magnetization and structure of ultrathin Fe films. <i>Physical Review B</i> , 2009, 80, .	1.1	16
58	Flux-closure domains in high aspect ratio electroless-deposited CoNiB nanotubes. , 2018, 5, .		16
59	Oxygen vacancy concentration as a function of cycling and polarization state in TiN/Hf _{0.5} Zr _{0.5} O ₂ /TiN ferroelectric capacitors studied by x-ray photoemission electron microscopy. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	16
60	Role of carbon dissolution and recondensation in graphene epitaxial alignment on cobalt. <i>Carbon</i> , 2019, 152, 489-496.	5.4	15
61	Direct observation of step-edge barrier effects and general aspects of growth processes: morphology and structure in diindenoperylene thin films deposited on Au(100) single crystals. <i>CrystEngComm</i> , 2011, 13, 4139.	1.3	14
62	Desorption kinetics from a surface derived from direct imaging of the adsorbate layer. <i>Nature Communications</i> , 2014, 5, 3853.	5.8	14
63	LEED- <i>i>I</i>(<i>i>V</i> Structure Analysis of the (7 Å⁻¹)_{rect} SO₄ Phase on Ag(111): Precursor to the Active Species of the Ag-Catalyzed Ethylene Epoxidation. <i>Journal of Physical Chemistry C</i>, 2018, 122, 26998-27004.</i></i>	1.5	14
64	Layer-by-Layer Graphene Growth on ¹² -SiC/Si(001). <i>ACS Nano</i> , 2019, 13, 526-535.	7.3	14
65	Spectromicroscopy with Low-Energy Electrons: LEEM and XPEEM Studies at the Nanoscale. <i>E-Journal of Surface Science and Nanotechnology</i> , 2011, 9, 72-79.	0.1	14
66	Initial stages of heteroepitaxial Mg growth on W(110): Early condensation, anisotropic strain, and self-organized patterns. <i>Physical Review B</i> , 2007, 75, .	1.1	13
67	Spin configurations in Co ₂ FeAl _{0.4} Si _{0.6} Heusler alloy thin film elements. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	13
68	Spin structure and spin Hall magnetoresistance of epitaxial thin films of the insulating non-collinear antiferromagnet SmFeO ₃ . <i>Journal of Physics Condensed Matter</i> , 2019, 31, 445804.	0.7	13
69	Adsorbate induced self-ordering of germanium nanoislands on Si(113). <i>New Journal of Physics</i> , 2007, 9, 392-392.	1.2	12
70	Magnetization textures in NiPd nanostructures. <i>Physical Review B</i> , 2011, 84, .	1.1	12
71	Magnetic Patterning by Electron Beam-Assisted Carbon Lithography. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 27178-27187.	4.0	11
72	Fine tuning of ferromagnet/antiferromagnet interface magnetic anisotropy for field-free switching of antiferromagnetic spins. <i>Nanoscale</i> , 2020, 12, 18091-18095.	2.8	11

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73	Revisiting the Chemical Stability of Germanium Selenide (GeSe) and the Origin of its Photocatalytic Efficiency. <i>Advanced Functional Materials</i> , 2021, 31, 2106228.	7.8	11
74	Domain faceting in an in-plane magnetic reorientation transition. <i>Physical Review B</i> , 2010, 82, .	1.1	10
75	Growth of single and multi-layer graphene on Ir(100). <i>Carbon</i> , 2014, 74, 237-248.	5.4	10
76	Fabrication of 2D Heterojunction in Graphene via Low Energy N^{2+} Irradiation. <i>Small</i> , 2015, 11, 5927-5931.	5.2	10
77	Magnetic configurations in nanostructured Co_2MnGa thin film elements. <i>New Journal of Physics</i> , 2015, 17, 083030.	1.2	10
78	Self-organised stripe domains and elliptical skyrmion bubbles in ultra-thin epitaxial $Au_{0.67}Pt_{0.33}/Co/W(110)$ films. <i>New Journal of Physics</i> , 2021, 23, 013020.	1.2	10
79	The electron density decay length effect on surface reactivity. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 015001.	0.7	9
80	Tunable coupling by means of oxygen intercalation and removal at the strongly interacting graphene/cobalt interface. <i>Carbon</i> , 2020, 163, 341-347.	5.4	9
81	Temperature dependence of surface stress across an order-disorder transition: $p(1\text{\AA}-2)O/W(110)$. <i>Physical Review B</i> , 2010, 81, .	1.1	8
82	Morphology and Composition of InAs/GaAs Quantum Dots. <i>Journal of Nanoscience and Nanotechnology</i> , 2007, 7, 1721-1725.	0.9	7
83	Chemical patterning of Ag(111): Spatially confined oxide formation induced by electron beam irradiation. <i>Applied Physics Letters</i> , 2008, 93, 233117.	1.5	7
84	Oxidation of Supported PtRh Particles: Size and Morphology Effects. <i>Journal of Physical Chemistry C</i> , 2010, 114, 16885-16891.	1.5	7
85	Control of the magnetization in pre-patterned half-metallic $La_{0.7}Sr_{0.3}MnO_3$ nanostructures. <i>Journal of Applied Physics</i> , 2012, 112, 103921.	1.1	7
86	Chemistry-dependent magnetic properties at the FeNi oxide-metal interface. <i>Journal of Materials Chemistry C</i> , 2020, 8, 5777-5785.	2.7	7
87	Controllable magnetic anisotropy and spin orientation of a prototypical easy-plane antiferromagnet on a ferromagnetic support. <i>Physical Review B</i> , 2021, 104, .	1.1	7
88	Mass transport of alkali metal with pulses in a surface reaction. <i>Physical Review E</i> , 2008, 78, 055203.	0.8	6
89	From nanoislands to nanowires: Growth of germanium on gallium-terminated silicon surfaces. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1718-1722.	0.8	6
90	Stress engineering at the nanometer scale: Two-component adlayer stripes. <i>Europhysics Letters</i> , 2011, 94, 38003.	0.7	6

