Roberto dos Reis

List of Publications by Year
in descending order

90 papers	1,874 citations	516710 16 h-index	265206 42 g-index
92 all docs	92 docs citations	92 times ranked	2904 citing authors

#	Article	IF	Citations
1	Uncovering the crystal defects within aragonite CaCO ₃. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2122218119.	7.1	10
2	Resonance Couplings in Si@MoS₂ Coreâ€“Shell Architectures. Small, 2022, 18, e2200413.	10.0	8
3	Effects of the Encapsulation Membrane in Operando Scanning Transmission Electron Microscopy. Nano Letters, 2022, 22, 4137-4144.	9.1	8
4	Probing the Optical Response and Local Dielectric Function of an Unconventional Si@MoS₂ Coreâ€“Shell Architecture. Nano Letters, 2022, 22, 4848-4853.	9.1	2
5	Selective suppression of {112} anatase facets by fluorination for enhanced TiO₂ particle size and phase stability at elevated temperatures. Nanoscale Advances, 2021, 3, 6223-6230.	4.6	3
6	Mechanism of non-catalytic chemical vapor deposition growth of all-inorganic CsPbX₃ (X) Tj ETQq0 0 0 rgBT /Overlock 10 T	5.5	6
7	Mapping Grains, Boundaries, and Defects in 2D Covalent Organic Framework Thin Films. Chemistry of Materials, 2021, 33, 1341-1352.	6.7	25
8	P₂S₅ Reactive Flux Method for the Rapid Synthesis of Mono- and Bimetallic 2D Thiophosphates M_{2â€“x}Mâ€²_xP₂S₆. Inorganic Chemistry, 2021, 60, 3502-3513.	4.0	18
9	Synthesis, Characterization, and Simulation of Four-Armed Megamolecules. Biomacromolecules, 2021, 22, 2363-2372.	5.4	4
10	Structural defects in transition metal dichalcogenide core-shell architectures. Applied Physics Letters, 2021, 118, .	3.3	8
11	Making the most of your electrons: Challenges and opportunities in characterizing hybrid interfaces with STEM. Materials Today, 2021, 50, 100-115.	14.2	13
12	Phosphate Elimination and Recovery Lightweight (PEARL) membrane: A sustainable environmental remediation approach. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
13	Structural and chemical analysis of mixed cation antiferromagnetic layered metal chalcophosphate FeCoP2S6. Microscopy and Microanalysis, 2021, 27, 140-143.	0.4	1
14	Emerging Opportunities in STEM to Characterize Soft-Hard Interfaces. Microscopy and Microanalysis, 2021, 27, 616-618.	0.4	0
15	Show me your â€œHandâ€• Direct determination of â€œhandednessâ€•in NaCu₅S₃ chiral crystal via aberration-corrected scanning transmission electron microscopy. Microscopy and Microanalysis, 2021, 27, 2652-2654.	0.4	1
16	Soft Microscopy of Negative Stained Soft Materials: Balancing Dose Rate and Sample Damage. Microscopy and Microanalysis, 2021, 27, 1408-1411.	0.4	0
17	Exploring the inner space of outer space: multi-length scale, multimodal characterization of Muonionalusta IVA iron meteorite. Microscopy and Microanalysis, 2021, 27, 2264-2266.	0.4	0
18	Multimodal Characterization of Hierarchically Porous Nanocomposite Materials: The Case Study of the PEARL Membrane. Microscopy and Microanalysis, 2021, 27, 2006-2009.	0.4	0

