

Odile Robach

List of Publications by Year in descending order

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1,824
citations

304743

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276875

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docs citations

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2286
citing authors

#	ARTICLE	IF	CITATIONS
1	LaueNN: neural-network-based $\langle i \rangle hkl \langle /i \rangle$ recognition of Laue spots and its application to polycrystalline materials. <i>Journal of Applied Crystallography</i> , 2022, 55, 737-750.	4.5	5
2	In-situ force measurement during nano-indentation combined with Laue microdiffraction. <i>Nano Select</i> , 2021, 2, 99-106.	3.7	2
3	Simultaneous Multi-Bragg Peak Coherent X-ray Diffraction Imaging. <i>Crystals</i> , 2021, 11, 312.	2.2	6
4	First stages of plasticity in three-point bent Au nanowires detected by in situ Laue microdiffraction. <i>Applied Physics Letters</i> , 2020, 116, 243101.	3.3	1
5	Validity of Crystal Plasticity Models Near Grain Boundaries: Contribution of Elastic Strain Measurements at Micron Scale. <i>Jom</i> , 2019, 71, 3543-3551.	1.9	5
6	Carbon Monoxide Oxidation Promoted by a Highly Active Strained PdO Layer at the Surface of Au ₃₀ Pd ₇₀ (110). <i>ACS Catalysis</i> , 2019, 9, 4448-4461.	11.2	4
7	Local strain redistribution in a coarse-grained nickel-based superalloy subjected to shot-peening, fatigue or thermal exposure investigated using synchrotron X-ray Laue microdiffraction. <i>Journal of Materials Science</i> , 2018, 53, 8567-8589.	3.7	5
8	Evidence of 3D strain gradients associated with tin whisker growth. <i>Scripta Materialia</i> , 2018, 144, 1-4.	5.2	21
9	High stresses stored in fault zones: example of the Nojima fault (Japan). <i>Solid Earth</i> , 2018, 9, 505-529.	2.8	3
10	Three-point bending behavior of a Au nanowire studied by in-situ Laue micro-diffraction. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	5
11	Oxygen-Induced Changes of the Au ₃₀ Pd ₇₀ (110) Surface Structure and Composition under Increasing O ₂ Pressure. <i>Journal of Physical Chemistry C</i> , 2018, 122, 22588-22596.	3.1	9
12	Plasticity in inhomogeneously strained Au nanowires studied by Laue microdiffraction. <i>MRS Advances</i> , 2018, 3, 2331-2339.	0.9	0
13	Direct measurement of local constitutive relations, at the micrometre scale, in bulk metallic alloys. <i>Journal of Applied Crystallography</i> , 2017, 50, 940-948.	4.5	7
14	Influence of Palladium on the Ordering, Final Size, and Composition of Pd-Au Nanoparticle Arrays. <i>Journal of Physical Chemistry C</i> , 2017, 121, 25864-25874.	3.1	7
15	Full elastic strain tensor determination at the phase scale in a powder metallurgy nickel-based superalloy using X-ray Laue microdiffraction. <i>Journal of Applied Crystallography</i> , 2017, 50, 1754-1765.	4.5	1
16	Lattice strain and tilt mapping in stressed Ge microstructures using X-ray Laue micro-diffraction and rainbow filtering. <i>Journal of Applied Crystallography</i> , 2016, 49, 1402-1411.	4.5	17
17	Integrated experimental and computational approach for residual stress investigation near through-silicon vias. <i>Journal of Applied Physics</i> , 2016, 120, 195104.	2.5	9
18	KB scanning of X-ray beam for Laue microdiffraction on accelero-phobic samples: application to in situ mechanically loaded nanowires. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1395-1400.	2.4	10