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91	Spectromicroscopy of pulses transporting alkali metal in a surface reaction. Physical Chemistry Chemical Physics, 2013, 15, 8752.	1.3	6
92	Stimulated CO Dissociation and Surface Graphitization by Microfocused X-ray and Electron Beams. Journal of Physical Chemistry C, 2019, 123, 8360-8369.	1.5	6
93	Toward the perfect membrane material for environmental x-ray photoelectron spectroscopy. Journal Physics D: Applied Physics, 2021, 54, 234001.	1.3	6
94	Real-time low-energy electron microscopy study of Ga adsorption and facet array formation on Si(113). E-Journal of Surface Science and Nanotechnology, 2005, 3, 379-383.	0.1	6
95	Magnetization Reversal and Domain Nucleation in Ultra-Thin Co/Re(0001) Capped by Graphitic C. IEEE Transactions on Magnetics, 2019, 55, 1-4.	1.2	5
96	Measuring the magnetization of three monolayer thick Co islands and films by x-ray dichroism. Physical Review B, 2009, 80, .	1.1	4
97	Self-organization in Pd/W(110): interplay between surface structure and stress. Journal of Physics Condensed Matter, 2013, 25, 355010.	0.7	4
98	Vacancy-mediated fcc/bcc phase separation in $\text{Fe}_{1-x}\text{Co}_x$ films. Physical Review B, 2016, 94, .	0.1	4
99	Ge Growth on Partially and Entirely Ag Covered Si(111). E-Journal of Surface Science and Nanotechnology, 2010, 8, 221-226.	0.1	4
100	Excitation dynamics in $\text{La}_{0.875}\text{Sr}_{0.125}\text{MnO}_3$ measured by resonant Auger electron and resonant x-ray emission spectroscopies. Physical Review B, 2006, 74, .	1.1	3
101	Silver: a novel growth catalyst for Ge nanoislands on Si(113). Physica Status Solidi - Rapid Research Letters, 2009, 3, 305-307.	1.2	3
102	Growth of magnetic nanowires on self-organized stripe templates: Fe on PdO/W(110). Ultramicroscopy, 2013, 130, 82-86.	0.8	3
103	Phase Coexistence in Two-Dimensional $\text{Fe}_{70}\text{Ni}_{30}$ Films on W(110). E-Journal of Surface Science and Nanotechnology, 2015, 13, 256-260.	0.1	3
104	Broadband Setup for Magnetic-Field-Induced Domain Wall Motion in Cylindrical Nanowires. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	3
105	Surface Concentration Mapping of InAs/GaAs Quantum Dots. AIP Conference Proceedings, 2007, , .	0.3	2
106	Chemical and Magnetic Imaging with X-Ray Photoemission Electron Microscopy. , 2015, , 571-591.		2
107	Combined effects of vertical and lateral confinement on the magnetic properties of MnAs micro and nano-ribbons. Journal of Applied Physics, 2016, 120, 093905.	1.1	2
108	Pulse picking in synchrotron-based XPEEM. Ultramicroscopy, 2019, 202, 10-17.	0.8	2

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109	Mazes and meso-islands: Impact of Ag preadsorption on Ge growth on Si(111). Physical Review B, 2016, 94, .	1.1	1
110	A UHV MOKE magnetometer complementing XMCD-PEEM at the Elettra Synchrotron. Journal of Synchrotron Radiation, 2021, 28, 995-1005.	1.0	1
111	Sensitivity to crystal stacking in low-energy electron microscopy. Applied Surface Science, 2021, 566, 150656.	3.1	1
112	Spin-polarized hybrid states in epitaxially-aligned and rotated graphene on cobalt. Carbon, 2022, 198, 188-194.	5.4	1
113	Laterally Inhomogeneous Au Intercalation in Epitaxial Graphene on SiC(0 0 0 1): A Multimethod Electron Microscopy Study. , 0, , .		0
114	Coherent x-ray scattering in an XPEEM setup. Ultramicroscopy, 2020, 216, 113035.	0.8	0
115	Reference plane for the electronic states in thin films on stepped surfaces. Physical Review B, 2021, 103, .	1.1	0