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19	To Cryo or Not to Cryo? A Consideration of Length Scales During Macromolecule Sample Preparation. Microscopy and Microanalysis, 2021, 27, 1404-1407.	0.4	0
20	Leveraging Hybrid Pixel Electron Detection Technology to Expand Electron Microscopy Observation of Material Structures at low Voltages. Microscopy and Microanalysis, 2021, 27, 1000-1002.	0.4	0
21	Spatial Mapping of Electrostatics and Dynamics in Quantum Materials. Microscopy and Microanalysis, 2021, 27, 1436-1438.	0.4	0
22	Phase Retrieval Imaging for Soft Materials at Low-Voltage. Microscopy and Microanalysis, 2021, 27, 1826-1828.	0.4	0
23	Towards Quantum Image Processing for Electron Microscopy. Microscopy and Microanalysis, 2021, 27, 1348-1351.	0.4	3
24	Si@MoS2 Core-Shell Architecture: Characterizations and Implications for Nanophotonic Applications. Microscopy and Microanalysis, 2021, 27, 650-652.	0.4	0
25	Degeneration Behavior of Cu Nanowires under Carbon Dioxide Environment: An In Situ/Operando Study. Nano Letters, 2021, 21, 6813-6819.	9.1	18
26	Hidden Complexity in the Chemistry of Ammonolysis-Derived â€œÎ³-Mo₂Nâ€• An Overlooked Oxynitride Hydride. Chemistry of Materials, 2021, 33, 6671-6684.	6.7	8
27	Spatial Mapping of Electrostatic Fields in 2D Heterostructures. Nano Letters, 2021, 21, 7131-7137.	9.1	2
28	Mixed Metal Thiophosphate Fe_{2â€“x}Co_xP₂S₆: Role of Structural Evolution and Anisotropy. Inorganic Chemistry, 2021, 60, 17268-17275.	4.0	8
29	Perovskite-like K₃TiOF₅ Exhibits (3 + 1)-Dimensional Commensurate Structure Induced by Octahedrally Coordinated Potassium Ions. Journal of the American Chemical Society, 2021, 143, 18907-18916.	13.7	4
30	Au@MoS₂@WS₂ Coreâ€“Shell Architectures: Combining Vapor Phase and Solution-Based Approaches. Journal of Physical Chemistry C, 2020, 124, 2627-2633.	3.1	7
31	Multimodal Characterization of the Oleophilic Hydrophobic Magnetic (OHM) Sponge: A Nanocomposite Material for Oil Spill Remediation. Microscopy and Microanalysis, 2020, 26, 2754-2756.	0.4	1
32	Oriented LiMn₂O₄ Particle Fracture from Delithiation-Driven Surface Stress. ACS Applied Materials & Interfaces, 2020, 12, 49182-49191.	8.0	20
33	OHM Sponge: A Versatile, Efficient, and Ecofriendly Environmental Remediation Platform. Industrial & Engineering Chemistry Research, 2020, 59, 10945-10954.	3.7	18
34	Direct Visualization of Electric-Field-Induced Structural Dynamics in Monolayer Transition Metal Dichalcogenides. ACS Nano, 2020, 14, 1569-1576.	14.6	23
35	Enhanced ferroelectricity in ultrathin films grown directly on silicon. Nature, 2020, 580, 478-482.	27.8	486
36	Nanoscale Investigation of Layered Oxychloride Intergrowth Photocatalysts for Visible Light Driven Water Splitting. Microscopy and Microanalysis, 2020, 26, 376-379.	0.4	4