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19	Analysis of the full stress tensor in a micropillar: Ability of and difficulties arising during synchrotron based $\frac{1}{4}$ Laue diffraction. <i>Materials and Design</i> , 2016, 108, 68-75.	7.0	12
20	In-situ X-ray $\frac{1}{4}$ Laue diffraction study of copper through-silicon vias. <i>Microelectronics Reliability</i> , 2016, 56, 78-84.	1.7	2
21	On the Accuracy of Elastic Strain Field Measurements by Laue Microdiffraction and High-Resolution EBSD: a Cross-Validation Experiment. <i>Experimental Mechanics</i> , 2016, 56, 483-492.	2.0	31
22	The Nature and Origin of "Double Expanded Austenite" in Ni-Based Ni-Ti Alloys Developing Upon Low Temperature Gaseous Nitriding. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4115-4131.	2.2	16
23	Laue-DIC: a new method for improved stress field measurements at the micrometer scale. <i>Journal of Synchrotron Radiation</i> , 2015, 22, 980-994.	2.4	23
24	<i>In situ</i> bending of an Au nanowire monitored by micro Laue diffraction. <i>Journal of Applied Crystallography</i> , 2015, 48, 291-296.	4.5	34
25	La microdiffraction Laue. , 2015, , 68-71.	0.1	0
26	Asymmetric grazing incidence small angle x-ray scattering and anisotropic domain wall motion in obliquely grown nanocrystalline Co films. <i>Nanotechnology</i> , 2014, 25, 335704.	2.6	18
27	X-ray $\frac{1}{4}$ -Laue diffraction analysis of Cu through-silicon vias: A two-dimensional and three-dimensional study. <i>Journal of Applied Physics</i> , 2014, 116, 163509.	2.5	8
28	Laue Microdiffraction at the ESRF. , 2014, , 156-204.		2
29	Local band bending and grain-to-grain interaction induced strain nonuniformity in polycrystalline CdTe films. <i>Physical Review B</i> , 2014, 89, .	3.2	19
30	<i>In-situ</i> observation of stress-induced stochastic twin boundary motion in off stoichiometric NiMnGa single crystals. <i>Applied Physics Letters</i> , 2013, 103, 021909.	3.3	9
31	A tunable multicolour 'rainbow' filter for improved stress and dislocation density field mapping in polycrystals using X-ray Laue microdiffraction. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2013, 69, 164-170.	0.3	27
32	Interface effects on Gd induced disordering of Co films on Pt(111). <i>Surface Science</i> , 2012, 606, 933-937.	1.9	1
33	Combining Laue Microdiffraction and Digital Image Correlation for Improved Measurements of the Elastic Strain Field with Micrometer Spatial Resolution. <i>Procedia IUTAM</i> , 2012, 4, 133-143.	1.2	11
34	Catalytic properties of supported gold nanoparticles: new insights into the size-activity relationship gained from in operando measurements. <i>Faraday Discussions</i> , 2011, 152, 253.	3.2	23
35	Size and Catalytic Activity of Supported Gold Nanoparticles: An in Operando Study during CO Oxidation. <i>Journal of Physical Chemistry C</i> , 2011, 115, 4673-4679.	3.1	132
36	Full local elastic strain tensor from Laue microdiffraction: simultaneous Laue pattern and spot energy measurement. <i>Journal of Applied Crystallography</i> , 2011, 44, 688-696.	4.5	30

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37	Twins and their boundaries during homoepitaxy on Ir(111). <i>Physical Review B</i> , 2011, 83, .	3.2	5
38	A new white beam x-ray microdiffraction setup on the BM32 beamline at the European Synchrotron Radiation Facility. <i>Review of Scientific Instruments</i> , 2011, 82, 033908.	1.3	78
39	Structure and growth kinetics of the oxidation process of Fe(001) whisker surfaces over a 10-decade pressure range. <i>Surface Science</i> , 2010, 604, 1840-1844.	1.9	0
40	Stress field in deformed polycrystals at the micron scale. <i>EPJ Web of Conferences</i> , 2010, 6, 35005.	0.3	0
41	Recent developments in white and monochromatic X-ray microdiffraction. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s100-s101.	0.3	0
42	Looking by grazing incidence small angle x-ray scattering at gold nanoparticles supported on rutile TiO ₂ (110) during CO oxidation. <i>Gold Bulletin</i> , 2008, 41, 159-166.	2.7	13
43	Stacking dependent disordering processes in Gd/Co/Pt(111) studied with surface x-ray diffraction. <i>Physical Review B</i> , 2008, 78, .	3.2	3
44	Following growth and catalytic reaction of oxide-supported metal nanoparticles with GISAXS. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2008, 64, C17-C18.	0.3	0
45	Strain and Shape of Epitaxial InAs/InP Nanowire Superlattice Measured by Grazing Incidence X-ray Techniques. <i>Nano Letters</i> , 2007, 7, 2596-2601.	9.1	57
46	Thickness-related instability of Cu thin films on Ag(100). <i>Physica B: Condensed Matter</i> , 2005, 357, 152-158.	2.7	6
47	Pd ₈ Ni ₉₂ (110) surface structure from surface X-ray diffraction. Surface evolution under hydrogen and butadiene reactants at elevated pressure. <i>Surface Science</i> , 2005, 587, 229-235.	1.9	32
48	Low-temperature growth favours hcp structure, flatness and perpendicular magnetic anisotropy of thin (1±5 nm) Co films on Pt(111). <i>Journal of Physics Condensed Matter</i> , 2005, 17, 5551-5561.	1.8	8
49	Stress and structure of c(2√2) and p2gg(4√2)Mn-Cu(001) surface alloys. <i>Physical Review B</i> , 2005, 71, .	3.2	19
50	Structure and Reactivity of Surface Oxides on Pt(110) during Catalytic CO Oxidation. <i>Physical Review Letters</i> , 2005, 95, 255505.	7.8	327
51	Layer relaxation and intermixing in Fe-Cu(001) studied by surface x-ray diffraction. <i>Physical Review B</i> , 2005, 71, .	3.2	26
52	The surface structure of model catalyst in action investigated by X-ray diffraction. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2005, 61, c8-c8.	0.3	0
53	Structural and magnetic properties of bcc Co films on Pt(001) studied by magnetic resonant surface x-ray diffraction, STM, and magneto-optical Kerr effect. <i>Physical Review B</i> , 2004, 70, .	3.2	22
54	Spin Reorientation and Structural Relaxation of Atomic Layers: Pushing the Limits of Accuracy. <i>Physical Review Letters</i> , 2004, 93, 156105.	7.8	18