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37	Topology of transition metal dichalcogenides: the case of the coreâ€“shell architecture. Nanoscale, 2020, 12, 23897-23919.	5.6	14
38	Self-Assembly of Two-Dimensional Perovskite Nanosheet Building Blocks into Ordered Ruddlesdenâ€“Popper Perovskite Phase. Journal of the American Chemical Society, 2019, 141, 13028-13032.	13.7	59
39	Reply. Journal of Cataract and Refractive Surgery, 2019, 45, 890-891.	1.5	0
40	Electronic Biasing of Monolayer Transition Metal Dichalcogenides in a TEM. Microscopy and Microanalysis, 2019, 25, 1904-1905.	0.4	0
41	Identification of Anion Sites in BiCuXO (X= Se, S) Heteroanionic Materials. Microscopy and Microanalysis, 2019, 25, 2106-2107.	0.4	0
42	Conductive 2D metal-organic framework for high-performance cathodes in aqueous rechargeable zinc batteries. Nature Communications, 2019, 10, 4948.	12.8	398
43	Revealing the Complex Structural Intergrowth Within Ternary W-Nb-O Oxide. Microscopy and Microanalysis, 2019, 25, 2172-2173.	0.4	0
44	Antiferromagnetic Semiconductor BaFMn_{0.5}Te with Unique Mn Ordering and Red Photoluminescence. Journal of the American Chemical Society, 2019, 141, 17421-17430.	13.7	10
45	Spatial Mapping of Hotâ€Spots at Lateral Heterogeneities in Monolayer Transition Metal Dichalcogenides. Advanced Materials, 2019, 31, 1808244.	21.0	16
46	Probing single-unit-cell resolved electronic structure modulations in oxide superlattices with standing-wave photoemission. Physical Review B, 2019, 100, .	3.2	3
47	Determination of the structural phase and octahedral rotation angle in halide perovskites. Applied Physics Letters, 2018, 112, .	3.3	38
48	Improved Subthreshold Swing and Short Channel Effect in FDSOI n-Channel Negative Capacitance Field Effect Transistors. IEEE Electron Device Letters, 2018, 39, 300-303.	3.9	128
49	Photoluminescence properties of arsenic and boron doped Si₃N₄nanocrystal embedded in SiN_xO_ymatrix. Materials Research Express, 2018, 5, 036201.	1.6	3
50	Room-Temperature-Synthesized High-Mobility Transparent Amorphous CdOâ€“Ga₂O₃ Alloys with Widely Tunable Electronic Bands. ACS Applied Materials & Interfaces, 2018, 10, 7239-7247.	8.0	24
51	Persistent luminescence of inorganic nanophosphors prepared by wet-chemical synthesis. Journal of Alloys and Compounds, 2018, 732, 705-715.	5.5	21
52	Interpretable and Efficient Interferometric Contrast in Scanning Transmission Electron Microscopy with a Diffraction-Grating Beam Splitter. Physical Review Applied, 2018, 10, .	3.8	20
53	The influence of the substrate misorientation on the structural quality of GaN layers grown by HVPE. Journal of Crystal Growth, 2018, 498, 346-351.	1.5	2
54	Quantitative determination of polarization from 4D scanning electron diffraction experiments. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a327-a327.	0.1	0

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55	Probing properties and structure of complex oxides superlattices using scanning electron nanodiffraction. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, a392-a392.	0.1	0
56	Crystalline Molybdenum Oxide Thin-Films for Application as Interfacial Layers in Optoelectronic Devices. ACS Applied Materials & Interfaces, 2017, 9, 7717-7724.	8.0	44
57	Work function mapping of MoOx thin-films for application in electronic devices. Ultramicroscopy, 2017, 183, 99-103.	1.9	15
58	Stabilization of ferroelectric phase in tungsten capped Hf0.8Zr0.2O2. Applied Physics Letters, 2017, 111, .	3.3	58
59	Simultaneous imaging of light and heavy elements at atomic resolution using electron ptychography and fast pixelated detectors. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a168-a168.	0.1	0
60	Symmetry group determination and direct imaging of all-inorganic halide perovskites CsPbBr3â^'x Cl x. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, a217-a217.	0.1	0
61	Electron ptychographic phase imaging using fast pixelated detectors. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C1349-C1349.	0.1	0
62	Revealing Point Defects in a Large-Scale Scanning Diffraction Dataset. Microscopy and Microanalysis, 2016, 22, 470-471.	0.4	1
63	Influence of CO annealing in metal-oxide-semiconductor capacitors with SiO2 films thermally grown on Si and on SiC. Journal of Applied Physics, 2016, 119, .	2.5	6
64	Formation of Nanoscale Composites of Compound Semiconductors Driven by Charge Transfer. Nano Letters, 2016, 16, 5247-5254.	9.1	9
65	The importance of structural inhomogeneity in GaN thin films. Journal of Crystal Growth, 2016, 456, 160-167.	1.5	3
66	Synthesis and Characterisation of Fluorescent Carbon Nanodots Produced in Ionic Liquids by Laser Ablation. Chemistry - A European Journal, 2016, 22, 138-143.	3.3	75
67	Towards Identification of Oxygen Point Defects by Means of Position Averaged CBED. Microscopy and Microanalysis, 2015, 21, 1097-1098.	0.4	3
68	Electronic band structure of ZnO-rich highly mismatched ZnO1â^'xTex alloys. Applied Physics Letters, 2015, 106, .	3.3	27
69	Blueâ€“green luminescent carbon nanodots produced in a silica matrix. Carbon, 2015, 91, 234-240.	10.3	14
70	Structural changes of potassium-saturated smectite at high pressures and high temperatures: Application for subduction zones. Applied Clay Science, 2014, 102, 164-171.	5.2	12
71	Passivation of defects in ZnO nanowires by SiO2 sputtering deposition. Materials Letters, 2014, 134, 126-129.	2.6	5
72	Structural defects in bulk GaN. Journal of Crystal Growth, 2014, 403, 66-71.	1.5	5

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73	Photoluminescence Emission from Si Nanocrystals in SiO₂ Matrix Obtained by Reactive Sputtering. Advanced Science, Engineering and Medicine, 2014, 6, 277-282.	0.3	2
74	Neâ€“He bubble formation in co-implanted Si(111) substrates. Thin Solid Films, 2013, 548, 465-469.	1.8	0
75	Microstructure of GaN1â^'x Bi x. Journal of Electronic Materials, 2013, 42, 26-32.	2.2	5
76	Direct atomic imaging of antiphase boundaries and orthotwins in orientation-patterned GaAs. Applied Physics Letters, 2013, 102, 081905.	3.3	2
77	Microstructure of Mg doped GaNAs alloys. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 453-456.	0.8	1
78	Photoluminescence from doped silicon nanocrystals in SiO<inf>2</inf> matrix. , 2013, , .		2
79	Planar defects in patterned GaAs by aberration corrected STEM. Microscopy and Microanalysis, 2012, 18, 338-339.	0.4	0
80	Raman and TEM characterization of high fluence C implanted nanometric Si on insulator. Applied Surface Science, 2012, 258, 7395-7400.	6.1	13
81	Molecular beam epitaxy of GaN_{1â€“x}Bi_x alloys with high bismuth content. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 419-423.	1.8	11
82	Structural studies of GaN_{1â€x} As_x and GaN_{1â€x} Bi_x alloys for solar cell applications. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1586-1589.	0.8	1
83	Dependence of random laser emission on silver nanoparticle density in PMMA films containing rhodamine 6G. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1118.	2.1	60
84	Doping of GaN1â^'xAsx with high As content. Journal of Applied Physics, 2011, 110, 093702.	2.5	4
85	Structural Characterization of Si1-xCx Nanolayers Synthesized by C Implantation into SiO2/Si. ECS Transactions, 2011, 39, 95-101.	0.5	2
86	Growth and transport properties of p-type GaNBi alloys. Journal of Materials Research, 2011, 26, 2887-2894.	2.6	16
87	Carbon redistribution in nanometric Si1â^'xCxlayers upon ion beam synthesis of SiC by C implantation into SIMOX(1â€‰1â€‰1). Journal Physics D: Applied Physics, 2010, 43, 395401.	2.8	3
88	Ion beam synthesis of SiC by C implantation into SIMOX(111). Nuclear Instruments & Methods in Physics Research B, 2009, 267, 1281-1284.	1.4	5
89	Ion beam synthesis of cubic-SiC layer on Si(111) substrate. Journal of Applied Physics, 2006, 100, 063504.	2.5	8
90	Wurtzite-to Amorphous-to Cubic Phase Transition of GaN_{1-X}As_x Alloys with Increasing as Content. Solid State Phenomena, 0, 186, 74-77.	0.3	1