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55	Hydrogenation of carbon monoxide on Ni(111) investigated with surface X-ray diffraction at atmospheric pressure. <i>Surface Science</i> , 2004, 557, 21-30.	1.9	33
56	Structure and Pt magnetism of FePt nanoparticles investigated with X-ray diffraction. <i>Journal of Magnetism and Magnetic Materials</i> , 2003, 264, 202-208.	2.3	15
57	Compressibility of CO adsorbed on Ni from 10^{-6} mbar to 1.2 bar ambient CO pressures investigated with X-ray diffraction. <i>Surface Science</i> , 2003, 522, 161-166.	1.9	27
58	Ultrathin Pt films on Ni(111): Structure determined by surface x-ray diffraction. <i>Physical Review B</i> , 2003, 68, .	3.2	7
59	Ni-induced giant stress and surface relaxation in W(110). <i>Physical Review B</i> , 2003, 67, .	3.2	19
60	Stacking reversal as a source of perpendicular magnetic anisotropy in Ni-Pt multilayers. <i>Physical Review B</i> , 2003, 67, .	3.2	11
61	Surface x-ray structure analysis of periodic misfit dislocations in Fe/W(110). <i>Physical Review B</i> , 2003, 68, .	3.2	41
62	Magnetic anisotropy of submonolayer Pt films grown on Ni(110). <i>Journal of Physics Condensed Matter</i> , 2003, 15, 4279-4285.	1.8	1
63	Magnetic anisotropy of ultrathin cobalt films on Pt(111) investigated with x-ray diffraction: Effect of atomic mixing at the interface. <i>Physical Review B</i> , 2002, 65, .	3.2	38
64	The interaction of gas molecules at atmospheric pressures with surfaces investigated with surface X-ray diffraction. <i>Surface Science</i> , 2001, 482-485, 101-106.	1.9	7
65	Oxygen-induced stress-modified reconstructions of the Ta(110)/Al ₂ O ₃ (11 $\bar{2}$ 0) surface: a surface X-ray diffraction study. <i>Surface Science</i> , 2001, 492, 41-54.	1.9	3
66	Adsorption of Carbon Monoxide on Ni(110) Above Atmospheric Pressure Investigated with Surface X-Ray Diffraction. <i>Physical Review Letters</i> , 2001, 86, 5325-5328.	7.8	48
67	Corrections for surface X-ray diffraction measurements using the <i>Z</i> -axis geometry: finite size effects in direct and reciprocal space. <i>Journal of Applied Crystallography</i> , 2000, 33, 1006-1018.	4.5	47
68	A new UHV diffractometer for surface structure and real time molecular beam deposition studies with synchrotron radiations at ESRF. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1999, 149, 213-227.	1.4	58
69	What can we learn on the structure and morphology of metal oxide/metal interfaces by measurement of X-ray crystal truncation rods in situ, during growth. <i>Faraday Discussions</i> , 1999, 114, 157-172.	3.2	13
70	Structure and morphology of the Ag/MgO(001) interface during in situ growth at room temperature. <i>Physical Review B</i> , 1999, 60, 5858-5871.	3.2	103
71	Growth, structure, and morphology of the Pd/MgO(001) interface: Epitaxial site and interfacial distance. <i>Physical Review B</i> , 1999, 60, 5872-5882.	3.2	74
72	Very-high-quality MgO(001) surfaces: roughness, rumpling and relaxation. <i>Surface Science</i> , 1998, 401, 227-235.	1.9	97

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73	Growth, annealing and oxidation of the Ni/MgO (001) interface studied by grazing incidence x-ray scattering. Journal of Applied Physics, 1998, 84, 4259-4267.	2.5	31
74	InSitu Grazing Incidence X-ray Scattering Study of the Epitaxial Growth of Ag on MgO(001). Surface Review and Letters, 1998, 05, 359-362.	1.1	12
75	Étude de la croissance de l'interface Ni/MgO(001) par diffraction de rayons X en incidence rasante. European Physical Journal Special Topics, 1998, 08, Pr4-221-Pr4-226.	0.2	0
76	La diffraction de rayons X en incidence rasante à l'ESRF : application à l'étude de surfaces et d'interfaces à base d'oxydes. European Physical Journal Special Topics, 1998, 08, Pr5-203-Pr5-213.	0.2	0
77	Présentation des possibilités de la diffraction de surface en ultra-vide sur les lignes françaises à l'ESRF. European Physical Journal Special Topics, 1996, 06, C4-341-C4-349.	0.2	0